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ของมหาวิทยาลัยในประเทศกัมพูชา

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THE DEVELOPMENT OF LEADERSHIP TRAIT MODEL FOR
UNIVERSITY SENIOR ADMINISTRATORS IN CAMBODIA



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ชื่อเรื่องวิทยานิพนธ์	การพัฒนารูปแบบคุณลักษณะความเป็นผู้นำสำหรับผู้บริหารระดับสูงของมหาวิทยาลัยในประเทศกัมพูชา
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บทคัดย่อ

การวิจัยนี้มีวัตถุประสงค์เพื่อ 1) ศึกษาวิเคราะห์แนวคิด ทฤษฎี และผลการวิจัยที่เกี่ยวข้องกับคุณลักษณะความเป็นผู้นำของผู้บริหาร 2) พัฒนารูปแบบคุณลักษณะความเป็นผู้นำสำหรับผู้บริหารระดับสูงของมหาวิทยาลัยในประเทศกัมพูชา 3) ยืนยันรูปแบบคุณลักษณะความเป็นผู้นำสำหรับผู้บริหารระดับสูงของมหาวิทยาลัยในประเทศกัมพูชา วิทยานิพนธ์นี้ใช้วิธีการวิจัยเชิงผสมผสาน โดยแบ่งขั้นตอนการทำวิจัยออกเป็น 3 ระยะ ได้แก่ ระยะที่ 1 ศึกษาวิเคราะห์แนวคิด ทฤษฎี และผลการวิจัย สัมภาษณ์ผู้มีประสบการณ์จำนวน 10 คน และสนทนากลุ่มกับผู้ที่มีประสบการณ์จำนวน 12 คน ในด้านคุณลักษณะความเป็นผู้นำ ระยะที่ 2 พัฒนารูปแบบคุณลักษณะความเป็นผู้นำสำหรับผู้บริหารระดับสูงของมหาวิทยาลัยในประเทศกัมพูชา โดยสนทนากลุ่มอีกครั้งกับผู้ที่มีประสบการณ์จำนวน 12 คน และวิเคราะห์ผลที่ได้จากการสนทนากลุ่ม โดยวิธีการวิเคราะห์เนื้อหา ระยะที่ 3 ยืนยันรูปแบบคุณลักษณะความเป็นผู้นำสำหรับผู้บริหารระดับสูงของมหาวิทยาลัยในประเทศกัมพูชา เครื่องมือที่ใช้เก็บข้อมูล คือ แบบสอบถามซึ่งมีข้อคำถามจำนวน 135 ข้อ เป็นมาตรประมาณค่า 5 ระดับ โดยกลุ่มตัวอย่างจำนวน 400 คน โดยใช้วิธีการสุ่มแบบหลายขั้นตอนจากประชากรจำนวน 1,845 คน ในสถาบันอุดมศึกษา จำนวน 37 แห่ง ค่าความเที่ยงตรงของแบบสอบถามอยู่ระหว่าง 0.60 - 1.00 ในขณะที่ค่าความเชื่อมั่นเท่ากับ 0.89 สถิติที่ใช้ในการวิจัย คือ ร้อยละ ค่าเฉลี่ย และส่วนเบี่ยงเบนมาตรฐาน การวิเคราะห์องค์ประกอบเชิงยืนยัน

ผลการวิจัยพบว่า

1. คุณลักษณะความเป็นผู้นำหลักจำนวน 83 คุณลักษณะ จากจำนวน 83 คุณลักษณะ มี 55 คุณลักษณะที่ตรงกับแนวคิด ทฤษฎี ผลจากงานวิจัยในอดีต และผลจากการสัมภาษณ์มีคุณลักษณะความเป็นผู้นำ 17 คุณลักษณะ ที่ปรากฏในแนวคิด ทฤษฎี และผลจากงานวิจัยในอดีต อีก 5 คุณลักษณะ ปรากฏในผลการสัมภาษณ์ และอีก 6 คุณลักษณะปรากฏในการสนทนากลุ่ม

2. การพัฒนาแบบคุณลักษณะความเป็นผู้นำสำหรับผู้บริหารระดับสูงของมหาวิทยาลัยในประเทศกัมพูชา พบว่า คุณลักษณะความเป็นผู้นำหลักจำนวน 83 คุณลักษณะ สามารถจำแนกออกเป็นองค์ประกอบย่อย 12 องค์ประกอบ โดยองค์ประกอบย่อย 12 องค์ประกอบนี้แยกออกเป็นองค์ประกอบหลัก 3 องค์ประกอบดังต่อไปนี้ องค์ประกอบหลักแรก เรียกว่า คุณลักษณะบุคคล ประกอบด้วย องค์ประกอบย่อย 3 องค์ประกอบ ได้แก่ คุณสมบัติทางกายภาพมี 5 คุณลักษณะหลัก ภูมิหลังทางสังคมมี 5 คุณลักษณะหลัก และคุณสมบัตินทางการพัฒนามี 5 คุณลักษณะหลัก

องค์ประกอบหลักที่สอง เรียกว่า คุณลักษณะทางบุคลิกภาพ ประกอบด้วย องค์ประกอบย่อย 4 องค์ประกอบ ได้แก่ คุณลักษณะทางอารมณ์มี 5 คุณลักษณะหลัก คุณลักษณะทางจริยธรรมมี 9 คุณลักษณะหลัก คุณลักษณะทางปัญญามี 10 คุณลักษณะหลัก และคุณลักษณะทางพฤติกรรมมี 11 คุณลักษณะหลัก องค์ประกอบหลักสุดท้ายเรียกว่า คุณลักษณะด้านวิชาชีพประกอบด้วย องค์ประกอบย่อย 5 องค์ประกอบ ได้แก่ คุณลักษณะระหว่างบุคคลมี 4 คุณลักษณะหลัก คุณลักษณะมุ่งเน้นความสำเร็จมี 13 คุณลักษณะหลัก คุณลักษณะด้านสมรรถนะมี 7 คุณลักษณะหลัก คุณลักษณะด้านการจัดการและความเป็นผู้นำมี 4 คุณลักษณะหลัก และคุณลักษณะด้านความสามารถทางสังคมมี 5 คุณลักษณะหลัก กล่าวโดยสรุป รูปแบบคุณลักษณะความเป็นผู้นำสำหรับผู้บริหารระดับสูงของมหาวิทยาลัยในประเทศกัมพูชาที่พัฒนาขึ้นในงานวิจัยนี้มีองค์ประกอบหลัก 3 องค์ประกอบ และองค์ประกอบย่อย 12 องค์ประกอบ

3. การวิเคราะห์องค์ประกอบเชิงยืนยันพบว่า ผู้นำนักองค์ประกอบย่อยทั้ง 12 องค์ประกอบ มีค่าเป็นบวก อยู่ระหว่าง 0.31 - 0.54 ซึ่งมีความแตกต่างอย่างมีนัยสำคัญทางสถิติที่ระดับ 0.01 ส่วนค่านำนักองค์ประกอบหลักทั้ง 3 องค์ประกอบ มีค่าเป็นบวกเช่นกัน อยู่ระหว่าง 0.59-0.89 ซึ่งมีความแตกต่างอย่างมีนัยสำคัญทางสถิติที่ระดับ 0.01 ในส่วนของค่าไคสแควร์มีค่าเท่ากับ 44.33 มีองศาความเป็นอิสระเท่ากับ 32 และค่าไคสแควร์หารด้วยองศาความเป็นอิสระเท่ากับ 1.39 ซึ่งน้อยกว่า 2 นอกจากนี้ พบว่า ดัชนีวัดระดับความกลมกลืนมีค่าเท่ากับ 0.98 ดัชนีวัดระดับความกลมกลืนที่ปรับแก้แล้วมีค่าเท่ากับ 0.96 และค่ารากของค่าเฉลี่ยกำลังสองของความคลาดเคลื่อนโดยประมาณ มีค่าเท่ากับ 0.03 ซึ่งต่ำกว่า 0.05 แสดงว่า รูปแบบคุณลักษณะความเป็นผู้นำสำหรับผู้บริหารระดับสูงของมหาวิทยาลัยในประเทศกัมพูชาที่พัฒนาขึ้นสอดคล้องกับข้อมูลเชิงประจักษ์

คำสำคัญ: คุณลักษณะความเป็นผู้นำ รูปแบบคุณลักษณะความเป็นผู้นำ ผู้บริหาร มหาวิทยาลัย

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ABSTRACT

The objectives of this study were 1) to study and analyze the concepts, theories and research findings about the leadership traits of administrators, 2) to develop a leadership trait model for university senior administrators in Cambodia, and 3) to confirm the leadership trait model of university senior administrators in Cambodia. It is a mixed method research. The research processes were divided into 3 main steps. Step 1: To study and analyze the concepts, theories, and research findings, to interview 10 experienced people, and to conduct a focus group discussion with 12 experienced people about the leadership traits of administrators. Step 2: To develop a leadership trait model for university senior administrators in Cambodia by conducting another focus group discussion with 12 experienced people. Content Analysis method was used to analyze the collected data from the focus group. Step 3: To confirm the leadership trait model of university senior items administrators in Cambodia. A set of 135 items questionnaire with 5 point rating scales was sent to 400 respondents selected from the population of 1,845 within 37 higher education institutions by applying multistage random sampling methods. The content validity value of questionnaire was between 0.60-1.00 while the reliability was 0.89. Analysis data percentage, mean, and standard deviation and Confirmatory Factor Analysis.

The results of the study were summarized as follows:

1. The result showed that 83 main leadership traits were found. Of 83 main leadership traits, the same 55 main leadership traits were found from concepts, theories, and research findings and from the interviews. The 17 different main leadership traits were found from the concepts, theories, and research findings. 5 different main leadership traits were found from the interview. Additionally, 6 more main leadership traits emerged from the focus group discussion.

2. The results of the development of the leadership trait model for university senior administrators showed that the 83 main leadership traits were classified into

12 sub-elements. Then the 12 sub-elements were classified into 3 main elements that were briefly described as the following: The first main element called Personal Traits consisted of 3 sub-elements namely Physical Attributes with 5 main leadership traits, Social Background with 5, and Development Attributes with 5. The second main element named Personality Traits consisted of 4 sub-elements such as Emotional Attributes with 5 main leadership traits, Ethical Attributes with 9, Intellectual Attributes with 10, and Behavior Attributes with 11. The last main element called Professional Traits consisted of 5 sub-elements namely Interpersonal Attributes with 4 main leadership traits, Achievement-Oriented Attributes with 13, competency attributes with 7, Management and Leadership Attributes with 4, and Soft-Skill Attributes with 5. The developed leadership trait model for university senior administrators in Cambodia, therefore, consisted of 3 main elements and 12 sub-elements.

3. The result of Confirmatory Factor Analysis showed that the factor loading of all 12 sub-elements was positive, which was between 0.31 - 0.54, and there was statistically significant difference at 0.01. The factor loading of 3 main elements also had positive value, which was between 0.59 - 0.89, and there was statistically significant difference at 0.01. Regarding the statistical value of Chi-Square χ^2 , it was 44.33, the value of degree of freedom (df) was 32; the value of χ^2/df was approximately 1.39, which was lower than 2. Moreover, it was found that the Goodness of Fit Index value (GFI) was 0.98, the Adjusted Goodness of Fit Index value (AGFI) was 0.96, and the Root Mean Square Error of Approximation (RMSEA) was 0.03, which was lower than 0.05. This indicated that the developed leadership trait model for university senior administrators in Cambodia was well congruent with the empirical data.

Keywords: Leadership Traits, Leadership Trait Model, Administrators, University

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CHAPTER ONE

INTRODUCTION

The world has become increasingly and rapidly interconnected, interdependent, and competitive in the last decades (Sylvia, 2012). It has kept changing in all aspects and sectors ranging from business to education. These national and international changes have a major impact upon education in all levels particularly higher education and the changing of educational climate also has a great impact on academic administrators (Flanders, 2008). To adopt and adapt with these fast and endless changes, this heavy responsibility falls upon the education in all levels. More importantly, to meet the ever-changing demand in a globalization era, each country must expand and promote its educational system particularly higher education to dominate the knowledge-based labor markets and to surpass competitive advantages. In this transitional period, to become effective leaders, administrators should have, instill, and develop positive leadership traits gradually. Furthermore, transactional and transformational leadership is necessary. University senior administrators must be ready for step by step changes so as to make their institutions survive and to dominate in the demanding competition. Additionally, the educational institutions must enhance and select potential strategies for gaining such competitive advantages through effective management and leadership.

1.1. Statement and Significance of the Problems

Higher education plays a very important role in serving and enriching the communities, societies and economic development in various ways. It is also one of the very important sectors for rapid growth and development of human resources which will take heavy responsibilities for economic, social, cultural, and scientific development of the country. In such a new global, information-based and knowledge-based competitive society, the role of higher education has become increasingly crucial with regard to the social, economic and country development and it contributes immeasurably to the personal and professional lives of students and enriches the intellectual, economic, and cultural fabrics of their communities, states, nations, and beyond (Leng, 2010; Ruben, 2007).

In the last decades, higher education has been growing very fast and its contribution to the success of economic development is seen undoubtedly vital. The increasing demand for higher education due to the increase of high school graduates, especially in the post-communist and developing worlds, has normally

resulted in the transformation of the education system from being selective and competitive to being massified and diversified (Altbach, 1999; Gibbons, 1998; Levy, 2006 cited in Leng, 2010). Cambodia is also one of the developing countries with a dramatic growth of higher education both public and private-owned. A very fast growth in numbers of higher education institutions has also resulted in strong and tough competition in a wide range of strategies. Moreover, higher education has experienced increased competition, increased expectations from students and students' parents as well as stakeholders, increased internet use and resources, and a push for more flexible models of learning (Flanders, 2008). To remain competitive, some universities also carry out a wide range of national and international activities such as two-way teaching process (bringing in students from other countries or sending out them to study abroad), research (national and international research collaborations), knowledge sharing, and cultural exchanges (Flanders, 2008). These activities can attract potential customers, high school students, for the next academic school year. To meet the demand of knowledge-based labor markets in this globalization era, effective administration of educational institutions is very important and this tough responsibility falls upon educational administrators at all levels from basic to higher education.

In the early part of the last century, the institutions of higher education determined that the quality of education can be met and assured by controlling a wide range of process inputs such as credentials of faculty, the ability of recruited students, library holdings, learning and teaching materials, and individual teacher assessment of students performance (Maguad & Krone, 2012). Sen & Ros (2013) also clearly state that "Improving the quality of higher education means providing to society's most talent citizens, including the disadvantaged, the skills and capacities to think logically and critically, thus allowing them to participate in, make a major contribution to and lead growth" (p. 1). Almost the same factors have been recognized as important ingredients for improving the quality of education so that qualified graduates can be produced. To be able to produce qualified graduates, educational institutions must be managed and led by those who have good managerial and leadership skills and by those who possess and develop positive leadership traits that are always viewed as effective weapons for gaining competitive advantages in this knowledge-based era. Possessing positive leadership traits are the fundamental attributes that can help educational administrators, particularly in higher education, to perform their duties effectively.

Higher education institutions in Cambodia, both public and private universities,

face many constraints and challenges, including scarcity of resources, poor governance, lack of autonomy, no culture of quality, poor human resource development and the like (Rath, 2010). Undoubtedly, university senior administrators have faced hardship and challenges in performing their role and fulfilling their responsibilities as effective instructional leadership. Even more problematic, their role and responsibilities are, in some cases, overlapped that can result in failing to produce desired results. Role ambiguity can slow down working process and cause conflicts that lead to ineffective performance. Overloaded responsibilities can also create stressful working environment in the work place. This causes severe setbacks in educational context. Turbulence, conflict, change, surprise, challenge, and possibility are all words that describe today's world and that evoke myriad emotions ranging from fear and anxiety to excitement, enthusiasm, and hope (Astin & Astin, 2000). In order for them to survive, higher education institutions need good leaders, key senior administrators, who are qualified, experienced and who possess and develop positive leadership traits that can help them perform the role and take various responsibilities to ensure that the capable graduates will be satisfactorily produced and the quality of services will be met. Strengthening higher education institutions and the effectiveness of their individual leaders is of great importance of work of education providers in the age of globalization world (Astin & Astin, 2000). Thus, leadership becomes an essential drive for an institution to allow it to develop a completely new self-understanding, to be strongly present in the outside world, capable of defending its own interests as well as being reactive to inside demands and needs, (EUA, 2007).

So far there has been a large amount of research focusing on leadership traits of administrators namely superintendents, principals and assistant principals in high schools and junior high schools specifically for basic education. However, little research has been conducted on leadership traits or on the development of the leadership trait model for senior administrators in higher education. So far, the leadership traits of university senior administrators have been rarely clarified and discovered. Few guidelines, recommendations and models have been found, recommended, and developed for improving and developing the leadership traits of university senior administrators. As a result, university senior administrators still lack of positive traits that are necessary to enable and help them adapt themselves so that they can well manage and effectively lead their higher education institutions. This causes the lacks of understanding the role that senior administrators have to play and the responsibilities that they have to take as well as the traits they need to

possess and develop. Lacks of understanding the need of leadership traits, the leadership trait models that can help administrators develop the leadership personality can lead to poor performance in managing and leading the institutions.

The researcher has worked for higher education institution for nearly ten years and he has also met and known many leaders from both private and public universities. Most of them possess their own leadership traits but they sometimes seem to fail to develop them more through their careers due to the lack of useful data, documents or research results that can help them to instill and equip themselves with such necessary traits. Moreover, as mentioned earlier, higher education is aimed at providing functional and practical knowledge and education to young people after high school, preparing them for a successful and useful living condition in society and for career advancement. To achieve these objectives, higher education institutions in each country need effective management and good leadership at institutional level. The university administrators particularly senior administrators who direct, guide, manage, and control all activities of the staff, teachers and students toward goal achievement are leaders. These administrators must possess the best personality characteristics that can help them lead their subordinates effectively. They also need to provide formal leadership and such leadership behavior determines the extent to which both staff, teachers and students view the university as interesting place for working, teaching and learning. Educational institutions can achieve its set goals and objectives through efficient and effective leadership (Akpan & Archibone, 2012).

Furthermore, university administration has become more complex than before as results of increase in student enrolment, the advancement of technology and modernization of physical structures such as buildings, libraries, learning and teaching materials as well as expanded curriculum. This causes more public concern about the effectiveness of administration and the leadership of administrators in carrying out their tasks, roles and responsibilities. This rising concern has put great pressure on educational administrators as educational leaders to ensure that the administration is effective (Akpan & Archibong, 2012).

This makes the researcher feel curious and eager to explore what the leadership traits and leadership qualities that university senior administrators must possess and what the leadership trait models must be developed for senior administrators in order to help them become good leaders in their institutions. What also noteworthy is that the research that examines the leadership traits of university senior administrators is vital. There is, therefore, a need for research on “The

Development of Leadership Trait Model for University Senior Administrators in Cambodia.” Understanding the importance of possessing positive leadership traits as well as of developing them accordingly is a must for university senior administrators in this knowledge-based globalization. The findings from this research will be beneficial for educational senior administrators in higher education. Based on the new found knowledge from this study, university senior administrators as well as stakeholders will be able to develop and improve their leadership characteristics so that they can prepare themselves for upcoming future changes. The leadership trait model is also necessary for all levels of educational administrators since it can be used as guidelines for promoting and improving leadership effectiveness. Effective leaders are needed for institutional growth and development.

1.2 Objectives of the Research and Research Questions

1.2.1 Research Objectives

The objectives of the research were:

1. To study and analyze the concepts, theories and research findings about the leadership traits of administrators.
2. To develop a leadership trait model for university senior administrators in Cambodia.
3. To confirm the leadership trait model of university senior administrators in Cambodia.

1.2.2 Research Questions

The research was conducted to seek for the answers to the following three research questions:

1. What leadership traits should university senior administrators possess and develop?
2. What leadership trait model should be developed for university senior administrators in Cambodia?
3. To what extent is the congruence of the developed leadership trait model with empirical data confirmed?

1.3 Scope of the Research

The research on “The Development of Leadership Trait Model for University Senior Administrators in Cambodia” is a mixed methodology research which considered

selecting only higher education institutions under the control of Ministry of Education, Youth, and Sport as the population of the study. Other HEIs which are not under the control of Ministry of Education, Youth, and Sport were excluded. Moreover, the target respondents were the presidents, vice presidents, deans, vice deans, department heads, office heads, staff as well as lecturers who were directly or indirectly engaged in leading and management process. The scope of content and population and sample size of the study was divided into three main subsequent steps as follows:

Step 1: To study and analyze the concepts, theories and research findings about the leadership traits of administrators

Step 1.1: To study and analyze the concepts, theories and research findings from related documents such as books, reports, journals, electronic documents, and research findings that were related to leadership traits of administrators.

Step 1.2: To interview 10 experienced people. The purpose of the interview was to elicit and to ask for more data and information closely connected to leadership traits of administrators. The collected data from the interviews was analyzed by applying Content Analysis method.

Population and sample size

10 target respondents were selected purposively for the interview. The first interviewee was from Provincial Department of Education, Youth and Sport; the second, the third and the fourth interviewees were from 3 Higher Education institutions; the fifth and the sixth interviewees were from vocational training institutes; the seventh interviewee was from COERR Language Skill Center; the eighth interviewee was from USA International School; and the ninth interviewee was from a non-government organization; and the last interviewee was an experienced lecturer from higher education institution.

Step 2: To develop the leadership trait model for university senior administrators in Cambodia

Step 2.1: To conduct a first group discussion. 12 experienced people from different working places were invited to participate in the first focus group discussion with the purpose of asking for more concepts and ideas related to leadership traits of administrators. The participants in the focus group were also asked to provide feedbacks and suggestions about the combinations of individual traits, main trait, trait combinations, and the classifications of the sub-elements and the main elements.

Step 2.2: To draft a leadership trait model for university senior administrators in Cambodia by analyzing and synthesizing the collected data from step 1.1 and step 1.2

Step 2.3: To develop the drafted model by conducting the second focus group discussion. The purpose of the second focus group discussion was to ask the participants for their opinions, concepts, additional comments, and suggestions as well as corrective feedbacks related to the main leadership traits, the sub-elements, the main elements and the model so that the acceptable leadership trait model could be developed. The collected data gained from the focus group discussion was analyzed by applying Content Analysis method.

Population and Sample Size

In this step, 12 knowledgeable and experienced people mostly working in the educational sector, using purposive sampling method, were invited to attend in a focus group discussion. Of 12 experts, one was from Directorate General of Higher Education, Ministry of Education, Youth and Sport; one was from Department of Higher Education, Ministry of Education, Youth and Sport, four experienced persons were from accredited universities, presidents and vice presidents; one was from Regional Teacher Training Center; two were from vocational training institutes; one was from Provincial Department of Education, Youth, and Sport; one person was an experienced lecturer who had at least ten-year experiences in teaching in higher education institutions; one person was from non-government organization; and one was from Provincial Department of Labor, technical, and Vocational Training. The purpose of the focus group discussion was to elicit ideas and opinions from the participants about the leadership traits, the sub-elements, the main elements as well as the leadership trait model for making sure that the model was reasonable, suitable or it could be adjusted and well-developed.

Step 3: To confirm the leadership trait model of university senior administrators in Cambodia, the Confirmatory Factor Analysis method will be applied.

Population of Higher Education Institutions

The target population of higher education institutions in this study referred to only the HEIs which are under the control of Ministry of Education, Youth and Sport. Presently, there are 73 higher education institutions, 13 public HEIs and 60 private HEIs, which are under the control of Ministry of Education, Youth and Sport (MoEYS, 2016). The target population of HEIs in this study was therefore 73. Of 73 HEIs which are under the control of Ministry of Education, Youth and Sport, 47 are located in the capital city, Phnom Penh while 26 are located in other provinces. The 73 HEIs

were then classified by the researcher into 4 groups based on their geographical locations as follows:

1. The central group (the big group): Referred to higher education institutions which are located in the capital city of Cambodia, Phnom Penh, and accounting for 47 HEIs.

2. The North-East group: Referred to higher education institutions which are located in the provinces such as Preyveng, Svayrieng, Kampongcham, Tbong Khmom, accounting for 8 HEIs.

3. The North-West group: Referred to higher education institutions which are located in the provinces namely Kampong Chhnang, Battambang, Posat, Banteaymeanchey, and Siemreap, Kompongthom, accounting for 12 HEIs.

4. The South-West group: Referred to higher education institutions which are located in such provinces as Takeo, Kampot, Kompongsoum, and Kanpongspue, accounting for 6 HEIs.

Population and Sample Size of Respondents

In this study, the target population of the respondents were presidents, vice presidents, deans, vice deans, department heads, office heads, and staff as well as lecturers who were directly or indirectly engaged in leading and management process. There were two phases in identifying the sample size in this study. First, the researcher had to make decision about the sample size of the HEIs so that the population of respondents could be calculated. Only full time administrators and lecturers were included as research population. Then the researcher calculated the sample size of the respondents.

First, 37 HEIs (about 50%) were selected for sample size based on their proportion of geographical areas. Only 4-year-program and accredited HEIs were selected from the target HEI population. Multi-staged sampling method was applied. The population selected from the 37 HEIs was 1845.

Second, the researcher identified the sample size of the respondents. The sample size of the respondents was based on sample size decision of CFA requirement. Sample size requirements in CFA also vary with the type of estimation method used and the distributional characteristics of the data (Kline, 2013). However, a 20 : 1 ratio is recommended. Although at least the sample size ratio 20 respondents to 1 variable is recommended, the researcher decided to select 400 respondents, based on its proportion by using multiple-staged sampling method, from the population of 1845 within the 37 HEIs that are fully accredited by Accreditation Committee of Cambodia (ACC). Again, respondents in this study were presidents, vice

presidents, deans, vice deans, department heads, office heads, staff as well as lecturers.

1.4 Definitions of Key Terms

1.4.1 Leadership: Leadership is a process of working with an organized group of people who share the common vision, interests and goals by directing, influencing, persuading, inspiring, coordinating, and managing them for the sake of organizational achievement.

1.4.2 Trait is defined as distinguishing personal characteristics that a person possesses. These personality characteristics can be innate or gradually developed through their work or experience.

1.4.3 Leadership Trait is defined as integrated patterns of personal characteristics that reflect a range of individual differences a leader has that make him or her have great influence on subordinates or organization. These personality characteristics, both innate and be developed through work and education, can help leaders manage and lead a variety of group and organizational situations to achieve set goals.

1.4.4 Higher Education: higher or tertiary education in this study is referred to the education in establishments following completion of secondary education in Cambodia.

1.4.5 Higher Education Institution: Refers to an educational institution that provides higher education for students who have completed high schools in Cambodia (grade 12).

1.4.6 Senior administrators: For the purpose of this study, senior administrators refer to president, vice presidents, deans/vice deans, heads and deputy heads of departments, who lead, manage, control, guide, and influence the activities of the staff, teachers, and students towards achieving set goals.

1.4.7 Focus Group: Focus group is a formally structured group of people which are selected and brought together by the researcher(s) for the purposes of expressing and addressing their personal experience, opinions, point of views related to the research topic within a fixed time frame and in accordance with a clearly spelled out rules and procedure.

1.4.8 Model: a model is a set of statements, description or analogy, information or a simplified representation of a real or theoretical system at some particular point in time or space built and developed by someone for somebody with the purposes of helping visualize something that cannot be directly observed,

providing an understanding of a system, and describing the system under study so that it can be easily understood and applied.

1.4.9 Leadership Trait Model: A model that presents the relationship of personal characteristics that can shape effective leaders. Those integrated patterns of personal characteristics can reflect a wide range of individual references and foster consistent leader effectiveness across variety of group and organizational situation.

1.4.10 Personal Traits: Refer to the traits an individual possesses that make him or her differ from others. They are innate qualities or abilities that enable a leader to perform or behave differently from non-leaders. Personal traits in this study consisted of three sub-elements including Physical Attributes, Social Background, and Development Attributes.

1) Physical Attributes: Refer to attributes or features about how a leader looks like, the first things a leader is seen when he/she is looked at. Physical characteristics can include height, weight, skin color, built, facial expression, dressing, and so on. The term can be used to refer to physical fitness such as power, strength, and good health, and so on so forth.

2) Social Backgrounds: Refer to attributes that are closely related to the social status of an individual in terms of educational background, wealth, social status, popularity, likeability, recognized, and so on. Strong social backgrounds can increase the degree of influences a leader has on others.

3) Development Attributes: Refer to leaders' attributes that are closely linked to the focuses on expanding and broadening skills, knowledge, and ability necessary for performing tasks and taking responsibilities. The development attributes can involve in formal, informal, non-formal education, training, seminar, and so on. Effective leaders must gradually advance and develop their skills, knowledge, and abilities by means of growth, training, coaching and other methods that can increase and build their own capacity for improving performance.

1.4.11 Personality Traits: Refer to the different attributes leaders have that can define who they are as individuals, the different styles of acting, feeling, thinking, behaving as well as mental and physical intelligence. Personality attributes are mostly innate qualities that make leaders differ from non-leaders. In this study Personality traits consisted of four sub-elements including Emotional Attributes, Ethical Attributes, Intellectual Attributes, and Behavior attributes.

1) Emotional Attributes: Refer to attributes that are closely connected to how leaders feel or how they have their emotion while encountering positive or negative surrounding atmosphere. To be happy and successful, leaders need

emotional strength such as stable, sensitive to others, patient since emotion can sometimes move people in the wrong direction when they are attached to adrenaline.

2) Ethical Attributes: Refer to attributes that are closely connected to moral and ethical conducts of people, the way they think, behave, and act in a moral and ethical way.

3) Intellectual Attributes: Refer to attributes that are closely related to intellect, mental capacity, ability, and intelligence that leaders possess. These attributes can be innate or be gradually developed through work or experience. Leaders with highly intellectual and ability characteristics can work better than those who have low intellect and ability.

4) Behavior Attributes: Refer to the behavioral attributes leaders have that can define who they are as individuals, the different styles of engaging, and behaving in the different situations. Behavior attributes such as confident, honest, and respectful are mostly innate qualities that make leaders differ from non-leaders.

1.4.12 Professional Traits: Refer to personality characteristics closely related to knowledge, skills, and abilities as well as the willingness and commitments that leaders need to possess and master so that they can apply them to any type of work or business. The traits can vary from one profession or company to another, but there are several that carry over. True leaders possess a number of important characteristics that can apply virtually to any type of work or business. Professional traits in this study consisted of 5 sub-elements including Interpersonal attributes, Competency Attributes, Achievement-Oriented Attributes, Management and Leadership Attributes, and Soft-Skill attributes.

1) Interpersonal Attributes: Refer to attributes that are closely connected to the focuses on interacting with other people both individually and in groups. The term mainly and generally refers to how a leader can get along with other people while performing the tasks or getting the tasks done inside or outside the organization. Leaders with interpersonal attributes are easy to be reached, comfortable to be with, and they are also good communicators.

2) Competency Attributes: Refer to attributes that are related to the ability and capability a person has so that he or she can perform the tasks effectively.

3) Achievement-Oriented Attributes: Refer to attributes that are closely related to the focuses on completing and achieving a job or task. The focuses are on the tasks that have to be done rather than who are going to do them. A

leader of this kind is best for the job if the job must be done within the organization and if it has to be done right.

4) Management and Leadership Attributes: Refer to the attributes that are closely connected with skills and qualities that managers and leaders need to possess and develop in order to manage and lead their organizations effectively. Management and Leadership Attributes in this study mainly focus on time management, strategic planning, managerial skills, and leadership skills.

5) Soft-skill Attributes: Refer to personality characteristics that indicate a high level of emotional intelligence. Soft skills are a combination of people skills, social skills, communication skills as well as social and emotional intelligence that enable people to navigate their environment, work well with other, perform well, and achieve their goals with complementing hard skills. In this study Soft Skill Attributes mainly focus on such important skills as communication skills, decision-making skills, problem-solving skills, analytical skills, and critical thinking skills.

1.5 Significances of the Research

The findings from this research would be beneficial as follows:

1.5.1 University senior administrators as well as stakeholders will be able to use these research findings to apply in their institutions. The findings will be able to help them determine what the leadership traits the university senior administrators must possess, and what leadership trait model is necessary for helping in improving performance of university senior administrators. Moreover, university senior administrators will also be able to develop their own leadership traits based on the findings from this study so that they can manage and lead their institutions effectively. Stakeholders can also use these findings for self-improvement.

1.5.2 These findings may also be informative to educators and policy makers in Cambodian higher education. The findings will hopefully contribute invaluable knowledge, broad insights and provide useful feedbacks to practitioners and policy makers who have long been seeking ways for institutional improvement and promoting instructional leadership effectiveness in their educational institutions. Furthermore, the findings will allow policy makers in higher education to broaden their knowledge and extent their understanding based on the developed leadership trait model. The policy makers will even be able to use the findings to formulate and develop new instructional approaches based on current situation while leadership trainers might come up with training needs for effective university instructional leaders.

1.5.3 The findings could also benefit university stakeholders such as NGOs, lower level administrators, ministry of education, as well as other ministries concerned.

1.5.4 Future researchers will be able to make use of the findings for further expanding the research area in higher education.

1.6 Conceptual Framework

1.6.1 In order to revise and identify the leadership traits, the sub-elements, and the main elements of leadership traits of administrators, the researcher studied and analyzed the concepts, theories and research findings related to leadership effectiveness and the leadership traits of administrators from a number of trusted sources written by the well-known authors such as Bush (2008) Harrell (2003) Bass (1985) Collins (2001) Michsel (2007) Eacott (2007) Scott et. al. (2012) Fiedler (1978) DuBrin (1995) Zaccaro (2001) Gates (2011) Economy (2014) Adam & Bornstein (2016) Trewatha & Newport (1982) Stogdill (1974) Bass (1990a) Kouzes & Posner (2002) Dubrin (1997) Northous (2011) Vangundy (1998) Sothimon (2007) Keith (2012) Ricketts (2009) Mannings & Curtis (2003) Bateman & Snell (2004) Barnard (1996) Deen (2013) House & Aditya (1997) ACCA (2009) Bennis & Goldsmith (1989) Musaaazi (1982) Lussier & Achua (2004) Navikan (2001) Gardner (1989) Marques (2007) Zepp (2011) Mothilal (2010) Gheselli (1971) Lekganyane et al. (2006) Wilson (2004) and Longsombun (2009). The significances of the revisions of the concepts, theories and research findings related to the leadership traits of administrators were to identify the leadership traits, and then to build up the sub-elements and the main elements of leadership traits of effective administrators.

1.6.2 For the development of the leadership trait model for university senior administrators in Cambodia, the researcher revised the concepts and theories from published and unpublished sources related to the model written by Sykes (2015) Steinmuller (1993 cited in Kuhne, 2005) Seitdewits (2003) Maria (1997) Undeger (2008) Joyce and Weil (1992) Bush (2006) Leithwood (1999) Yukl (2002) Brown and Moberg (1980) Bush and Glover (2014) Keeves (1988) Epstein (2008) Novara (2005). The significances of the revisions of the concepts and theories related to the model wereto help the researcher have clear guidelines about how to develop the leadership trait model for university senior administrators in Cambodia.

The significances of the above revisionswere to help the researcher be able to drawclear conceptual frameworkthat could helphimdevelop the leadership trait model for university senior administrators in Cambodia.

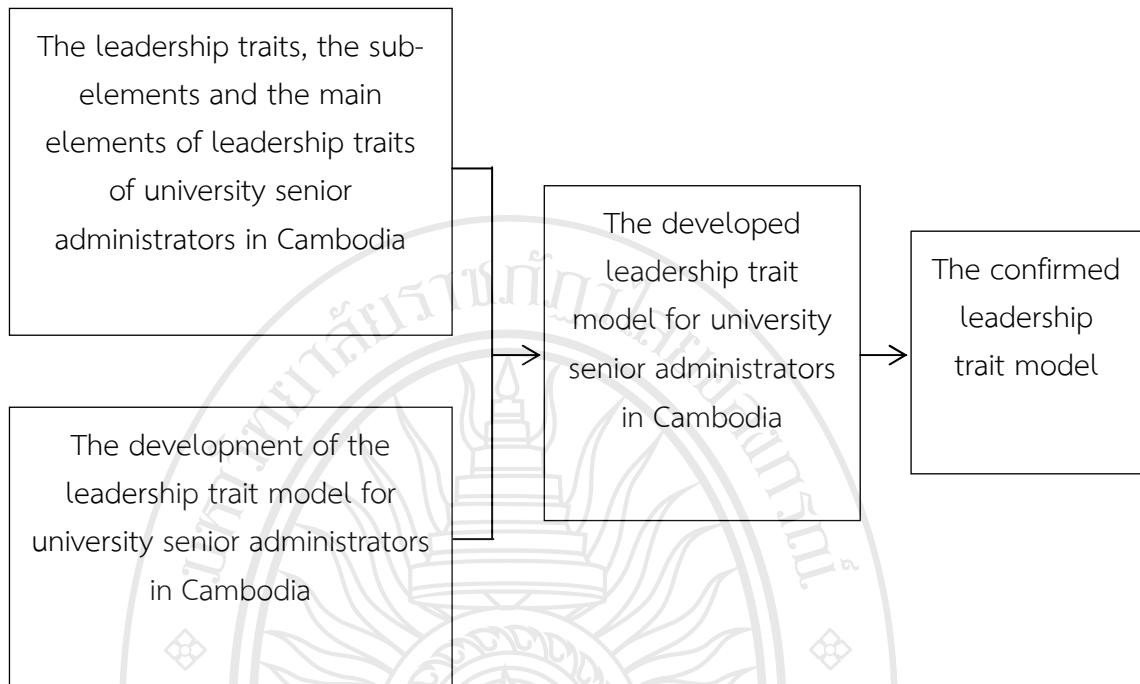


Figure 1.1 Conceptual Framework

CHAPTER II

LITERATURE REVIEW

The study entitled “the development of leadership trait model for university senior administrators in Cambodia” has three main objectives: 1) to study the leadership traits of university senior administrators, 2) to develop the leadership trait model of university senior administrators in Cambodia, 3) to confirm the leadership trait model of university senior administrators in Cambodia. This chapter contains a review of the literature in nine broad sections. The first section is a collection of the definitions of leadership and leader as well as leadership concepts. The second section revises the well-known leadership theories such as Great man theory, trait theory, contingency theory, behavior theory, situational theory, participative theory, transactional theory, transformational theory, great event theory, charismatic theory, and theory X and theory Y. The third section focuses on the leadership styles of effective leaders. The fourth section is about the definitions, theories and concepts as well as research findings related to leadership traits of effective administrators. The fifth section is about effective academic administrators mainly focusing on roles, responsibilities and skills. The sixth section focuses on focus group discussion. The seventh section describes the concepts and theories of models. The eighth is about factor analysis while the ninth section focuses on structural model equation. The last section is about Cambodian education describing the evolvement of the educational situation in Cambodia with a brief history of higher education from the past until the present time. It also summarizes the government policies and endeavor of Ministry of Education, Youth and Sport aiming at promoting the quality of higher education in Cambodia.

In the study of “The Development of Leadership Trait Model for University Senior Administrators in Cambodia” the researcher studied and analyzed the concepts, theories, documents, and related research in subsequent steps as follows:

- 2.1 Leadership and leaders
 - 2.1.1 Definitions of Leadership
 - 2.1.2 Concepts of Leadership
 - 2.1.3 Definitions of Leader
- 2.2 Leadership Theories
 - 2.2.1 Great Man Theory
 - 2.2.2 Trait Theory
 - 2.2.3 Contingency Theory

- 2.2.4 Behavior Theory
- 2.2.5 Situational Theory
- 2.2.6 Participative Theory
- 2.2.7 Transactional Theory
- 2.2.8 Transformational Theory
- 2.2.9 Great Event Theory
- 2.2.10 Theory X and Theory Y
- 2.3 Leadership styles
 - 2.3.1 The autocratic style
 - 2.3.2 The democratic style
 - 2.3.3 The laissez faire style
- 2.4 Traits of Leadership
 - 2.4.1 Definitions of Traits
 - 2.4.2 Trait Controversy
 - 2.4.3 Concepts and Theories Related to Leadership Traits of Effective Administrators
 - 2.4.4 Research Findings Related to Leadership Traits of Effective Administrators
 - 2.4.5 Effective Leadership
 - 2.4.6 Summary
- 2.5 Academic Administrators
 - 2.5.1 Definitions of Administrators
 - 2.5.2 The Main Roles of Educational Administrators
 - 2.5.3 Academic Administrators' Skills and Responsibilities
 - 2.5.4 Summary
- 2.6 Focus Groups
 - 2.6.1 Concepts of Focus Groups
 - 2.6.2 Definitions of Focus Groups
 - 2.6.3 Purposes of Focus Groups
 - 2.6.4 The Role of Focus Groups
 - 2.6.5 Characteristics of Focus Groups
 - 2.6.6 Types of Focus groups
 - 2.6.7 Advantages of Focus Group
 - 2.6.8 Summary
- 2.7 Models
 - 2.7.1 Concepts of Models
 - 2.7.2 Definitions of Models

- 2.7.3 Kinds of Models
- 2.7.4 Elements of Models
- 2.7.5 Purposes of Models
- 2.7.6 Summary
- 2.8 Factor Analysis
 - 2.8.1 Definitions of Factor Analysis
 - 2.8.2 Types of Factor Analysis
 - 2.8.3 Steps of Confirmatory Factor Analysis
 - 2.8.4 Components of Factor Analysis
 - 2.8.5 Purposes of Confirmatory Factor Analysis
 - 2.8.6 Advantages of Factor Analysis
 - 2.8.7 Sampling Methods of Factor Analysis
 - 2.8.8 Summary
- 2.9 Structural Equation Modeling (SEM)
 - 2.9.1 Definitions of SEM
 - 2.9.2 Basic Components of SEM
 - 2.9.3 Purposes of SEM
 - 2.9.4 Process of SEM Analysis
 - 2.9.5 Structural Equation Model Development
 - 2.9.6 Goodness of Fits
 - 2.9.7 Shortcoming of SEM
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The topic of leadership has been studied literally hundreds of years and during that time the researchers have learned a great deal about what

leadership is and about what it isn't (Ivancevich & Matteson, 1999). Some leadership researchers have focused on the personality, physical traits, or behaviors of the leaders while others have studied the relationship between leaders and followers (Hughes, Ginnett & Curphy, 2006). Leadership doesn't take place in a vacuum and every leader must deal with the most three important variables: the people who are being led, the tasks that the people are performing, and the environment in which the people and the tasks exist (Ivancevich & Matteson, 1999).

2.1 Leadership and Leaders

2.1.1 Definitions of Leadership

According to Thrash (2012), "the study of leadership is not a fad; it has been the focus of theorists and philosophers for thousands of years." Leadership has as many definitions as researchers (Wilson, 2004). People who do research on leadership actually disagree much more than what we think about what leadership really is and most of the disagreement stems from the fact that leadership is a complex phenomenon involving in three dimensions: the leader, the followers, and situation (Hughes, Ginnett & Curphy, 2006). Leadership is such an important topic in business as well as in other spheres of life that the term of leadership has been defined in many ways (Dubrin, 1997). Juras (2009) states that "despite the fact that the meaning of the term "leadership" is often mistaken with the ideas of leading and management, it seems like the idea of the essence of leadership did not change much, when various definitions, used in the last five decades, are compared (p. 68)". As a result, the authentic definitions of leadership have been defined so far. Some definitions of leadership are based on leaders' characteristics, some on leader behaviors, still others on outcomes or end results (Ivancevich & Matteson, 1999). Leadership is the process of influencing people so that they will strive willingly towards the achievement of group goals (Akpan & Archibong, 2012). Edem (2003) maintains that the essence of leadership is to influence his relationship with members of his organization towards chosen goals. Leadership is an interaction between members of a group, or/and an attempt to use influence to motivate individuals to accomplish some set goals (Gibson, et al., 2006).

Since the concepts of leadership vary, so far there has been a collection of leadership definitions defined by research scholars in the field. Lead is an Anglo-Saxon word meaning path (Michael, 2007). Leadership may be therefore defined as the process of providing the path that others follow (Michael, 2007). Ivancevich & Matteson (1999) defines leadership as the process of influencing others to facilitate the attainment of organizationally relevant goals. Sharma & Jain (2013) define leadership as a process by

which a person has influences on others to accomplish an objective and directs the organization in a way that makes it more cohesive and coherent. Northouse's (2007) definition of leadership is a process whereby an individual influences a group of individuals to achieve a common goal. Munson (1921) defined leadership as "the ability to handle men so as to achieve the most with the least friction and cooperation." Leadership is the process by which an agent induces a subordinate to behave in a desired manner (Bennis, 1989). Fiedler (1967) defined leadership as the process of directing and coordinating the work of group members. Leadership is an interpersonal relation in which others comply because they want to, not because they have to (Merton, 1969). Rost (1993) defines the leadership as "an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes (p. 102)". Roach & Behling (1984) defines leadership as "the process of influencing an organized group toward accomplishing its goals." Pierce & Newstrom (2006) defines leadership as "a dynamic and working relationship, built over time, involving an exchange between leader and follower in which leadership is a resource embedded in the situation, providing direction for goal attainment (p. 6)."

As seen above, a handful of leadership definitions that seem to be confusing have been defined by scholarly researchers so far. Although such a large number of leadership definitions may seem confusing, it is very important to understand that there is no single correct definition. The various definitions can help us appreciate the multitude of factors that affect leadership, as well as different perspectives from which to view it. Searching for the one and only proper and true definition of leadership seems to be fruitless (Bass, 1990a). Based on a handful of definitions above, it can be concluded that leadership is a process of working with an organized group of people who share the common vision, interests and goals by directing, influencing, persuading, inspiring, coordinating, and managing them for the sake of organizational achievement.

2.1.2 Concepts of Leadership

Although there are confusing differences between definitions, two characteristics of leadership can be observed: leadership is related to the process of influencing others' behavior; it is also related to goal development and achievement. Leadership is the initiative of a new structure or procedure for accomplishing an organization's goals and objectives or for changing an organization's goals and objectives (Lipham, 1981 cited in Bass, 1985). Leadership is a process in which some values, needs, and aspirations of both leader and followers are taken care of while acting for achieving certain goals (Bass, 1990a). To achieve some goals a leader may have to direct the activities towards it or may initiate an action among people for a

specific purpose (Jacobs & Jaques, 1990). Leadership possesses as many definitions as the term motivation. It is an elusive, yet very real concept that daily influences every person in every organization in the world. Leadership can be seen as the relationship in which one person (the leader) influences others to work together willingly on related tasks to attain goals desired by the leader and / or group. In this connection leading involves influencing and interacting with people in order to attain goals. According to Boles and Davenport (1995), leadership is a process – not a category of behavior, a prerogative of position or personality, nor a collectivity of persons. A person does not become a leader by virtue of some combination of traits but the pattern of personal characteristics of the leader must bear some relationships to the characteristics, activities, and goals of the followers. Thus, leadership must be conceived in terms of the interaction of variables, which are in constant flux and change (Stogdill, 1974). defines the literal definition of leadership as “the behavior of an individual when he is directing the activities of a group with a focus on a shared goal.” It is the “process of influencing” the activities of an organized group toward goal achievement, as well as, the process of giving meaningful direction to collective efforts and achieving your objective. Accordingly, leadership is a purposive process which is inherently value-based (Astin & Astin, 2000). It is a process that is ultimately concerned with fostering change. In contrast to the notion of “management,” which suggests preservation or maintenance; “leadership” implies a process where there is movement – from wherever we are now to some future place or condition that is different. Leadership also implies intentionality, in the sense that the implied change is not random, “change for change’s sake”, but rather directed toward some future end or condition which is desired or valued. Consistent with the notion that leadership is concerned with change, the leader is basically viewed as a change agent, meaning that the “one who fosters change.” Leader, then, are not necessarily those who merely hold formal leadership positions; on the contrary, all people are potential leaders. Furthermore, since the concepts of “leadership” and “leader” imply that there are other people involved, leadership is, by definition, a collective or group process (Astin & Astin, 2000). “leadership is social influence. It means leaving a mark. It is initiating and guiding, and the result is changed. Leadership is important not only in government, but in other areas of life as well (p. 2-3).” Cohen (1990) suggests that leadership is the art of influencing others to their maximum performance to accomplish any task, objective or project. The leader affects the group by initiating action, facilitating communication, establishing structure and implementing his own philosophy in the

manner in which he leads. Good leaders show their responsibility and authority while planning, initiating, managing, delegating, coordinating, decision-making, communicating and evaluating. In solving any particular problem, a principal might use one or several of these acts of leadership. Van and Field (1990) point out and argue that the leadership role requires attention to individuals and organizations. Essentially, people see him (the leader) filling the gap between subordinate desires and abilities on one hand and organizational goals and requirements on the other. In essence, when the gap is filled, there should be satisfied subordinates in a high performance organization. Conger & Kanungo (1988) Deal & Paterson (1999) & Davies (2005) summarize the meaningful concepts of leadership in order to enrich the clarification: Leadership is the product of interaction between leader and followers, and not that of status and position; leadership cannot be pre-structured. It is always circumscribed by interactional pattern in the group, structure and group goals; a good leader in one situation may not be effective in another situation; whether a person is or is not a leader in a group depends on how he is perceived by the group; the way a leader perceives his role determines his action; leadership manifests positive sentiments towards the group activity and towards the persons in a group; leadership may be autocratic, democratic but never laissez faire; leadership protects the standard of behavior (norms) of the individuals in a group; persons perceived by others as leaders are adorned with some authority to take decisions and actions for the group; leadership is not monopoly of one person. All group members have leadership potential to some degree; the effectiveness of leader behavior is measure in terms of mutuality of goals, productivity in the achievement of these goals and the maintenance of group solidarity; leadership is directed toward modifying and changing the behavior of members. Changes in people's behavior are manifestations of changes in their goals, perceptions, understandings, habits, skills, insights, values, beliefs, motivations, and interrelationships. To bring about change in the behavior of people, leadership behavior alters one or more of these factors; the quality of an organization is often evaluated by the perceived quality of leadership; the qualities of leader's ideas are often a more powerful force than his external behavior; institutional changes are dependent upon the organization of changes in individuals. Leadership behavior in formal organizations resorts to grouping, programming, and rearranging relationships; leadership behavior very often creates imbalance in a group with a view to moving group in a desired direction. A leader creates a sensible vision for others, and then directs them toward achieving that vision and a leader also displays enthusiasm, passion, and inspiration to get others to attain high level of

performance (Dubrin, 1997, p.2-3). Scholarly researchers in the field of leadership have contributed too many leadership concepts to managers, administrators as well as leaders who have been willing to develop themselves to be effective leaders in their organizations so that they can manage work and lead their followers effectively.

2.1.3 Definitions of a Leader

Like leadership, the term “leader” can be defined in different concepts and the debate of the definitions has long been discussed widely in workshops, conferences and training sessions. No single definition is correct and widely acceptable. However, scholarly researchers have together combined a handful of definitions of a leader for useful reference. Gibson (2006) stressed that “Leaders are agents of change, persons whose acts affect other people more than other people’s acts affect them” (p. 313). Allen’s (1958) definition of a leader is “the one who guides and directs other people.” Conger (1992) defines leaders as “individuals who establish direction for a working group of individuals who gain commitment from this group of members to this direction and who then motivate these members to achieve the direction’s outcomes.” A leader is someone who has the authority or power to control a group of people and get it organized for a particular task or goal, who has a clear vision for the welfare of his organization and development of his organization (Bass, 1985). Lead is an Anglo-Saxon word meaning path (Michael, 2007). Then he defines the leader as the one who provides the path (Michael, 2007). A leader is a person who influences others to attain goals and the greater numbers of followers, the greater the influence (Bateman & Snell, 2004). “an effective development leader is one who possesses the characteristics and engages in actions primarily focused on the growth and development of the people and organizations he or she leads” (Wilson, 2004).

Based on the above definitions, a leader is someone who inspires, motivates, guides, and directs a certain organized group of people to achieve set goals and objectives.

2.2 Leadership Theories

Leadership theories, models, practices have been researched and written over the past several decades and as a result, many journal articles, textbooks, books, and other publications have come about (Wilson, 2004). Leadership theories attempt to explain the actions and rationale of leader behavior (Humphreys & Einstein, 2004). Scholarly interest in leadership began increasing during early part of the twentieth century. Since then, many different leadership theories have emerged (Wagner, 2008). Even though leadership has been studied for many years, there is still debate over what distinguishes an effective leader from their non-effective

counterparts (House, 1971). Leadership theories attempt to explain the factors involved either in the emergence of leadership or in the nature of leadership and its consequences (Bass, 1990a). Early leadership theories mostly focused on the qualities that distinguished leaders from followers while subsequent theories discussed more about other variables such as situational factors and skill levels (Wagner, 2008). Wagner (2008) has classified leadership theories into eight major types: Great Man theories, Trait Theories, Contingence Theories, Situational Theories, Behavioral Theories, Participative Theories, Transactional Theories (Management Theories) and Transformational Theories (Relationship Theories). Other scholarly research and articles have also summarized similar leadership theories that have been very popular since the early age of ancient Greece.

2.2.1 Great Man (woman) Theory

Early studies of leadership and what makes a good leader began by examining qualities of the so-called great-man, and then moved on to consider leadership traits (Ford, 1991). The Great Man Theory was popular with professional historians in the 1900's (Russell, 2011). Great Man theory believes that the capacity of leadership is inherit- leaders are born, not made. According to this theory, people are born into leadership, and only "great" people possess such traits can become leaders. The term "Great Man" was used because leadership was thought of primarily as a male quality, especially in terms of military leadership (Wagner, 2008). The assumption of Great Man theory was that some people were born to be leaders and would excel by virtue of their innate personality alone (Bolden, 2004). These leaders can rise to the occasion as super leaders through charisma, intelligence, wisdom or some other parameter (Russell, 2011). However, Fiedler (1964) argued that there is no single best way to lead; instead the leaders' style should be selected according to the situation. Likewise, Hersey and Blanchard (1969) had similar ideas with Fiedler but proposed that it is possible for a leader to adapt his/her appropriate leadership style to the situation. However, a scholar named Jago (1982) has argued that good leaders are made not born. Anyone who has desire and willpower, they can become an effective leader. To become a good leader, one has to have high commitment because good leaders develop through a never ending process of self-study, education, training, workshop, conference, and experience.

2.2.2 Trait Theory

Trait theory is very similar to Great Man theory which assumes that people have innate and inherit certain qualities and traits that make them become great leaders (Wagner, 2008). Bass (1990a) also states that some specific personality

traits that people inherit from their births may lead them into leadership roles. These innate and instinctive personality traits or behavioral characteristics are inherent in the family and passed on genetically. Based on this assumption, some scholars try to investigate this theory and determine some specific traits that distinguish leaders from followers. Gordon Allport was one of the early advocates for trait theory and the study of traits. He and scholars after him identify physiological, demographic, intellectual, task-related and social characteristics with leader effectiveness (Russell, 2011).

2.2.3 Contingency Theory

The contingency theory was popular in the 1960s and 1970s believing that no leadership style is correct in all circumstances. Contingency theory is a class of behavioral theory which contends that there is no one best way of managing / leading and that a management / leadership style that is effective in one situation may not be successful in others (Fiedler, 1967). Most person-situation theorists had focused on how the person needs to be developed to best adapt to the needs of the situation while the contingency theory expanded on this concept, (Kalrgyrou & Woods, 2009). Wagner (2008) stressed that “this theory of leadership focuses on particular variables related to the environment that might determine which particular style of leadership is best suited for the situation” (p. 01).

2.2.4 Behavioral Theory

Contrast to the Great Man Theory and Trait Theory, Behavioral Theory strongly hypothesizes that great leaders are made, not born. This theory mainly focuses on the actions and the behavior of leaders not on personalities or characteristics they possess from birth. The belief of this theory is that the leader can become an effective leader through observation, teaching and experience and then he/she develops and applies new found knowledge in their workplace accordingly (Lewin, 1935). This theory focuses on how leaders behave in given situations with the thought that the leaders can be conditioned to respond appropriately when confronted with various situations (Russell, 2011).

2.2.5 Situational Theory

The situational Theory is very similar to Contingency Theory, emphasizing that no single best type of leadership style exists (Russell, 2011). The situational leadership theorists disagree with trait theorists (Kalargyrous & Woods, 2009). All situations are different so what people do depending on the real situation they are engaged According to Mischel (1968) the situation normally has a greater effect on a leader's action than his or her traits. This is because while traits may have an impressive stability over a period of time, they have little consistency across situations. Situational theory of

leadership strongly proposes that leaders cleverly choose the best course of action primarily based upon the situation variable because they believe that different styles of leadership may be more appropriate for certain types of working environment (Wagner, 2008). According to Russell (2011), “effective leadership is determined by the leader, the group being led and the tasks that are required to be completed.” This leadership theory identifies four different leadership styles: telling - directing what subordinates are to do; selling - providing the ideas to subordinates while giving them independence and autonomy to complete the task; participating - a leader interact with everyone about his ideas while he listens to feedback; and delegating - a leader fully delegates tasks to subordinates and allows them to work autonomously (Russell, 2011). This makes a number of leadership scholars think that situation theory of leadership is a much more accurate course of action than the trait theory of leadership (Shaema & Jain, 2013). Indeed, most of the researchers today agree and conclude that no one leadership style is right or suitable for every manager under all circumstances. Instead, situational theory was developed to indicate that the style to be used is mainly dependent upon such factors as the situation, the people, the task, the organization, and other environmental variables (Bolden, 2004). Although there are both critique and agreeableness with Great Man theory and Trait theory, some theorists believe that effective leaders must possess the combination of traits and talents that is suited to the situation.

2.2.6 Participative Theory

Participative leadership theory takes the input of others into account, encourages participation and contribution from followers, and helps group members feel secure and relevant in a decision-making process (Wagner, 2008). According to Russell (2011) “this type of leadership theory helps to give a sense of ownership to the subordinates with the intent to garner active collaborative participation within the organization”. Participative leadership is generally the most effective means of successfully leading people (Lewin, 1978). However, this type of leadership theory can lead to negative consequences if the leader often asks for opinions every time while making decision, then he or she ignores the subordinates input (Russell, 2011).

2.2.7 Transactional Theory (Management Theory)

Transactional theory focuses on the role of supervision, organization, and group performance. This theory bases on the system of reward and punishment, meaning that when employees are successful and/or doing the job well, they will be rewarded. In contrast, when employees fail to complete the assigned tasks, they will be reprimanded or punished (Wagner, 2008; Russell, 2011). Transactional leadership theory, contrasted with transformational leadership theory, leaders focus on work

result and gain commitment from followers on the basis of a straightforward exchange of pay, praise, punishment and security (Bolden, 2004). Bass (1990b) suggests that transactional leadership involves a leader-follower exchange relationship in which the follower receives some reward related to lower-order needs in return for compliance with the leader's expectations. The leader motivates the followers by appealing to their self-interest. This approach emphasizes contingent rewards or rewarding followers for meeting performance targets and taking action when tasks are not going as planned.

2.2.8 Transformational Theory (Relationship Theory)

According to Dubrin (1997) "The most influential leaders in the workplace are those who can transform the firm from poor to outstanding performance (p. 44)." Transformational theory focuses on the participation between leaders and followers. These leaders motivate, encourage, and inspire participation from the followers by demonstrating the importance of tasks to employees. These leaders have high ethical and moral standards (Wagner, 2008). James MacGregor Burns was the first theorist to put forward the concept of 'transforming leadership' (Bolden, 2004, p. 11). According to Burns (1978), "transforming leadership is a relationship of mutual stimulation and elevation that converts followers into leaders and may convert leaders into moral agents." He also suggested that "transforming leadership occurs when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality". Transforming leadership approach puts a heavy emphasis on the leaders' ability to motivate and empower his/her followers and also the moral dimension of leadership (Bolden, 2004). Likewise, according to Weinstein (2004 cited in Trash, 2012), "transformational leaders are concerned about the well-being of their employees." They encourage their employees and pay attention to each individual's need for achievement. Burn's concept of 'transformational leadership' was then developed into transformational leadership by Bass & Avolio (1994). Bass and Avolio (1994) states that:

The goal of transformational leadership is to 'transform' people and organizations in a literal sense – to change them in mind and heart; enlarge vision, insight, and understanding; clarify purposes; make behavior congruent with beliefs, principles, or values; and bring about changes that are permanent, self-perpetuating, and momentum building.

In contrast with the transactional leadership theory, transformational leadership theory involves a leader-follower exchange relationship in which the followers feel trust, loyalty, and respect toward the leader, and are motivated to do more than

originally expected. The leaders have a vision, provide inspiration, motivate by creating high expectations, and give consideration and respect to the followers (Bass, 1985).

People can choose to become leaders by themselves by learning leadership skills that are needed for leaders to work with people (Stogdill, 1989; Bass, 1990a).

Table 2.1 A Comparison of Transformational and Transactional Leadership

Transformational Leadership	Transactional Leadership
<ul style="list-style-type: none"> • Build on a man's need for meaning • Is preoccupied with purposes and values, morals, and ethics • Transcends daily affairs • Is orientated toward long-term goals without compromising human values and principles • Focuses more on missions and strategies • Releases human potential – identifying and developing new talent • Designs and redesigns jobs to make them meaningful and challenging • Aligns internal structures and systems to reinforce overarching values and goals 	<ul style="list-style-type: none"> • Build on man's need to get a job done and make a living • Is preoccupied with power and position, politics and perks • Is mired in daily affairs • Is short-term and hard data orientated • Focuses on tactical issues • Relies on human relations to lubricate human interactions • Follows and fulfills role expectations by striving to work effectively within current systems • Supports structures and systems that reinforce the bottom line, maximize efficiency, and guarantee short-term profits

Source: Covey (1992 cited in Bolden, 2004)

2.2.9 Great Events Theory

Some people become leaders by a crisis or important event. This crisis or event causes him or her to face against and rise to the occasion, which brings out extraordinary leadership qualities (Stogdill, 1989; Bass, 1990a). The occasion can raise the person to the leadership role due to the popularity he or she gains by managing the event or crisis successfully.

2.2.10 Theory X and Theory Y

McGregor (1960) proposed that management and leadership style is influenced by the negative assumptions about human nature. He summarized the two completely contrasting viewpoints of managers/leaders by two theories: theory X and theory Y. Theory X managers/leaders assume negative view of human nature, believing that the average person does not like working and they will avoid it if possible. Leaders/managers holding this viewpoint believe that coercion and control sometimes punishment is necessary to ensure that people work, and that workers have no desire for responsibility. In contrast, theory Y leaders/managers, on the other hand, believe that the expenditure of physical and mental effort in work is as natural as play or rest, and that the average human being, under proper and satisfactory conditions, learns not only to accept but to seek more responsibility. Such leaders/managers will endeavor to enhance their employees' capacity and morality to exercise and inspire a high level of participation, imagination, ingenuity, and creativity to help fine the solution of organizational problems. It can be seen that leaders/managers holding different assumptions will demonstrate and practice different approaches to leadership. Theory X leaders like preferring an autocratic style while theory Y leaders like preferring a participative style (McGregor, 1960).

Table 2.2 A Comparison of Theory X and Theory Y Leaders (McGregor, 1960)

Theory X leaders' Assumption	Theory Y Leaders' Assumption
<ol style="list-style-type: none"> 1. Employees generally dislike work, and if possible, they will avoid it. 2. Employees must be forced, controlled, or threatened with punishment to achieve desired goals. 3. Employees will avoid more responsibilities and seek for more formal direction whenever possible. 4. Most workers place security above all other factors associated with work and will display little ambition. 	<ol style="list-style-type: none"> 1. Employees think that working is the same as playing and resting. 2. Employees will like self-direct or self-control condition rather than being directed if they are committed to the clearly set objectives. 3. The average person can learn to accept, and seek for more responsibilities. 4. The ability to make good decision is widely dispersed throughout the population and is not necessarily the sole province of managers

Adapted from IAAP, 2009

2.3 Leadership Styles

Lewin (1935) identified three leadership styles that are very famous till today. The three styles are:

2.3.1 Autocratic Style

Autocratic style of leadership is characterized by the tight control of group activities and decisions made by the leader. In the autocratic style, the leader makes decisions without consulting subordinates or asking for participation from the followers (Lewin, 1935). After making decision this type of leaders announce the made decision to the group and tell the followers to do what he/she has decided (Bateman & Snell, 2004). In this style, leaders have absolute control and do not call for any input from subordinates.

2.3.2 Democratic Style

Democratic style of leadership strongly emphasizes on group participation and majority rule. In the democratic style, the leader involves the subordinates in the decision making, although the process for the final decision may vary. The leader consults his/her subordinates and encourages them and other stakeholders to actively participate in the process of making-decision or discussion in order for them to share experience and provide feedbacks to the management (Lewin, 1935). The leader seeks information, opinions, and preference, sometimes calls for a meeting with the group, leading discussions, and using consensus or majority vote to make the final decision (Bateman & Snell, 2004). This leadership style can motivate followers to work harder because it gives them a sense of belonging and ownership.

2.3.3 Laissez-Faire Style

The laissez-faire style involves very low levels of any kind of activity by the leader and minimizes the leader's involvement in decision-making (Lewin, 1935). The leader in this style makes no decision by delegating all responsibilities to subordinates, lets subordinates make their own decision so that they can have freedom on performing their tasks (Bateman & Snell, 2004).

The classic study comparing the two previous styles, autocratic and democratic, found that a democratic approach resulted in the most positive attitudes, whereas an autocratic approach resulted in somewhat higher performance. Additionally, a laissez-faire approach led to more negative attitudes and lower performance (Bateman & Snell, 2004). However, a democratic approach is not always appropriate. One side doesn't fit all. The leader must take it into account to ensure that which style can be effective for making decision. Whether a decision should be

made autocratically, democratically or in a laissez-faire way depends on the characteristics of the leader, the followers, and the situation. It is believed that different leaders behave in different ways, that there is no one set style of leading, that leadership is contingent on circumstances, and that what works in one situation may not work in another (Ford, 1991). Thus, attention to the situational approach must be carefully paid so that effective performance can be satisfied.

2.4 Traits of Leadership

2.4.1 Definitions of Trait

In the field of scholarly research on leadership, traits have been defined conceptually by the scholars. Trait approach refers to a leadership perspective that focuses on individual leaders and attempts to determine personal characteristics that great leaders share (Bateman & Snell, 2004). Trait is used broadly by most researchers to refer to people's general characteristics and attributes including capacities, motives, or pattern of behaviors (Shelly & Edwin, 1991). According to Zaccaro, Kemp, & Bader (2003), the term "Traits" has been "the source of considerable ambiguity and confusion in the literature, referring sometimes and variously to personality, temperaments, dispositions, and abilities as well as to any enduring quality of individual, including physical and demographic attributes" (p. 103). Traits are unseen dispositions that can affect the way people act (Hughes, Ginnett, and Curphy, 2006). Boleman defines traits as distinguishing personal characteristics while personality is a combination of traits that classifies an individual's behavior. Personality traits are useful concepts for explaining why people act fairly consistently from one situation to the next (Hughes, Ginnett, & Curphy, 2006). Similarly, Bateman and Snell (2004) define traits as "a distinguishing quality or personal characteristics." Gordon Allport, one of the traits psychologists, defines a trait as "a generalized and focalized neuropsychic system (peculiar to the individual) with the capacity to render many stimuli functionally equivalent and to initiate and guide consistent forms of adaptive and expressive behavior" (Allport, 1937, p. 295). Ryckman (1985) defines traits as "convenient constructs that are used to describe patterns of behaviors". Zaccaro, Kemp, & Bader (2003) defines the leader traits as "relatively stable and coherent integrations of personal characteristics that foster a consistent pattern of leadership performance across a variety of group and organizational situations" (p. 104). Wilson (2004) defines leader traits as "personality factors that are observable both within and outside the context of work and they are inner qualities or abilities that enable a leader to function effectively in fostering growth and organizational effectiveness" (p. 8-9). These special characteristics reflect a wide range of stable

individual differences, including personality, temperament, motives, cognitive abilities, skills, and expertise (Zaccaro, Kemp & Bader, 2003). Traits refer to recurring regularities or trends in a person's behavior (Hogan, 1991). According to Bateman & Snell (2004) traits is a distinguishing characteristic such as a habit, manner, or peculiarity. Sothap (2005) defines traits as special personal characteristics including basic personality related to temperament, needs, drive, and values while personal characteristics refer to the behaviors a person behave in a different situation such as self-confidence, emotional maturity, emotional stability, energy level, and stress tolerance. Daft (2001) defines traits as the most important combination of personal characteristics including self-confidence, integrity, and drive while George and Jones (1996) define traits as personality factors that identify people's temperaments connected to feeling, thinking, and acting such as shy, critical, and easy-going. Yukl (2006) defined traits as a variety of individual attributes including aspects of personality, needs, motives, and values.

Based on a number of definitions above, traits can be defined as personality factors and attributes such as habits, manners, capacities, motives, temperaments, patterns of behaviors, and personal characteristics that can be observed both within and outside the context of work of individuals. They are distinguishing personal characteristics that a person possesses and these personal characteristics can be innate or gradually developed through work or experience.

2.4.2 Trait Controversy

Over the past several years, one of the most important contributions psychology has made to the field of business has been in determining the key traits of acknowledged leaders. Psychological tests have been used to determine what characteristics are most commonly noted among the most successful leaders. As a result, the list of traits (combinations of personalities and characteristics) can be used for development purposes to help leaders/managers gain insight and develop their leadership qualities. Personal traits play a major role in determining who will and will not be comfortable leading others (Cattell, 2005). Some studies conclude that positive traits can differentiate effective leaders from ineffective leaders (Gibson, et. al., 2006). From 1904-1948, more than one hundred leadership trait studies were conducted by scholars (Bateman & Snell, 2004). The researchers at the end of that period concluded that no particular set of traits is necessary for a person to become an effective leader. However, some research on traits kept going. The latter researchers found that although no traits ensure leadership success, certain characteristics are potentially useful (Bateman & Snell, 2004). The study of leader

traits has along and controversial history. While research shows that the possession of the certain traits of some leaders alone does not ensure leadership success, there is still some evident that the effective and successful leaders are different from other people in certain respect (Shelly & Edwin, 1991). Traits theory assumes that people are born with inherit traits that can make them particularly suited to leadership, make them different from average person in terms of personal traits such as intelligence, perseverance, ambition, and so on (IAAP, 2009). For years, researchers have been trying to answer the questions. What does it take to be a successful leader? What specific traits that can make a person a good leader? And what is the most effective leadership style? Early studies were based a number of main theories – Great man theories, Trait theory, focusing on qualities of the leader, and behavior theory, focusing on leadership actions and other popular theories related to the study of leadership. The current perspective of research on leadership traits is that some personality characteristic - many of which a person need not be born with but can strive to acquire - do distinguish effective leaders from others (Bateman & Snell, 2004).

2.4.3 Concepts and Theories Related to Leadership Traits of Effective Administrators

Leadership is one of those nebulous terms- you hear it all the time and everywhere but it has various and numerous definitions (Farrel, 2011). Being a leader today is different from what it was 10 or even 5 years ago due to a fast pace of change and many more demands in today's workplace (Hewes, 2014). Every time when we are asked to think of a leader, someone who inspires us to do our best every day, a wide variety of different people come to mind (Deen, 2013). Some people have wondered about whether leaders are made or born. Some research results suggest that some personality traits are closely associated with leader effectiveness (Gibson, et. al., 2006). The controversy has been long in doubt so far. However, true leaders ignore such arguments and instead concentrate on developing the leadership qualities that are necessary for them to succeed (Shead, 2016). Good leaders clearly know how to engage their employees and challenge them to follow and try to do their best work in order to achieve a set goal (Farrell, 2011). According to Farrell (2011), "Great leaders are aware of their own style and make the effort to learn how their style actually comes across to their team. They learn to flex their leadership style to individual team members so that they communicate and behave in ways that motivate and inspire." Some leaders have a certain set of skills and personal characteristics that make them a good leader while others learn and develop their personality traits by practice and repetition. Research has so far identified more than fifty leadership qualities or traits that are very important to great

leaders. Among those traits, some seem to stand out as being more important than others (Farrell, 2011). Likewise, the traits that make a good leader can also vary depending mainly on the organization, team, manager, situation and environment (Farrel, 2011).

Tepsaeng (1999) cited in Panadda (2013) contends that professional administrators must possess necessary qualities namely 20Ps such as; 1) Psychology- understanding the person's feeling, thinking and emotion. 2) Personality- having appropriate personalities including dressing, behaving, facial expression, positioning, and good habits and manner. 3) Pioneer- being brave to start and take risk. 4) Poster- being good at public relation and interpersonal skill. 5) Parent- being a good parent of subordinates with goodness and neutral. 6) Period- being punctual, caring about the deadline, and as a role model for followers. 7) Pacific- being well-balanced, patient, and calm. 8) Pleasure- having a sense of humor, getting rid of stress and tension in the organization. 9) Prudent- being long sighted and visionary, and be up-to-date with global situation. 10) Principle- based on principles. 11) Perfect- perfecting the tasks, fulfilling the responsibilities with desired results. 12) Point- working toward achieving organizational goals and objectives. 13) Plan- planning work and tasks effectively. 14) Pay- delegating work or tasks to subordinates and paying and rewarding them for outstanding performance, and motivating and encouraging followers to contribute to the organization. 15) Participation- participating and encouraging the followers to take part in performing organization tasks. 16) Pundit- having broad knowledge of work in the organization and being able to manage and lead the followers to perform the tasks well. 17) Politic- being knowledgeable and aware of the country politic. 18) Poet- Being good at speaking and writing particularly being competence in phraseology both spoken and written. 19) Perception- being insightful, predicting and previewing the situation and 20) Psycho- being professionalism, and enlighten.

Similarly, Sergiovanni (1982) proposed a 10-P model of quality leadership described in the following; 1) Prerequisites: Refer to the leadership skills needed to develop and maintain basic leadership competence such as mastering and using competency leadership theories, conflict management tactics, team management, shared decision-making and so on. 2) Perspective: Refers to the ability to be able to differentiate between the tactical and strategic and to understand how they are related. Once a leader has long perspectives, he or she will bring broader, long-range of view and vision to his or her organization. 3) Principles: Refer to the leader who is self-disciplined, integrity, rule-based performance. 4) Platform- Refers to the articulation of one's principle into an operational framework and decision-making made based on

the platform. 5) Politics: Good leaders should possess management skills, be able to use power to influence work performance of the subordinates so that objectives can be achieved. 6) Purposing: Effective leaders should promote the day-to-day activities of people at work, work toward achieving organizational objectives, and reflect people's contribution, efforts, success, or failures. 7) Planning: Leaders should plan work activities (short or long term planning) to be consistent with the objectives and time frame. 8) Persisting: Refers to the intention leaders give to important principles, issues, and outcomes. 9) Peopling: Leaders should treat people with care, respect and dignity, and motivate them to work toward the goals. Peopling is a key strategic requirement of quality leadership. 10) Patriotism: Patriotism is a key to viewing leadership as cultural expression. In effective organizations, people share a set of common beliefs, reach a set of common agreements, and govern what will be done and how it will be done. Patriots are committed to purposes, working hard, believing what they are doing, feeling a sense of excitement, finding their contributions to the organization meaningful. The ten principles suggest a climate and commitment to work that goes well beyond mere competition.

Dubrin (1995) divided the personal characteristics determining leadership effectiveness into two groups. The first is general personality traits including self-confidence, honesty, integrity, and credibility, dominance, extroversion, assertiveness, emotional stability, enthusiasm, sense of humor, warmth, high tolerance for frustration, self-awareness and self-objectivity. The second group includes task-related personality traits consisting of initiative, sensitivity to others and empathy, flexibility and adaptability, internal locus of control, courage, and resiliency.

Zaccaro (2001) proposes a number of traits for effective leaders including caring, empathetic, diplomatic, tactful, technically expert, well-prepared, dependable, reliable, decisive, directive, task-oriented, work-focused, politically astute, innovative, and clever (p. 140).

Gates (2011) stressed that effective leaders must possess ability to lead by example, in attempt to gain respect and confidence of his/her fellow group members. Moreover, a good leader must possess and develop such important traits as; 1) Proactive-thinking ahead and work to avoid problems before they arise. 2) Flexible/Adaptable-adapting to new surroundings and situations and doing his or her best to adjust. 3) A good communicator - listening, willing to understand the needs and desires of the members. 4) Respectful-showing respect or paying respect will ultimately bring it back. 5) Confident-being proud of the organization. 6) Enthusiastic-Being excited and motivated make the followers you. 7) Open-minded- Considering all ideas and

opinions when making decisions. 8) Resourceful-Utilizing the resources available to you and the organization. 9) Rewarding- recognizing the effort of others and giving rewards or praises. 10) Well-educated- Develop yourself both in formal or informal ways. 11) Open to change- Taking into all points of views and willing to change. 12) Interested in feedback- accepting feedbacks from everyone inside or outside the organizations. 13) Evaluation- Assessing the events or the programs that are not working. 14) Organized- Preparing for meeting events and being well-organized. 15) Consistent-Being consistent with every situation so that you can gain confidence and respect from your subordinates. And 16) Delegator- Practicing delegating work to members can boost followers' motivation (Gates, 2011).

Economy (2014) once contended that many leaders are competent, but few qualify as remarkable. He also provided nine leadership traits that are very important for extraordinary leaders. The traits are; 1) Awareness- leaders must understand the nature of differences between people in the organization and learn to accept it. 2) Decisiveness- all leaders must dare to make tough decision. 3) Empathy- leaders must keep in mind that praises have to be provided in public while blames in private. 4) Accountability- leaders must be responsible for everyone's performance as well as their own no matter good or bad results. 5) Confidence- Confidence is contagious. 6) Optimism- the very best leaders are a source of energy, they seem to have all solutions while the problems arise, and they are hopeful and helpful. 7) Honesty- strong leaders treat people the way they want to be treated. Good leaders must be ethical, reliable, and integrity. 8) Focus- Staying focus on the tasks, planning ahead, well-organized and well-prepared. 9) Inspiration- Communicating clearly, concisely to everyone and motivating them to reach expectation (Economy, 2014).

Adam & Bornstein (2016) summarized twenty two qualities that make a person such a great leader as; 1) focus-staying focus on every task; 2) Confidence- confidence is a key to success. 3) Transparency- being open and authentic in every situation without wearing a mask. 4) Integrity- integrity is a key for leaders to gain trust and respect. 5) Inspiration- leaders are a powerful drive that can motivate the followers to work toward the goals. 6) Passion- loving what you are doing. 7) Innovation- innovation is essential not only for success but also survival. 8) Patient- patient is really courage and that is meant to test your commitment to your cause. 9) Stoicism- accepting and anticipating in a hardship, failure, and mistakes and finding ways to solve and improve them. 10) Wonkiness- being able to analyze and diagnose the problems. 11) Authenticity- learning from others, reading autobiographies of your favorite leaders so that you can improve yourself. 12) Open-mindedness- being an open mind and being

flexible and adjusting if necessary. 13) Decisiveness- making smart and prompt decision when necessary. 14) Personableness - leaders must be likable and personable. 15) Empowerment - delegating responsibilities and empowering your teamwork to perform the tasks. 16) Positivity- thinking positively and optimistically and believing impossible possible. 17) Generosity- being kind to everyone and treating them as a collective whole. 18) Persistence- persistence beats resistance. Leaders must persist no matter what. 19) Insightfulness- being insightful is very important quality for good leaders. 20) Communication- communicating in a friendly way with subordinates and listening to them to find out what they need and want and what their thoughts and ideas are. 21) Accountability- accountability is not only responsibility but it also takes a next step to make it right. And 22) Restlessness- it takes real leadership to find the strengths within each person on your team and then willing to look outside to plug the gaps.

According to Trewatha and Newport (1982) the leadership traits of administrators are divided into four categories as the following; 1) Physical characteristics: Refer to height, weight, appearance, strength, and physical tolerance. 2) Personal characteristics: Refer to ambitious, self-confident, faithful, effort and docile, and imaginative. 3) Social characteristics: Refer to sympathetic, tactful, trustful, social status, and participator. 4) Personal characteristics: Refer to communication, wisdom, judgment, intelligence, competence, achievement and responsibility.

Stogdill (1974) suggested some positive traits that can help to make a person a good leader. Those traits are adaptable, intelligence, insight, initiative, alertness, sociable, ambitious and achievement-orientated, assertive, cooperative, decisive, persistent, self-confident, tolerant, responsibility, dependable, influential, problem-solving, and energetic. He also suggested some important skills that a good manager/leader needs to possess such as clever (intelligent), conceptually skilled, creative, diplomatic and tactful, fluent in speaking, knowledgeable about group task, organized (administrative ability), persuasive, and socially skilled.

Bass (1990a) then placed Stogdill's attributes into six categories; 1) Physical characteristics: Leaders should be energetic, mature, good appearance, appropriate height and weight. 2) Social background: Leaders should be well-educated and hold a social status and wealthy. 3) Intelligence and ability: Leaders should be intelligent, knowledgeable, good judgment and decisiveness, and fluency in speaking and writing. 4) Personality: Leaders should be adaptable, adjustable, aggressive, alert, dominant, emotional-balanced, independent, tough-minded, creative, frank, ethical, resourceful, self-confident, stable, and tolerance of stress. 5) Task-related characteristics: Leaders should have desire to excel, high responsibility, initiative, persistence, goal-oriented, and

task-oriented. And 6) Social characteristics: Leaders should be able to enlist cooperation, administration, attractiveness, nurturance, popularity, interpersonal skill, sociable, and tact.

Kouzes & Posner (2002) have long conducted research since the 1980's to determine what characteristics or traits people most admire in their leaders. Then the twenty found traits have been listed in its order of priority. The 20 characteristics listed are honest, forward-looking, competent, inspiring, intelligent, fair-minded, broad-minded, supportive, straightforward, dependable, cooperative, determined, imaginative, ambitious, courageous, caring, mature, loyal, self-controlled, and independent (Kouzes & Posner, 2002).

Dubrin (1997) proposed seventeen traits for effective leaders namely emotional, goal-oriented, visionary, energetic, caring, confident, friendly, proud, respectful, trustful, inspirational, engaged, fair treatment, considerate, courageous, risk-taking, and innovative.

Northouse (2001) summarized several studies and listed down the following common traits such as intelligence, self-confidence, dominant personality, high expectation, strong role model, competence, determination, integrity, and sociability.

Vangundy (1998) listed a list of potentially successful leadership traits that every leader must possess or develop. The traits are creativity, ambition, strong values, cleverness, motivation, trustworthiness, imagination, empathy, sense of humor, open-mindedness, persistence, confidence, organization, calmness, intelligence, intuition, adaptability, likeability, dedication, tolerance, loyalty, goal-oriented, passion, commitment (Vangundy, 1998).

Sothimon (2007) revised literature from various sources related to leadership characteristics. He then contended that effective leaders must possess and develop personal characteristics that can help themselves well lead subordinates. He compiled the most important traits such as well-educated, experienced, accountable, patient, sharing, advisory, open to new ideas, endless learning, justice, honest, being a model, physically and mentally strong, problem solving, decisive, popular, rewarding and encouraging, protective, thrifty, integrity, visionary, initiative, ethical, being obligatory, strategic, communication, energetic, democratic, confidential, be informed, keeping promise, brave, flexible, self-disciplined, and self-confident.

Keith (2012) provided fourteen useful and effective leadership traits that he used while he was working in a Marines Corps. Those fourteen traits are justice, judgment, decisiveness, integrity, dependability, tact, initiative, enthusiasm, bearing, unselfishness, courage, knowledge, loyalty, and endurance. In order to

remind himself about these necessary traits, he created an acronym of the traits as JJ DID TIE BUCKLE (Keith, 2012).

Ricketts (2009) suggested that effective leadership often relies upon certain traits held by the leader. According to Ricketts (2009), effective leaders tend to be more sociable, aggressive, original (creative), popular, humorous, intelligent, alert, insightful, responsible, able to take initiative, persistent and self-confident. However, Ricketts argues that:

These leadership traits are important, but it should be noted that individuals do not become leaders solely because they possess certain traits. More accurately, the traits a leader possesses need to be relevant to the situation in which the leader is performing. So leadership effectiveness is based upon the working relationship between the leader and other group members or the appropriateness of the fit between the leader and followers.

Mannings & Curtis (2003) provided ten leadership qualities that can help leaders become effective. Those are vision, ability, enthusiasm, stability, concern of others, self-confidence, persistence, vitality, charisma, and integrity.

Bateman & Snell (2004) contends that certain qualities belong potentially to everyone but effective leaders must possess these qualities to an exceptional degree. The qualities that are necessary for outstanding leaders are vision, ability, enthusiasm, stability, concern for others, knowledge of business, motivation, drive, self-confidence, persistence, vitality, charisma, and integrity (Bateman & Snell, 2004).

According to Barnard (1996) good leaders must have the following qualities; 1) Vitality and endurance: the ability to adapt and tolerate with the surrounding environment, actively work with the different working atmosphere and people, and have desire to learn from people and experience. 2) Decisiveness: the ability to make sound decision at the right time with desired results, and be self-confident. 3) Persuasiveness: the ability to persuade the followers with good manner so that they can jointly work to reach goals, honest, faithful, and literate with spoken and written language. 4) Responsibility: the ability to response to the situation, perform the tasks carefully, work hard toward the goals, and be willing to accept the blames while making mistakes with virtue and morality. 5) Intellectual capacity: the ability to be up-to-date with the news, events, and information related to the business and prepare for changes as well as knowledge of business.

Deen (2013) summarized ten useful leadership traits that effective leaders must possess and develop. Those traits are honesty, ability to delegate,

ability to communicate, sense of humor, confidence, commitment, positive attitude, creativity, ability to inspire, and intuition.

House & Aditya (1997) provided the nine traits that separate leaders from others. Those traits are dominance, high energy, self-confidence, locus of control, stability, integrity, intelligence, flexibility, and sensitive to others. Great leaders cannot be strong in all of the nine traits. However, great leaders must know strengths and weakness of themselves and take gradual step to enhance the strengths and improve the weaknesses.

ACCA (2009) summarized the traits that are essential for good leaders. Those are judgment, drive, fairness, energy, initiative, human relation skill, ambition, emotional stability, integrity, decisiveness, dedication, co-operation, foresight, dependability, objectivity. To make a leader more effective, traits can be accompanied by certain skills, learned abilities that a leader has learned and developed. Those are entrepreneurship skill, interpersonal skill, decision-making skill, problem-solving skill, time-management and personal organization, and self-development skill (ACCA, 2009).

Bennis & Goldsmith (1989) proposed six important traits for great leaders. Those traits are vision, passion, integrity, trust, curiosity, daring.

Musaazi (1982) also contends that personal characteristics or desired traits of educational administrators are intelligence, self-confident, sociable, accepting new ideas, professional view, morality and frank, modesty, good health, knowledge, administration.

Lussier & Achua (2004) have identified the traits of effective leaders such as dominance, high energy, self-confidence, locus of control, stability, integrity, intelligence, flexibility, sensitive to others (p. 38-41).

Navikan (1998) conducted a study on leadership traits and classified them into six significant categories; 1) Physical characteristics: Physical characteristics such as age, height, weight, strong built are partial factors that can help leaders become effective. 2) Social background: Refer to education, social and economic status. 3) Intelligence: Refers to judgment, determined, broad knowledge, and diplomacy. 4) Personality: Refers to alertness, enthusiastic, hard-working, self-confidence, frank, responsible, and trustworthy. 5) Professional characteristics: Refer to task-oriented, achievement-oriented, high responsible, initiative, and goal-oriented. And 6) Social characteristics: Refer to participation, enthusiastic, approachable, interrelation, team work, human relation, unity, trustful, and reliable.

Gardner (1989) published a study of a large number of leaders and concluded that there are some attributes that appear to make a leader successful in

any situation. These traits include physical vitality and stamina, intelligence and action-oriented judgment, eagerness to accept responsibility, task competence, understanding of followers and their needs, skill in dealing with people, need for achievement, capacity to motivate people, courage and resolution, trustworthiness, decisiveness, self-confidence, assertiveness, and adaptability/ flexibility.

2.4.4 Research Findings Related to Leadership Traits of Effective Administrators

So far many scholars interested in leadership have sought to understand more deeply about leadership and leadership development by gradually studying the leadership traits of administrators for making sure that possessing positive traits and that developing traits accordingly can really help an administrators become effective in managing and leading his or her institution.

Marques (2007), after reviewing the documents related to six renowned leaders while teaching his students the leadership course, concludes that the traits that are considered to be important in leadership are confidence, hard-work, courage, empathy for subordinates, communication skills, strategic insight and vision, appropriate intelligence, determination, and resilience (p. 121).

Zepp (2011) studied the perceptions of leadership in three professions in Cambodia by selecting three different groups of respondents from three different professions: provincial leaders, teachers, and farmers. He then listed eight initiated traits for the three professions to rank based on their preferences. The traits are persistence, confidence, honesty, friendliness, broad vision, dependability, good speaker, and intelligence. The results show clearly that there are significant differences between mean scores ranked by the three professions. However, the three groups ranked high scores for honesty (Zepp, 2011).

Mothilal (2010) conducted a study on the values, personal traits and characteristics of leaders who get things done by interviewing African business leaders found that in order to get things done, leaders should possess a number of traits such as drive-refers to energy, ambition and focus; consciousness-refers to honesty, integrity, and ethics; self-confidence; openness-refers to flexibility, adaptability, and innovation; charisma-refers to vision, inspiring, good communication skills, and persuasive; and emotional intelligence-refers to balance of emotion, self-control, consistency, caring, empathy, consultative, approachable, and listening skills.

One of the most widely reported studies of leadership traits was conducted by Edwin Gheselli, who evaluated over 300 managers and 90 different businesses in the United States. Identified six traits as being important for effective leadership: need for achievement – seeking responsibility, working hard to succeed;

intelligence - using good judgment, having good reasoning and thinking capacity; decisiveness - making difficult decisions without undue hesitation; self-confidence - having a positive self-image as a capable and effective person; Initiative - being a self-starter; getting jobs done with minimal supervision; supervisory ability - getting the jobs done through others.

Lekganyane & Oosthuizen (2006) conducted a survey with employees on middle management level in Eskom, a major electricity supplier in South Africa. The respondents participated in his survey possess the following traits which are presented in sequence of dominance: integrity, intelligence, high energy, ability, locus of self-control, self-confidence, stability, flexibility, and sensitive to others.

Wilson (2004) conducted a study related to the traits and behaviors of a leader. He found that effective developmental leaders possess a number of traits. The traits found in his study are classified into six categories; 1) Dedicated - hard-working, productive, focused, dedicated, efficient/effective, prepared, dependable, willingness, helpful, coherent, organized, consistent, persistent, teach by doing and disciplined. 2) practical - not a micromanager, non-abrasive tone, perceptive, pragmatic, practical, down to earth, active, enduring, realistic, rational and tact. 3) cooperative - loyalty, justice, patient demeanor, agreeable, honest, calm and poised speech, and contemporary thinking. 4) assertive - powerful/strong, competitive, authoritative, control, assertive, opportunistic, fast-thinking, bold, driven, poise, fast-thinking, and outspoken. 5) personable - engaging personality, characteristic, passionate, sociable, personable, interesting, eloquent, charismatic, and energetic. 6) analytical - complex-thinker, analytical, concentrated, and broad skills. In his research, he also found that a developmental leader would possess the following behaviors: advisor, charismatic, competitive, delegator, developer, focused, and supportive.

Longsombun (2009) conducted a study on administrators' traits affecting community participation in schools under the jurisdiction of Nakhonpathom educational service area office 2. He suggested that administrators must instill themselves with such traits as competence, advisory, role model, persuasion, participation, attractive, well-educated, well-trained, self-development, self-confidence, decisiveness, initiative, enthusiastic, responsible, well-balanced, calm, carefulness, self-controlled, sacrifice, devoted, strive, patience, problem-solving.

2.4.5 Effective Leadership

There have been many studies focusing on effective leadership so far. Researchers, experts, theorists, psychologists, book authors have provided a handful of definitions in terms of effective leadership. The significance of effective leadership

for the successful operation of schools and colleges is widely acknowledged in this century (Bush, 2008). A starting point in becoming an effective leader is to understand what leadership and being a leader are all about (Dubrin, 1997). Harrell (2003) describes effective leadership as “a by-product of having and demonstrating the right attitudes. The timeless characteristics of honesty, integrity, and accountability are what inspire people to trust and follow their leaders – not because that person is their boss, (p. vii).” A leader means someone who has the authority or power to control a group of people and get it organized for a particular task or goal, who has a clear vision for the welfare of his organization and development of his organization while leadership is that quality of leader by which he leads the team or his group (Bass, 1985). Leaders are self-confident and inspire self-confident in others; leaders project personal dynamism, know how to speak in a way that move other to action, know how to nurture and coach others, help others to be more creative, and help build teamwork among their followers (Dubrin, 1997). According to Bateman & Snell (2004) “Outstanding leaders combines good strategic substances and effective process to formulate and implement strategies that produce results and sustainable competitive advantage (p. 366)”. A characteristic of a great leader is a person who sets up and pushes the organization for success at all levels following his or her departure (Collins, 2001). Leadership is a process of influencing others’ actions in achieving desirable ends and leaders are those who shape the goals, motivations, and actions of others (Bush, 2008). Steve Job’s leadership style provides two main areas for effective leaders: (i) Persistence is the key, (ii) Innovation brings leadership. Steve Jobs believed that “persistence is the key” towards the successfulness of any leader. His second belief indicated that “innovation brings leadership” meaning that the leader must engage his team to be an important part of decision making and create a sense of belongingness in team members. The study conducted by Collins (2001) identified the effective leader, who catalyzes commitment to a compelling vision and higher performance standards as well as the executive leader, who goes beyond performance standards and building enduring greatness. Effective leaders have ability to inspire the followers in certain ways. According to Michael (2007), business leaders can inspire others by imagination- the ability to bring about the new, thinking beyond themselves and considering others, giving a sense of meaning and purpose to others in the organization, developing the vision and building a consensus, and gaining commitment and engaging others. Effective leadership is not happenstance; it follows specific rules revolving around these four basic areas of responsibility such as directing, coaching,

supporting and delegating (Barnard, 1996). Leadership skills can be learned and developed, even if an individual does not have a natural tendency toward leadership. More importantly, once learned and applied, these rules make a leader more effective and productive as he or she learns to work, direct and guide others toward the mutual accomplishment of goals and objectives. To be effective, leaders must play certain roles such as communicators, strategic thinkers, decision-makers, team-builders, and image-builder (Barnard, 1996). Davies and Davies cited in Eacott (2007) established a list of significant characteristics that successful strategic leaders possessed. These are a dissatisfaction or restlessness with the present, the ability to prioritize their own strategic thinking and learning, the ability to create mental models to frame their own understanding and practice, and powerful personal and professional networks. Scott et. al. (2012) lists the top fifteen capabilities on importance for effective leadership of education for sustainability (EfS): 1) having energy, passion, and enthusiasm for EfS, 2) being willing to give credits to others. 3) empathizing and working productively with diversity, 4) Being transparent and honest in dealing with others, 5) thinking literally and creatively, 6) being true to one's values and ethics, 7) listening to different points of view before coming to a decision, 8) understanding personal strengths and limitations, 9) time management skills, 10) persevering, 11) learning from errors, 12) learning from experience, 13) remaining calm when under pressure or the unexpected happens, 14) being able to make effective presentations to different groups, and 15) identifying from a mass of information the core issue/opportunity (p. 19). Effective leadership is contingent on matching a leader's style to the right setting (Fiedler, 1978).

2.4.6 Summary

Personality traits are useful concepts for explaining why people act fairly consistently from one situation to the next so personality traits may play an increasingly important role in a leader's behavior (Hughes Ginnett & Curphy, 2006). Both trait and behavior approaches to leadership have helped us better understand the dynamics of leadership situation and it also discovers complex multiplicative and curvilinear relationship with leadership outcomes. Successful leaders must be very ambitious about what they are doing and they must also have a strong desire to be ahead and to achieve their goals. To accomplish their set goals, leaders must possess certain characteristics that make them more unique than others.

Although some traits do not identify actual or potential leaders in every instance, they do appear to have sufficient validity as predictors to warrant continued study (Gibson, 2006). Moreover, although the trait-based perspective

was virtually rejected for nearly 40 years, over the last few decades, some researchers in the field have succeeded in demonstrating that traits do in fact add to the prediction of leader effectiveness (Mothilal, 2010). However, certain traits and behaviors may be important in some situations but may be irrelevant or damaging in others (Ivancevich & Matteson, 1999). Likewise, different leaders behave in different ways; there is no one set style of leading; leadership is contingent on circumstance; and what works in one situation may not work another (Ford, 1991).

There is a dearth of studies in the current leadership literature that considers how unique combinations of certain leadership traits operate to impact leadership effectiveness (Mathilal, 2010). Many concepts, theories and research reviewed in the literature in this study show definite trends in the study and perceptions of who a leader is and what leadership is. Although many concepts, theories capture the idea of an effective leader, the researcher was not able to find the key traits and behaviors that can ensure the effectiveness of leadership.

There is a growing recognition that the quality of leaders and effective leadership is critical if educational institutions are to produce the best possible learning outcomes for their learners, and their stakeholders (Bush, 2008). Leadership has become an essential quality for educational institutions to allow them to develop a completely new self-understanding, to be strongly present in the outside world, capable of defending their own interests as well as being reactive to inside demands and needs (EUA, 2007). Effective educational leaders need necessary skills in order to inspire their followers. They also need to play certain roles so that they can lead their subordinates to accomplish the organization goals. Effective educational leaders must be visionary, innovative, goal-oriented, critical thinking. To become effective leaders in all fields, people need to learn and develop themselves gradually; they can instill themselves with necessary knowledge and skills. Moreover, they must install positive traits that can help them become good leaders in their organization. Furthermore, to be effective in educational administration in all levels educational administrators must be aware of internal and external factors that can affect the effectiveness of administration since good education institutions can be impacted by a number of factors such as social environment, human resources, facilities, technology, budget and so on. This creates a need for the researcher to identify key personal characteristics that an effective educational leader needs to possess and develop so that he or she can lead the institutions for high and desire performance.

After having studied and analyzed the concepts and theories from printed books, journals, electronic sources, and research findings related to the leadership traits of administrators, the researcher found 224 leadership traits of administrators as shown in the following initial table.



Table 2.3 Initial list of leadership traits of administrators summarized from studying and analyzing the concepts and theories from various sources such as printed books, journals, electronic sources, and research findings

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																					
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33				
	DuBrin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tiwedra & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBrin (1997)	Northouse (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)				
Appropriate height						√		√																		√											
Appropriate weight						√		√																		√											
Good built																										√											
Mature								√	√																	√											
Good Appearance					√		√																														
Physical appearance																																				√	
Active																																				√	
Energetic							√	√		√			√							√	√				√				√			√	√				
Vitality																√	√	√									√										
Powerful																																		√			
Physical Strength					√																															√	
Resiliency	√																											√									
Good health													√											√													
Physical Fitness																																				√	
																																					researcher
																																					Sub-elements

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																						
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	researcher	Sub-elements			
	DuBrin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tiwadeha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBrin (1997)	Northoise (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothilal (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)					
Endurance														√				√																				
Tolerance	√					√	√	√			√	√						√																√				
bearing														√																								
Stoicalism					√																																	
Patience					√								√																				√	√	√			
Emotional-balanced								√																						√								
Locus of control	√																			√					√				√		√							
Well-balanced																																			√			
Self-controlled									√																						√	√	√	√				
Consistence			√																										√		√							
Calmness												√																				√	√					
Emotional stability	√																																					
Stable								√								√	√				√			√						√						√		
Adaptable	√		√				√	√				√															√		√									

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																								
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	researcher	Sub-elements					
	DuBrin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tievaeha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBrin (1997)	Northoise (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)							
Adjustable								√																																
Open to change				√														√																						
Flexible	√		√										√							√	√			√						√		√				√				
High expectation											√																													
Positivity					√																																			
Optimism				√																																		√		
Passion					√							√																												
Passionate																						√															√			
Compassionate																																								
Sympathy						√																																√		
Sensitive to others	√																			√				√		√						√								
Empathy	√	√		√								√																√		√								√		
Concern for others																	√	√																						
Caring		√							√	√																					√							√		

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																																			
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	researcher	Sub-elements																
	DuBirin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstirn (2016)	Tiwedha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBirin (1997)	Northoise (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)																		
Strong value												√																																							
Positive self-image																																																			
Positive attitude																				√																															
<u>Integrity</u>	√			√	√						√		√	√		√	√			√	√	√			√							√		√								√									
Respectful			√							√																																									
Morality																								√																											
<u>Ethical</u>				√		√							√																					√										√							
Unselfishness																																																			
Sharing														√																																					
<u>Generosity</u>					√																																									√					
Down to earth																																																			
Modesty																								√																											
<u>Humility</u>																																		√											√						
Warmth	√																																																		
Extroversion	√																																																		
Friendly											√																																								

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																						
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	researcher	Sub-elements			
	DuBrin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tiwadeha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBrin (1997)	Northoise (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)					
Enthusiasm	√												√		√	√									√								√	√				
Self-disciplined												√																										
Disciplined																																	√	√				
faithful					√													√																				
Frank							√															√			√													
Loyal								√			√		√																				√					
Keeping promise												√																										
Straightforward								√																														
Honest	√			√				√				√						√	√									√	√			√		√	√			
Transparency					√																																	
Outspoken																																	√					
Openness																													√							√		
Credibility	√																																					
Confidential												√																										
Trustworthy											√															√	√											
Trustful					√				√													√			√											√		

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																									
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	researcher	Sub-elements						
	DuBryn (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tiwadeha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBryn (1997)	Northoise (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)								
Fair-minded								√	√																																
Justice													√	√																					√						
Fairness																					√																	√			
Daring																						√																			
Brave													√																												
Courageous	√							√	√					√													√	√											√		
Aggressive								√								√																									
Opportunistic																																				√					
Risk-taking										√																															
Competitiveness																																					√				
Ambition						√	√		√			√									√																			√	
Proud										√																															
Assertiveness	√						√																						√								√			√	
Independence								√	√																												√				
Bold																																						√			
Self-Confidence	√		√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√				√	√	√	√	√	√	√	√	√	√	√				√	√		

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																								
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33							
	DuBrin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tiwadeha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBrin (1997)	Northouse (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)	researcher	Sub-elements					
Humorous															✓																									
Sense of Humor	✓										✓								✓																			✓		
Tough-minded								✓																																
Pragmatic																																								
Practical																																					✓			
Realistic																																				✓		✓		
Well-educated			✓										✓													✓											✓	✓		
Social status						✓		✓																		✓														
Influential							✓																																	
Dominance	✓							✓			✓									✓				✓														✓		
Economic status																										✓														
Wealthy								✓																															✓	
Attractive								✓																																
Interesting																																					✓			
Likeability												✓																												

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																					
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	researcher	Sub-elements		
	DuBrin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tiwadeha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBrin (1997)	Northoise (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)				
Personable					√																														√	√	
Popularity								√					√		√																				√		√
Charismatic																√	√													√				√		√	
Interrelation																										√											
Interpersonal skill								√													√																
Human relation																					√						√	√									√
Approachable																										√				√							
Social Skills							√																														
Sociable							√	√			√				√								√											√			√
Eloquent																															√						
Diplomatic		√					√																				√										√
Good speaker							√	√																							√						
Listening skill								√																							√						
Communication			√		√	√							√						√	√								√		√							√

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																								
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	researcher	Sub-elements					
	DuBirin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tiweaha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBirin (1997)	Northoise (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)							
Devoted																																			√					
Sacrifice																																				√				
<u>Dedicated</u>												√									√													√		√				
Willingness																																				√				
Drive																	√				√														√					
<u>Commitment</u>												√							√																		√			
Determined								√		√																	√	√												
<u>Decisiveness</u>		√		√	√		√	√					√	√				√			√							√				√				√	√			
Democratic													√																											
Engaged										√																									√					
<u>Participation</u>						√																				√											√	√		
Unity																										√														
Teamwork																										√														
<u>Cooperation</u>							√	√	√												√															√		√		
Protective													√																											
Nurturance								√																																

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																					
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	researcher	Sub-elements		
	DuBrin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tiwedha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBrin (1997)	Northouse (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)				
Efficient																																			√		
Productive																																				√	
Effectiveness																																				√	√
Concentrate																																				√	
Focus				√	√																															√	√
Foresight																					√																
Forward-looking								√																													
Visionary										√		√			√	√					√							√	√	√							√
Expertise		√																																			
Ability																√	√																	√			
Competence						√		√		√																	√								√	√	√
Well-trained																																				√	√
Experienced													√																								
Knowledgeable							√	√						√	√				√				√		√											√	
Consultation																														√							
Advisory													√																					√	√	√	

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																										
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	researcher	Sub-elements							
	DuBrin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tiweeha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBrin (1997)	Northoise (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)									
Directive	√																																									
Administration prepared	√			√				√																											√							
Organized			√	√			√				√										√														√		√					
Accountability				√	√								√																													
Obligatory													√																													
Responsibility				√	√	√	√								√			√									√	√				√				√	√					
Reliable		√		√																							√															
Authoritative																																					√					
Dependable		√					√		√						√							√								√						√		√				
Empowerment					√																																					
Delegation			√																	√																√		√				
Teach by doing																																					√		√			
Role Model											√		√																									√	√			
Problem-solving							√						√									√																√	√			
Intuition												√								√																						

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																						
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	researcher	Sub-elements			
	DuBrin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tiweeha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBrin (1997)	Northoise (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)					
Resourceful			√					√																														
Tactful		√				√	√	√						√																				√		√		
Clever		√					√					√																										
Wisdom						√																																
Intellectual capacity																																						
Fast-thinking																																						
Intelligence						√	√	√	√		√	√			√						√			√	√		√	√	√		√	√				√		
Carefulness																																				√		
Proactive			√																																			
Alertness							√	√							√											√											√	
Wonkiness					√																																	
Evaluation				√																																		
Analytical																																				√		√
Rational																																				√		
Reasonable																															√							
Considerate										√																												

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																								
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	researcher	Sub-elements					
	DuBrin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tievaeha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBrin (1997)	Northoise (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)							
Judgment						√		√						√							√					√									√					
Thinking Capacity																																					√			
Thoughtful																																				√				
Perceptiveness																																					√			
Insightfulness					√		√								√													√									√			
Informed													√					√																						
Consciousness																																					√			
Professional Views																							√																	
Awareness	√			√																																		√		
Imagination						√		√				√																												
Creative							√	√				√			√																								√	
Innovation		√			√					√																										√				
Initiative	√						√	√					√	√	√							√					√							√			√	√		
Authenticity					√																																			
Interested in feedback			√																																					

Table 2.3 (Continued)

Studying and analyzing the concepts and theories from printed books, journals, electronic sources, and research related to leadership traits of administrators																																									
Leadership traits of administrators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	researcher	Sub-elements						
	DuBrin (1995)	Zaccaro (2001)	Gates (2011)	Economy (2014)	Adam & Bornstein (2016)	Tiwadeha & Newport (1982)	Stogdill (1974)	Bass (1990)	Kouzes & Posner (2002)	DuBrin (1997)	Northoise (2011)	Vangundy (1998)	Sothimon (2007)	Keith (2012)	Ricketts (2009)	Mannings & Curtis (2003)	Bateman & Snell (2004)	Barnard (1996)	Deen (2013)	House & Aditya (1997)	ACCA 2009	Bennis & Goldsmith (1989)	Musaazi (1982)	Lusier & Achua (2004)	Navikan (2001)	Gander 1 (989)	Marques (2007)	Zepp (2011)	Mothial (2010)	Gheselli (1971)	Lekganyane et al. (2006)	Wilson (2004)	Longsombun (2009)								
Curiosity																						√																			
Inquisitive																																						√			
Endless learning													√																												
Life-long learning																																									
Self-development																					√															√	√	√			
Accepting new ideas																							√																		
Agreeable																																				√		√			
Open to new ideas													√																												
Broad-minded									√																																
Open-minded			√		√							√																												√	

After creating the initial list of leadership traits of administrators in the first table, the researcher studied and analyzed the 224 listed traits in the first table in order to find out the duplicated words or the words that are very close in meanings. Then the duplicated words were eliminated and similar-meaning words were combined and replaced by a single word. As a result, the second table was constructed with 72 main leadership traits of administrators classified into 2 main elements, personal trait and professional trait, and 10 sub-elements namely physical attributes, moral and ethical attributes, emotional attributes, personality attributes, social background, interpersonal attributes, achievement-oriented attributes, competency attributes, intellectual attributes, and academic attributes as shown in the table below.

Table 2.4 The 72 leadership traits of administrators were classified into 2 main elements with 10 sub-elements

N ^o		72 traits from the initial table	Sub-elements	Main elements
1	1	Physical appearance	Physical Attributes	Personal Traits
2	2	Physical strength		
3	3	Physical fitness		
4	1	Patient	Emotional Attributes	
5	2	Self-controlled		
6	3	Stable		
7	4	Flexible		
8	5	Optimism		
9	6	Sympathy		
10	1	Empathy	Moral and Ethical Attributes	
11	2	Caring		
12	3	Integrity		
13	4	Ethical		
14	5	Generosity		
15	6	Humility		
16	7	Enthusiasm		
17	8	Disciplined		

Table 2.4 (Continued)

N ^o		72 traits from the initial table	Sub-elements	Main elements
18	1	Honest	Personality Attributes	
19	2	Openness		
20	3	Trustful		
21	4	Fairness		
22	5	Courageous		
23	6	Ambition		
24	7	Assertiveness		
25	8	Self-confident		
26	9	Sense of humor		
27	10	Realistic		
28	1	Well-educated	Social Background	
29	2	Dominance		
30	3	Wealthy		
31	4	Personable		
32	5	Charismatic		
33	1	Human relation	Interpersonal Attributes	
34	2	Sociable		
35	3	Diplomatic		
36	4	Communication		
37	1	Dedicated	Achievement-Oriented Attributes	Professional Traits
38	2	Commitment		
39	3	Decisiveness		
40	4	Participation		
41	5	Cooperation		
42	6	Supportive		
43	7	Inspiring		
44	8	Motivation		
45	9	Hard-working		
46	10	Persistence		
47	11	Achievement-oriented		

Table 2.4 (Continued)

N ^o		72 traits from the initial table	Sub-elements	Main elements
48	12	Effectiveness	Competency Attributes	
49	13	Focus		
50	1	Visionary		
51	2	Competence		
52	3	Knowledgeable		
53	4	Advisory		
54	5	Organized		
55	6	Responsibility		
56	7	Dependability		
57	8	Delegation		
58	9	Role model	Intellectual attributes	
59	10	Problem-solving		
60	1	Tactful		
61	2	Intelligent		
62	3	Alertness		
63	4	Analytical		
64	5	Judgment		
65	6	Insightfulness		
66	7	Awareness	Academic Attributes	
67	8	Creative		
68	9	Initiative		
69	1	Inquisitive		
70	2	Self-development		
71	3	Agreeableness		
72	4	Open-minded		

2.4.7 Main Elements and Sub-elements of Leadership Traits of Administrators

After studying and analyzing the concepts and theories as well as related research findings, the researcher classified the traits of administrators into two main elements with 10 sub-elements as described with its definition below.

2.4.7.1 Personal Traits: Refer to the traits an individual possesses that make him or her differ from others. In this study, the personal trait consists of 5 sub-elements as follows:

1. Physical Attributes: Refer to attributes or features about how a person looks like, the first things a person is seen when he/she is looked at. Physical attributes can include height, weight, skin color, built, facial expression, dressing, and so on. The term can be used to refer to physical fitness such as power, strength, good health, and so on so forth. In this study, physical attributes consist of three main categories; 1) Physical appearance: height, weight, good built, dressing, mature, and good appearance. 2) Physical strength: active, energetic, vitality, powerful. And 3) Physical fitness: resilience, good health, and fitness.

2. Emotional Attributes: Refer to attributes that are closely connected to how people feel or how they have their emotion while encountering positive or negative surrounding atmosphere. To be happy and successful, people need emotional strength since emotion can sometimes move people in the wrong direction when they are attached to adrenaline. In this study, emotional attributes consist of 6 categories namely 1) Patience: tolerance, endurance, bearing, socialism. 2) Self-controlled: emotional-balanced, locus of control. 3) Stable: consistence, calmness, emotional stability. 4) Flexible: adaptable, adjustable, open to change. 5) Optimism: high expectation, positivity. 6) Sympathy: passion, passionate, compassionate.

3. Moral and Ethical Attributes: Refer to attributes that are closely connected to moral and ethical conducts of people, the way they think, behave, and act in a moral and ethical way. In this study, moral and ethical attributes consists of 8 categories such as; 1) Empathy: sensitive to others. 2) Caring: concern for others. 3) Integrity: strong value, positive self-image, positive attitude. 4) Ethical: respectful, morality. 5) Generosity: unselfishness, sharing. 6) Humility: down-to-earth, modest. 7) Enthusiastic: warmth, friendly, extroversion. 8) Disciplined: self-disciplined.

4. Personality Attributes: Refer to attributes persons have that can define who they are as individuals, the different styles of acting, and behaving. In this study, personality attributes consist of 10 main categories namely; 1) Honesty:

faithful, frank, loyalty, keeping promise, straightforward. 2) Openness: transparency, outspoken. 3) Trustful: credibility, confidential, trustworthy. 4) Fairness: fair-minded, justice. 5) Courageous: daring, brave. 6) Ambition: Aggressive, opportunistic, risk-taking, competitive. 7) Assertiveness: proud. 8) Self-confident: independence, bold. 9) sense of humor: humorous. 10) Realistic.

5. Social Background: Refer to attributes that are closely related to the social status of an individual in terms of educational background, wealthy, social status, popularity, likeability, recognized, and so on. In this study, social background consists of 5 categories namely; 1) Well-educated. 2) Dominance: social status, influential. 3) Wealthy: economic status. 4) Personable: attractive, interesting, likeability. 5) Charismatic: popularity.

2.4.7.2 Professional Traits: Refer to personality traits that professionals need to possess so that they can apply them to any type of work or business. The traits can vary from one profession or company to another, but there are several that carry over. True professionals possess a number of important characteristics that can apply virtually to any type of work or business. In this study, the professional trait consists of 5 sub-elements as follows:

1. Interpersonal Attributes: Refer to attributes that are closely connected to the focuses on communicating, interacting with other people both individually and in groups. The term mainly and generally refers to how a person can get along with other people while performing the tasks or getting the tasks done. In this study, interpersonal attributes consist of 4 categories such as; 1) Human relation: interrelation, interpersonal skill. 2) Sociable: approachable, social skill. 3) Diplomatic: eloquent. 4) Communication: good speaker, listening skills, fluency in speaking and writing.

2. Achievement-oriented Attributes: Refer to attribute that are closely related to the focuses on completing and achieving a job or task. The focuses are on the tasks that have to be done rather than who are going to do them. A leader of this kind is best for the job if the job must be done within the organization and if it has to be done right. In this study, achievement-oriented attributes consist of 13 categories including; 1) Dedicated: devoted, sacrifice. 2) Commitment: willingness, drive. 3) Decisive: determined. 4) Participation: democratic, engaged. 5) Cooperation: unity, teamwork. 6) Supportive: protective, nurturance, helpful. 7) Inspiring: encouraging, persuasion. 8) Motivation: rewarding. 9) Hard-working: strive, effort. 10) Persistence:

restlessness. 11) Achievement-oriented: work-oriented, task-oriented, goal-oriented. 12) Effectiveness: efficiency, productive. 13) Focus: concentrate

3. Competency Attributes: Refer to attributes that are related to the ability and capability a person has so that he or she can perform the tasks effectively. In this study competency attributes consist of 10 categories namely; 1) Visionary: foresight, forward- looking. 2) Competence: expertise, ability. 3) Knowledgeable: well-trained, experienced. 4) Advisory: consultation. 5) Organized: directive, administrative, prepared. 6) Responsibility: accountability, obligatory. 7) Dependability: reliability, authoritative. 8) Delegation: empowerment. 9) Role model: teach by doing. 10) Problem-solving.

4. Intellectual Attributes: Refer to attributes that are closely related to intellect, mental capacity, and intelligence that individuals possess. People with highly intellectual and ability characteristics can work better than those who have low intellect and ability. In this study, intellectual attributes consist of 9 categories including; 1) Tactful: intuition, resourceful. 2) Intelligence: clever, wisdom, intellectual capacity, fast-thinking. 3) Alertness: careful, proactive. 4) Analytical: wonkiness, evaluation. 5) Judgment: rational, reasonable, considerate. 6) Insightfulness: thinking capacity, thoughtful, perceptiveness. 7) Awareness: informed, consciousness, professional views. 8). Creative: imagination, 9) Initiative: innovation.

5. Academic Attributes: Refer to attributes that are closely linked to the focuses on expanding and broadening skills, knowledge, and ability necessary for performing tasks and taking responsibilities. The academic attributes can involve in formal, informal, non-formal education, training, seminar, and so on. In this study, academic attributes consist of 4 categories including; 1) Inquisitive: authenticity, interested in feedback, curiosity. 2) Self-development: endless learning, lifelong learning. 3) Agreeableness: accepting new ideas. 4) Open-minded: open to new ideas, broad-minded.

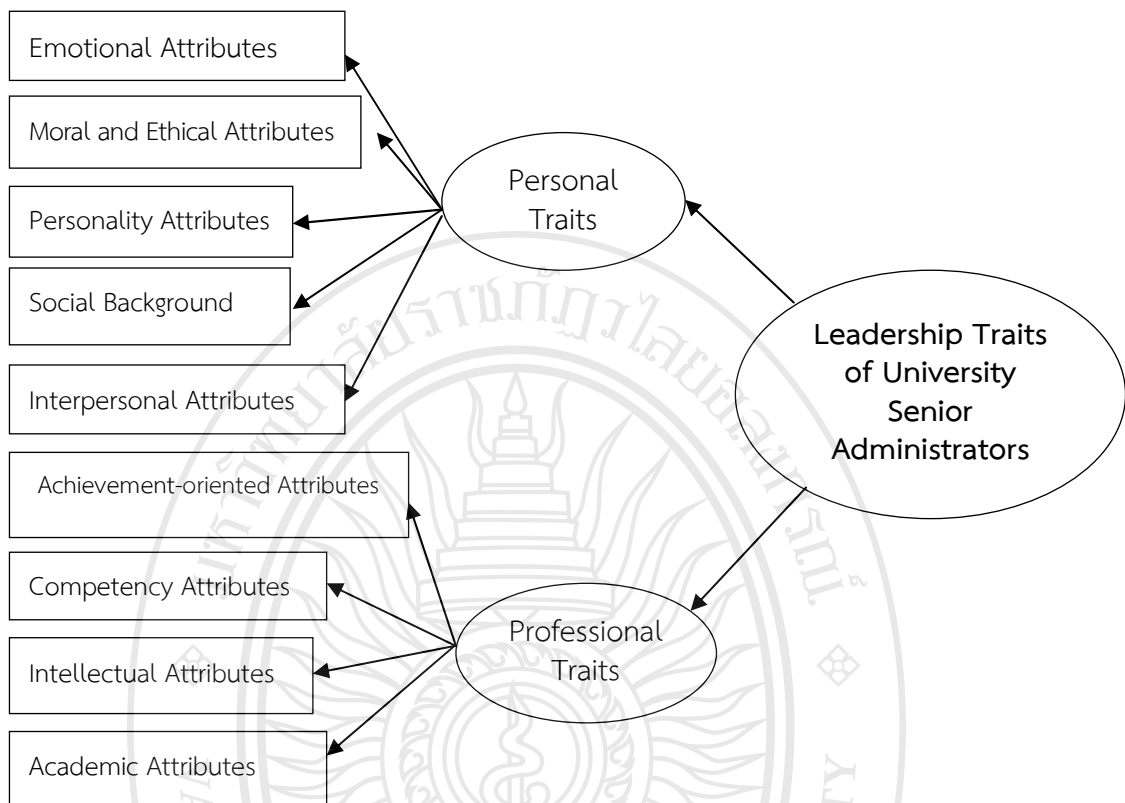


Figure 2.1 The first drafted model of leadership traits of university senior administrators

2.5 Academic Administrators

According to Amadi (2008) administration is “a process of systematically arranging and coordinating the human and material resources available to any organization for the main purpose of achieving stipulated goals of that organization.” Educational administration is a process through which the school administrators arrange and coordinate the resources available to education, for the purpose of achieving the goals of the educational system (Amadi, 2008). For effective school administration, the administrator needs to be knowledgeable in the theories, techniques and principles of school administration as a guide for action when necessary (Amadi, 2008).

2.5.1 Definitions of Administrator

Most people think of an administrator as paper-pushing and issuing instructions, requiring little initiative skills. They are therefore widely undervalued and receive little recognition for their contribution to business or activity (Joshi, 2012). In fact administrators have direct influence on their organization’s image and success.

Oxford Advanced Learner's dictionary defines administrator as a person responsible for managing public or business affairs. An administrator is someone who is capable of organizing activities and resources (Joshi, 2012). An academic administrator is a person who is engaged in managing university affairs. Academic administrators are the key to success in educational institutions (Joshi, 2012).

An administrator is a person who is responsible for carrying out both the administration and the strategic functions of a business or an organization. In this study, administrators refer to president, vice presidents, deans/vice deans, heads and deputy heads of department and other office heads whose jobs are engaged in leading and managing universities.

2.5.2 Main Roles of Academic Administrator

An administrator, no matter in which sector he/she works in, is responsible for managing various resources. The resources that an administrator manages are people, time, space, finance, equipment, and information (Joshi, 2012). According to Macmillan, Mayer, and Sherman (2001), "The role of administrators is increasingly in complexity and is shifting away from instructional leadership as direct involvement in classrooms to instructional leadership as the provision a positive instructional environment." The main role of educational administrator is to facilitate the teaching and learning activities, growth and effectiveness of faculty, staff and students (Pasurapan, 2004). A good administrator should be democratic and egalitarian, works to gain support, makes sound decision, evaluates the process and systems, delegates tasks and assigns responsibilities to others, communicates well with stakeholders, strengthens good relationships with other institutions, builds bridge to other campuses and departments, markets the institutional program to the outside world, maintains the quality of teaching and learning, and builds and strengthens the organizational culture (Pasurapan, 2004). College administrators act as transformational leaders by integrating a shared vision of change, empowering voices in a collaborative community, and reflection on vision value (Davis, 2011). Academic administrators have a wide range of roles to play to ensure that the work performance is productive. Administrators, like managers, also involve such elements as planning, organizing, programming, staffing, budgeting, coordinating, reporting and evaluating, but on a smaller scale than management (Amadi, 2008).

2.5.3 Academic Administrator's Skills and Responsibilities

For decades, people have believed that leadership ability inherent in certain chosen individuals (Katz, 1974). People talk of "born leaders," "born administrators," "born

salesmen” and so on. It is also undoubtedly true that some people possess naturally and innately greater aptitude or ability in certain skills. However, research in psychology and physiology also indicates that although some people have strong innate aptitudes and abilities, they can improve their skills through practice and training. For those who lack the natural ability, they can learn and develop it as well (Katz, 1974). Macmillan, Mayer, and Sherman (2001) conducted a survey by asking the participants to rank a list of 11 administrative competencies and characteristics with the question “What is considered by school boards when hiring administrators?” The highest mean of the responses starts from credibility as a teacher, disciplinarian, status in the profession, experience in leading others, completion of the NSEL modules (Nova Scotia Educational Leadership Consortium), curriculum knowledge, a degree in Ed. Administration, organizational ability, good interpersonal skills, communication skills, and status in the community (Macmillan, Mayer, and Sherman, 2001). Educational administrators have heavy responsibility for the success or failure of the academic institutions they lead. According to Kalargyrou & Woods (2009), educational administrators are required to possess necessary skills that can help them to lead their subordinates effectively. Those fundamental skills are communication, diplomacy, goal setting, compassion, fund-raising, IT skills, Management skills, time management skills, managing changes, extroversion, creativity, innovation, flexibility, analytical skill, collegiate relationship building, collaborative encouragement, facilitation skill, and human resources skills (p. 21). At university level, various challenges may occur that demand more proactive skills. Rothwell (2001) contends that supervisory personnel at all administrative levels in higher education must possess several leadership competencies to be successful in their position. The dimensions of leadership competencies for higher educational administrators are planning, decision making, organization, communication, development of subordinates, internal and external environment awareness, interpersonal relations, emotional intelligence, managing change, and program implementation (Mackey, 2008; Christie, 2005; Heuer, 2003 cited in Riccio, 2010). So other leadership strengths need to be considered: interpersonal communication, creativity thinking, and technology (Davis, 2011). An academic administrator is the one who leads a unit, directs the actions and activities of other people, undertakes the responsibility for achieving certain objectives through these efforts, is responsible for the instructional leadership, and has faculty responsibilities (Katz, 1974; U.S. Department of Labor, Bureau of Labor Statistics, 2007 cited in Kalargyrou & Woods, 2009). Effective administrators need to possess fundamental skills such as technical skills, human skills, conceptual skills, problem-solving skills,

decision-making skills, and administrative skills (Katz, (1995) Kootz & Wehrich, (1998) & Moshal, (1998). Bowman (2002) suggested that “the real work of academic chairs demands a diverse set of leadership capabilities: well-honored communication, problem-solving skills, conflict-resolution skills, cultural-management skills, coaching skills, and transition-management skills” (p. 161). Montez, Wolverton, & Gmelch (2002) conducted the study on the “roles and challenges of deans” asking 1,370 academic deans in the United States. The academic leaders in this study self-reported the following responsibilities of leaders: (a) fiscal, including budget and finance, allocation and use of resources, and fund-raising, (b) administration, including public and legislative accountability, working with top administration, long-range planning, community outreach, and reorganization, (c) curriculum and program development, including development of curricula and programs, dealing with unprepared students, recruiting high quality students, (d) faculty, including recruiting and retaining faculty, dealing with difficult personnel, moving faculty toward change, (e) technology, including distance learning, upgrading technology, (f) personal balance, balancing personal and professional lives, attaining personal goals, and (g) diversity, ensuring diversity of faculty and students. Moore & Rudd (2004) conducted a study on “Leadership Skills and Competencies for Extension Directors and Administrators” concluded that extension leaders need competence in six leadership skill areas: human skill, conceptual skill, technical skill, communication skill, and emotional intelligence, and industry knowledge skills. Davis (2011) asserts three key skills of educational administrators in higher education namely building relationships, facilitating and empowering others, and humor and happiness (p.9). A study conducted by Bateh & Heyliger (2014) provides three key recommendations related to leadership effectiveness. First, senior academic administrators should identify current transformational leadership for their organizations and use them as mentors to assist in the training and mentorship of current and future leaders. Second, academic administrators should recognize that leadership traits can be learned and developed so training and development in the area of leadership is necessary. Finally, for those who seek leadership positions in academia should become aware of the attributes of an effective higher education administrator, and work to develop an intrinsic understanding of and cultivate a skillset of transformational leadership characteristics. Perry (1989) provides seven important skills of effective administrators: technical skill, human skill, conceptual skill, responsiveness to democratic institutions, networking ability, focus on results, and balance. Pasurapan (2004) concludes in his paper entitled “what makes a person a good educational administrator?” that a good administrator

should possess at least three skills and one understanding namely job-related technical skill, human understanding skill, world view conceptual skill and nature understanding. Technical skill is primarily concerned with working with things while human skill is primarily concerned with working with people (Katz, 1974; Pasurapan, 2004). Any person can improve his or her leadership effectiveness by practicing and developing existing and new skills through everyday work (Hughes, Ginnett & Curphy, 2006). Skills of leadership, no matter in which business he or she works in, can be divided into two main categories: Basic leadership skills and advanced leadership skills. According to Hughes, Ginnett & Curphy (2006), basic leadership skills are learning from experience, communication, listening, assertiveness, providing constructive feedback, guidelines for effective stress management, building technical competence, building effective relationship with superiors, building effective relationship with peers, setting goals, punishment, and conducting meetings and advanced leadership skills are delegating, managing conflict, negotiation, problem solving, improving creativity, diagnosing performance problems in individuals, groups, and organizations, team building for working teams, building high performance teams, team building for the top, development planning, creditability, coaching, and empowerment. Simpson (2012), in her book focusing on “Top Ten Leadership skills”, no matter what kind of organization it is, a leader must possess some certain skills in order to lead the organization effectively. Those skills are act assertively, communication, critical reflective learning, giving and receiving feedback, forward thinking/strategic planning, know yourself, know your team, manage team performance, provide vision and direction, and transformational leadership (p. 7). Administrator’s skills are classified as technical, human, conceptual, diagnostic, and political (Joshi, 2012). Humphries (2000 cited in Joshi, 2012) contends that administrators must also learn and develop more fundamental skills such as communication, listening, motivation, delegation, innovation, training, planning, controlling, and influencing. The knowledge of administrators in staff needs, organization policy, organization procedures, organization objectives, services, competition, and financial is also important.

2.5.4 Summary

An administrator needs to have certain skills in order to manage and lead the organization effectively no matter where he/she works. Whether he/she works in a business or in a hospital, in a government agency or in a labor union, in a university or in the army, the administrator is expected to get the right things done (Drucker, 1967). According to Katz (1974), an effective administrator depends on three main skills namely technical skill, human skill and conceptual skill. The administrator

needs sufficient technical skill to accomplish the mechanics of the particular job for which he is responsible, sufficient human skill to work with others to be an effective group member and to be able to build cooperative effort within the team he leads, sufficient conceptual skill to recognize the interrelationships of the various factors involved in his situation (Katz, 1974; Pasurapan, 2004). Similarly, to be a good educational administrator, a person should have at least one understanding about the nature and three fundamental skills namely job-related technical skill, human understanding skill, and world view conceptual skill (Pasurapan, 2004).

2.6 Focus Groups

2.6.1 Concepts of Focus Groups

Focus groups provide insights into how people think and provide a deeper understanding of the phenomena being studied and they are group interviews that give the researcher the ability to capture deeper information more economically than individual interviews (Nagle & Williams, n.d). Focus group research involves an organized discussion with a selected group of individuals in order to gain information about their views and experiences of a topic. It is particularly suited for obtaining several perspectives about the same topic and the benefits of focus group research include gaining insights into people's shared understandings of everyday life and the ways in which individuals are influenced by others in a group situation. Focus groups are under-used in social research, although they have a long history in market research (Morgan, 1988). Focus group can be very beneficial for collecting data from experienced people who have share similar perceptions, concepts about the topic being studied.

2.6.2 Definitions of Focus Groups

There are many definitions of focus groups in the literature, but features like organized discussion (Kitzinger, 1994), collective activity (Powell et al 1996), social events (Goss & Leinbach, 1996) and interaction (Kitzinger, 1995) identify the contribution that focus groups make to social research (Cited in Gipps, 1997). According to Powell and Single (1996) focus group is a group of individuals selected and assembled by researchers to discuss and comment on the topic that is the subject of the research by basing on personal experience, opinions and points of view. Morgan (1998) defines focus group as a form of group interviewing but it is important to distinguish between the two. Group interviewing involves interviewing a number of people at the same time, the emphasis being on questions and responses

between the researcher and participants while focus group relies on interaction within the group based on topics that are supplied by the researcher. A focus group is “a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, nonthreatening environment (Krueger, 1988). Focus Group is a type of in-depth interview that can be accomplished in a group, whose meetings present characteristics defined with respect to the proposal, size, composition, and interview procedures. The focus or object of analysis is the interaction inside the group (Freitas, Oliveira, Jenkins and Popjoy, 1998). A focus group is a planned, facilitated discussion among a small group of stakeholders designed to obtain perceptions in a defined area of interest in a permissive, non-threatening environment (USAID, 2008).

Based on the mentioned definitions above it can be concluded that focus group is a formally structured group of people which are selected and brought together by the researcher(s) for the purposes of expressing and addressing their personal experience, opinions, points of view related to the research topic within a fixed time frame and in accordance with a clearly spelled out rules and procedure.

2.6.3 Purposes of Focus Groups

According to Gipps (1997) the main purpose of focus group research is to draw upon respondents’ attitudes, feelings, beliefs, opinions, experiences and reactions in a way in which would not be feasible using other methods. Freitas et al. (1998) states that the main goal of focus groups is to have the participants understand the topic of interest to the researcher, irrespective of its use, alone or together with other research methods. Focus group can be used in order to explore new areas of research or to examine subjects well-known to the participants. Together with other methods, it can be used for preliminary research, or to prepare specific subjects in a large project; or even to illuminate the results of other data. Nagle and Williams (n.d.) contend that the purposes for a focus group include finding out about an issue of importance from the target population, asking members of the target population what types of activities they would enjoy, collecting in-depth data on specific research questions, and collecting in-depth data on specific evaluation questions to determine program success or progress. According to USAID (2008), focus groups are good for initial concept exploration, generating creative ideas, testing ideas and determining differences in opinion between various stakeholder groups and are often used as a means of triangulation with other data collection methods.

Hojjer (2008) stresses that formal focus groups have been around since the 1940s and they have been used for an array of purposes as follows:

1. To stimulate new ideas and concepts for both the researcher and the participants
2. To learn about impressions of product and service effectiveness, or management issues
3. To learn general information about a specific topic
4. To generate new hypotheses for future research opportunities
5. To help develop sound quantitative research approaches
6. To learn how respondents communicate about topics of interest
7. To enhance the utility of survey content and delivery mechanisms
8. To determine what additional research tools may be useful for follow-up information collection,
9. To better interpret previously obtained quantitative information.

Kimel (2003) points out that focus group discussion has such main purposes as follows:

1. Gather background information
2. Diagnose problems
3. Stimulate new ideas or identify new relationships
4. Generate hypothesis
5. Evaluate programs
6. Interpret quantitative results

Boyce (2002) summarizes the main purposes of focus group including;

- 1) Obtaining and developing ideas on a topic of interest to the researcher and client.
- 2) Getting opinions on product and service concepts.
- 3) Exploring issues, opinions, and ideas in depth.
- 4) Generating hypothesis that can be tested in further research.
- 5) Developing questionnaires.
- 6) Testing products, services, and communication material.
- 7) hearing how people talk-the way they express themselves. And
- 8) Increasing understanding of survey findings.

2.6.4 The Role of Focus Groups

Focus groups can be used at the preliminary or exploratory stages of a study (Kreuger, 1988). During a study, it is perhaps used to evaluate or develop a particular program of activities or after a program has been completed, it is used to assess its impact or to generate further avenues of research (Race et al., 1994). They can be used either as a method in their own right or as a complement to other

methods, especially for triangulation and validity checking (Morgan, 1998). Focus groups provide a preliminary step in the development of a quantitative study. Focus groups generate ideas for narrowing the scope of the research, yield hypotheses for field testing, select appropriate wording of questions for questionnaires and identify target groups for study (Ogunbameru, 2003). Focus groups may also be used to explore and illuminate results of a quantitative study or to gain greater understanding about the reason for certain trends (Kahn & Manderson, 1992). Focus groups are also used as a primary data collection method for some topics which cannot be easily studied through quantitative techniques or through individual interviews - for example sexual behavior. In another way, focus groups can be used to provide information to decision maker about how programs touch the lives of a number of people at three different points in time: before, during, and after the program or service is provided (Ogunbameru, 2003). Focus groups can help to explore or generate hypotheses and it can also help to develop questions or concepts for questionnaires and interview guides (Gibbs, 1997).

2.6.5 Characteristics of Focus Groups

A focus group is not just any group where people get together to talk about a topic (Krueger and Casey, 2000). Focus groups have certain characteristics that make them distinctive. The core features of focus group are as follows:

1. The questions are focused. The questions used in a focus group are carefully sequenced so that they focus more and more specifically on the key topic of the study.
2. There is no push for agreement or consensus. Focus groups are distinctive in that the goal is not to reach consensus or to discover a single solution. Focus groups are conducted to gather the range of opinions and experience.
3. The environment is permissive and nonthreatening. The focus group environment should be comfortable. There are no wrong answers and all points of view are welcome. The focus group offers honoring environment and participants are made comfortable and appreciated.
4. The participants are homogenous. People who are invited to participate in a particular focus group must have something in common. They might live in the same neighborhood, belong to the same organization, or have similar experience in the topic.
5. The group size is reasonable. The size of a focus group can range from as few as four or five to as many as a dozen people. The most workable size

depends on the background of participants, the complexity of the topic, and the experience of the moderator. It is recommended that nine to twelve can work better for customer topics while five to eight can be good for topics that might be seen as sensitive or personal or when the participants have considerable expertise or experience with the topic.

6. Pattern and trends are examined across groups. The rule of thumb is to hold three or four groups with each type of participants for which you want to analyze results.

7. The group is guided by a skillful moderator. Skillful moderators make facilitation look easy. Moderators must be friendly, open, get engaged with participants, and make people feel welcome and comfortable.

8. The analysis fits the study. One of the most-time consuming aspects of focus group research is the analysis. In some situations, it can involve audio recording, transcripts, and content analysis of the exact words of participants while in other situations; the analysis might be based on observation, field notes, and the memories of the research team.

According to Ogunbameru (2003), the five known characteristics of focus groups are briefly discussed below:

1. Focus Groups Involve People

There is no a concrete rule about the number of people in a focus group discussion. Different researchers have noted different ranges in size from between 4 - 12. As cited in Masadeh (2012), the size of the group ranging from 4 (Krueger, 1994; Seggern & Young, 2003; Boddy, 2005), 5 (Morgan, 1988; Ruyter, 1996), or 6 (Prince and Davies, 2001) to 12 participants; from 6 to 8 participants (Laitao and Vergueiro, 2000; Evmorfopoulou, 2007) and from 7 (Marczark & Sewell, 2007) or 8 (Greenbaum, 2003) to 10 participants. It is also noted that 8 to 12 participants is common practice in the USA while 5 to 6 is widely used in the UK and other countries Price and Davies, 2001 cited in Masadeh (2012). However, the number varies somehow among investigators from the target population, on issues important to a particular study. As a rule, the size is conditioned by two factors: it must be small enough for everyone to have opportunity to share insights and yet large enough to provide diversity of perception (Ogunbameru, 2003; Nagle & Williams, n.d.; Gibbs, 1997; USAID, 2008).

2. Participants are Homogenous and Unfamiliar with Each Other

Focus groups are best conducted with participants who are similar to each other. Although the specification of group characteristics flows from the research objectives and the topics to be discussed, each group must be homogenous on the relevant variables. Although focus groups are composed of homogenous participants, ideally, it is best if participants do not know each other. Despite the fact that this may not be visible in some communities, researchers should avoid close friends or those who work together as participants (Ogunbameru, 2003). Theoretically, the participants in each group should be strangers to each other, and have had no previous experience with focus groups. It should however be noted that the issue of homogeneity should not be overstretched. This is because heterogeneous groups can also be useful. For instance, if the problem under investigation refers to a past event, different religions or different age groups, then the composition of the group has to be heterogeneous in order to accommodate opinions and interests of the various people involved (Ogunbameru, 2003; Morgan, 1997). However, it is not always easy to identify the most appropriate participants for a focus group (Gibbs, 1997). If a group is too heterogeneous, the differences between participants can make a considerable impact on their contributions. Alternatively, if a group is homogenous with regard to specific characteristics, diverse opinions and experiences may not be revealed. Participants need to feel comfortable with each other. Meeting with others whom they think of as possessing similar characteristics or levels of understanding about a given topic, will be more appealing than meeting with those who are perceived to be different (Gibbs, 1997).

3. Focus Groups Are a Data Collection Procedure

Focus groups have a narrow purpose for which they work particularly well in order to determine the perceptions, feelings, and manner of thinking of consumers about products, services, or opportunities (Ogunbameru, 2003). Focus groups are not intended to develop consensus, they arrive at an agreeable plan, or to make decisions about which course of action to take (Ogunbameru, 2003).

4. Focus Groups Make Use of Qualitative Data

Focus groups produce qualitative data that provide insights into the attitudes, perceptions, and opinions of participants. What researchers do in focus groups is to moderate, listen, observe, and analyze using an interactive process.

5. Focus Groups Have a Focused Discussion

In a focus group, the topics of discussion are predetermined and sequenced, based on an analysis of the situation. The analysis includes an in-depth

study of the event, experience, or topic in order to describe the context of the experience and the ingredients or components of the experience (Ogunmeru, 2003).

Krueger (2002) contends the characteristics of focus group interviews as follows:

1. Participants: Participants must be carefully recruited; there are about 5 to 10 people per group, 6 to 8 are preferred; similar types of people are good; and repeated groups must be considered.

2. Environment: Environment must be comfortable; circle seating is arranged; and tape recording must be done.

3. Moderator: Moderator must be skillful in group discussion; pre-determined questions should be used; and permissive environment must be established.

4. Analysis and Reporting: Systematic analysis must be considered; verifiable procedures must be taken into account; and appropriate reporting must be done.

2.6.6 Types of Focus Groups

There are two types of focus groups: Exploratory or Confirmatory focus group or a combination (Office of Quality Improvement, 2007).

1. Exploratory Focus Groups:

Focus group is an exploratory data collection method proved to be effective and efficient for collecting information. This method is used to:

- 1.1 Explore how a group perceives a problem
- 1.2 Use the power of group thinking to brainstorm potential solutions
- 1.3 Identify areas of further investigation or action
- 1.4 Help design surveys for wide distribution
- 1.5 Help interpret unclear or conflicting survey responses
- 1.6 Tend to use open-ended questions to elicit participation

2. Confirmatory Focus Groups:

In a confirmatory type, focus groups are used to:

- 2.1 Assess solutions already enacted
- 2.2 Seek opinions on proposed efforts
- 2.3 Confirm and expand results from a survey or other data collected
- 2.4 Tend to use closed-ended questions to pinpoint responses

(Office of Quality Improvement, 2007).

2.6.7 Advantages of Focus Groups

Focus groups have several advantages over both survey methods and other qualitative approaches (Folch - Lyonet et al., 1981; Freedman, 1987; Knodel and Pramulratana, 1988; Morgan and Spanish, 1984 cited in Ogunbameru, 2003). Focus groups help to reduce the chance of questions being misunderstood by respondents, and to rescue socially desirable answers, place people in natural, real-life situations as opposed to the controlled experimental situation typical of quantitative studies, have high face validity and the technique is easily understood and the results seem believable to those using the information. Focus group discussions are also relatively low in cost, enable the researcher to increase the sample size of qualitative studies, and are excellent for obtaining information from illiterate communities. Freitas et al. (1998) state that focus groups provide a lot of advantages as it is comparatively easier to drive or conduct; it allows to explore topics and to generate hypotheses; it generates opportunity to collect data from the group interaction, which concentrates on the topic of the researcher's interest; it has high "face validity" (data); it has low cost in relation to other methods; it gives speed in the supply of the results (in terms of evidence of the meeting of the group), and it allows the researcher to increase the size of the sample of the qualitative studies. According to USAID (2008), focus groups are relatively inexpensive and the format is flexible, allowing participants to question each other and to elaborate upon their answers. The method is relatively simple, allowing participants to readily grasp the process and purpose. When the power differential between the participants and the decision-makers is great enough to discourage frank participation, the focus group provides the security of a peer group. In focus group discussion, participants can "feed off each other" as they respond to each other's comments, support or disagree with one another, creating more energy and thus more data, get at perceptions, attitudes, and experiences more than a quantitative survey (Center for the Study of the Students, 2012). Kimel (2003) claims that focus group can provide concentrated amounts of rich data, in participants' own words, on precisely the topic of interest. In it, interaction of participants adds richness to the data that may be missed in individual interviews and it also provides critical information in development of hypotheses or interpretation of quantitative data. Boyce (2002) claims that the advantages of focus groups are: They often produce unexpected ideas; group dynamics can stimulate involvement; little pressure on respondents to take part; the clients can observe the session; the client's involvement throughout may add credibility; more immediate than a survey; no knowledge of statistics is needed; a suitable way to research confidential topics; and the focus group process is flexible.

2.6.8 Summary

A focus group is a valuable qualitative research tool and method whose application is mainly useful in the social sciences. It has also been used in areas such as management, marketing, decision and information systems, among others and it can capture information that will help to better tell the story on the studied topic. This research method can represent a useful, practical, and rewarding data collection method and can be used separately or in conjunction with other methods, to strengthen a research design. The frequent use of this tool has shown it to be a highly collaborative process for participants and an opportunity for the project leader to gain multiple perspectives on the topic of interest. The benefits of focus group research include gaining insights into people's shared understandings of everyday life and the ways in which individuals are influenced by others in a group situation. It can be also an empowering process for participants and an exciting challenge for social researchers wanting to gain a different perspective on their field of interest. Although focus group discussion has some limitations, it has been widely used in qualitative research since it provides rich depth of understanding of the phenomenon of interest. It can also be used in isolation, or to complement or supplement quantitative methods and it is as useful and as strong as its link to the underlying research question and the rigor with which it is applied.

Compared to observation, a focus group enables the researcher to gain a larger amount of information in a shorter period of time. Observational methods tend to depend on waiting for things to happen, whereas the researcher follows an interview guide in a focus group. In this sense focus groups are not natural but organized events. Focus groups are particularly useful when there are power differences between the participants and decision-makers or professionals, when the everyday use of language and culture of particular groups is of interest, and when one wants to explore the degree of consensus on a given topic (Morgan & Kreuger, 1993).

2.7 Models

2.7.1 Concepts of Models

Models are significant as they are used to provide a supposedly reliable description or representation of the world. Most of the models that scientists attempt to generate and analyze are based on assumptions that are only believed to be true since such models would not consider irregularities and inconsistencies with common theory. In educational administration knowledge of models of educational

management can provide managers of educational organizations with a better understanding of why they do what they do in managing their courses, departments and institutions. Moreover, recognizing models of educational management contextualizes decision making and helps to rationalize and explain actions that are taken (Sykes, 2015).

2.7.2 Definitions of Models

The Webster's new encyclopedia dictionary defines a model as a) a small but exact copy of something, b) a description or analogy used to help visualize something that cannot be directly observed, c) a pattern or figure of something to be made; and d). Theoretical projection of a possible or imaginary system. According to Steinmuller (1993 cited in Kuhne, 2005), a model is information on something (content, meaning) created by someone (sender) for somebody (receiver) for some purpose (usage context). Kuhne (2005) defines a model as "a description of something" (p. 3). Seidewits (2003) defines a model as "a set of statements about some system under study." Models are usually descriptive in traditional scientific disciplines and they are used to describe the system under study (Seidewits, 2003). Maria (1997) defines a model as "a representation of the construction and working of some system of interest." According to Maria (1997), a model is similar to but simpler than the system it represents and its purpose is to enable the analyst to predict the effect of changes to the system. A model should be a close approximation to the real system and incorporate most of its salient features but it should not be so complex that it is impossible to understand and experiment with it. A good model is a judicious tradeoff between realism and simplicity (Maria, 1997). Undeger (2008) defines a model as "a simplified representation of a real or theoretical system at some particular point in time or space intended to provide understanding of the system."

Based on the above definitions it can be concluded that a model is a set of statements, description or analogy, information or a simplified representation of a real or theoretical system at some particular point in time or space built and developed by someone for somebody with the purposes of helping visualize something that cannot be directly observed, providing an understanding of a system, and describing the system under study so that it can be easily understood and applied.

2.7.3 Kinds of Models

Obviously there are many ways in which one can distinguish models and many researchers have made many kinds of model so far (Kuhne, 2005). According to Kuhne (2005) there are two kinds of model; 1) Token model and 2). Type model.

1. A token model is a map capturing singular aspects of the original's elements. Token models are often what people have in their minds when talking about models and they have not been extensively used in model driven development yet but are useful for capturing system configurations or as the basis for simulations (Kuhne, 2005).

2. Type model is a kind of model that captures the universal aspects of an original's elements. Kuhne (2005) stresses that Instead of showing all the particular elements and their relationship, the type model shows the types of interest only.

Undeger (2008) suggests three main kinds of models: Mathematical Models, Physical Model, and Process Model.

1. Mathematical Models are the properties of which are described by mathematical symbols and relations. They are descriptions of a system using mathematical concepts and language. They may also help to explain a system and to study the effects of different components, and to make predictions about behavior. Mathematical models are abstract models that use mathematical language to describe the behavior of a system.

2. Physical Models are the properties of which are described by physical structures and relations. The physical models are frameworks of ideas and concepts from which we interpret our observations and experimental results and they are concrete representations that are distinguished from the mathematical and logical models, both of which are more abstract representations of the system. Moreover, physical models are simplified material representations, usually on a reduced scale, of an object or phenomenon that needs to be investigated.

3. Process models express the process a system performs and they represent dynamic relations by mathematical and logical functions.

Joyce & Weil (1992) study and classify the model based on the concepts, theories, and principles of teaching into 4 kinds:

1. Information-Based Model: These models focus on intellectual capacity. They are concerned with the ability of the learner to observe, organize data, understand information, form concepts, employ verbal and nonverbal symbols and solve problems. The primary purposes of these models are the mastery of methods of inquiry, the mastery of academic concepts and facts, the development of general intellectual skills such as the ability to reason and think more logically.

2. Personal Model: Models which belong to this family deal with the individual and the development of selfhood. The emphasis of these models is on developing an individual into an integrated, confident and competent personality. They attempt to help students understand themselves and their goals, and to develop the means for educating themselves. Many of the personal models of teaching have been developed by counselors, therapists and other persons interested in stimulating individual's creativity and self-expression. The primary goals of these models are to increase the student's self-worth, to help students understand themselves more fully, to help students recognize their emotions and become more aware of the way emotions effect other aspects of their behavior, to help them develop goals for learning, to help students develop plans for increasing their competence, to increase the students' creativity and playfulness, to increase the students' openness to new experience.

3. Social Interaction Model: The models in this family emphasize on the relationships of the individual to the society or other persons. The core objective is to help students learn to work together, to identify and solve problems, either academic or social in nature. The primary goals of these models are to help students work together to identify and solve problems, to develop skills to human relations, and to become aware of personal and social values.

4. Behavior Modification Model: All the models in this family share a common theoretical base, a body of knowledge which referred to as behavior theory. The common thrust of these models is the emphasis on changing the visible behavior of the learner.

Keeves (1988) suggests five educational and sociological models as follows:

1. Analogue Model: An Analogue Model is the representation of entities of a system by analogue entities pertaining to the model and it is also a method of representing a phenomenon of the world, more reliable and analyzable system.

2. Sematic Model: Semantic model is an additional layer of information that maps database tables and views into concepts that are meaningful to business users and it is a collection of entities, their attributes, and their relationships that reflects the real-world relationships between business functions and processes.

3. Mathematic Model: abstract models that use mathematical language to describe the behavior of a system.

4. Schematic Model: A schematic model is a representation of the elements of a system using abstract, graphic symbols rather than realistic pictures. A schematic usually omits all details that are not relevant to the information the schematic is intended to convey, and may add unrealistic elements that aid comprehension. Schematic models can reveal redundancies and system weaknesses that can be corrected without extensive formal analysis. Understanding a system well enough to construct a schematic model of its operation may be the most important.

5. Causal Model: A Causal Model is an abstract model that describes the causal mechanisms of a system. The model must express more than correlation because correlation does not imply causation. The causal model normally consists of sets of equations, indicating a web of causal and non-causal relations among the variables of interest.

Bush (2006) classifies six major models of educational management as follows:

1. Formal Models: Formal model is an umbrella term used to embrace a number of similar but not identical approaches and the term is used because these theories emphasize the official and structural elements of organizations. These models also assume that organizations are hierarchical systems in which managers use rational means to pursue agreed goals. Heads possess authority legitimized by their formal positions within the organization and are accountable to sponsoring bodies for the activities of their organization.

2. Collegial Model: Collegial models include all those theories that emphasize that power and decision-making should be shared among some or all members of the organization and these models assume that organizations determine policy and make decisions through a process of discussion leading to consensus. Power is shared among some or all members of the organization who are thought to have a shared understanding about the aims of the institution.

3. Political Model: Political models embrace those theories that characterize decision-making as a bargaining process. Analysis focuses on the distribution of power and influence in organizations and on the bargaining and negotiation between interest groups. Conflict is regarded as endemic within organizations and management is directed towards the regulation of political behavior. These models assume that in organizations policy and decisions emerge through a process of negotiation and bargaining. Interest groups develop and form

alliances in pursuit of particular policy objectives. Conflict is viewed as a natural phenomenon and power accrues to dominant coalitions rather than being the preserve of formal leaders.

4. Subjective Models: Subjective models focus on individuals within organizations rather than the total institution or its subunits. These models assume that organizations are the creations of the people within them. Participants are therefore thought to interpret situations in different ways and these individual perceptions are derived from their personal background and values. Subjective models become prominent in educational management.

5. Ambiguity Models: Ambiguity models stress uncertainty and unpredictability in organizations and these theories assume that organizational objectives are problematic and that institutions experience difficulty in ordering their priorities. These models assume that turbulence and unpredictability are dominant features of organizations. Ambiguity is a prevalent feature of complex organizations such as schools and is likely to be particularly acute during periods of rapid change.

6. Cultural Models: Cultural models emphasize the informal aspects of organizations rather than their official elements. These models focus on the values, beliefs and norms of individuals in the organization and how these individual perceptions coalesce into shared organizational meanings. These models are also manifested by symbols and rituals rather than through the formal structure of the organization. These models assume that beliefs, values and ideology are at the heart of organizations. Individuals hold certain ideas and value-preferences, which influence how they behave and how they view the behavior of other members.

Again, Bush (2006) classifies leadership models into six types:

1. Managerial Leadership Model: Managerial leadership models assume that the focus of leaders ought to be on functions, tasks and behaviors and that if these functions are carried out competently the work of others in the organization will be facilitated. Most approaches to managerial leadership also assume that the behavior of organizational members is largely rational. Managerial leadership is focused on managing existing activities successfully rather than visioning a better future for the educational institution.

2. Participative Leadership Models: Because policy is determined within a participative framework, the principal is expected to adopt participative leadership strategies. Participative leadership models assume that the decision-making processes of the group ought to be the central focus of the group. Participative leadership will

increase school effectiveness, is justified by democratic principles, and is potentially available to any legitimate stakeholder (Leithwood, et. al. 1999).

3. Transactional Leadership Models: Transactional leadership is leadership in which relationships with teachers are based upon an exchange for some valued resource. This leadership model is most closely aligned with political models. Transactional leadership does not produce long-term commitment to the values and vision promoted by educational leaders.

4. Postmodern Leadership Models: The notion of post-modern leadership aligns closely with the principles of subjective models in management. Subjective theorists prefer to stress the personal qualities of individuals rather than their official positions in the organization. The subjective view is that leadership is a product of personal qualities and skills and not simply an automatic outcome of official authority.

5. Contingent Leadership Models: The contingent leadership model provides an alternative approach, recognizing the diverse nature of school contexts and the advantages of adapting leadership styles to the particular situation, rather than adopting a “one size fits all” stance. Yukl (2002) claims that “The managerial job is too complex and unpredictable to rely on a set of standardized responses to events and effective leaders are continuously reading the situation and evaluating how to adapt their behavior to it” (p. 234).

6. Moral Leadership Models: The leadership model that is most closely linked to organizational culture is that of moral leadership. This model assumes that the critical focus of leadership ought to be on the values, beliefs and ethics of leaders themselves. Moral leadership is consistent with organizational culture in that it is based on the values, beliefs and attitudes of principals and other educational leaders. It also focuses on the moral purpose of education and on the behaviors to be expected of leaders operating within the moral domain. Furthermore, it assumes that these values and beliefs coalesce into shared norms and meanings that either shape or reinforce culture.

Table 2.5 Typology of management and leadership models

Management Models	Leadership Models
Formal	Managerial
Collegial	Participative
Political	Transactional
Subjective	Post-Modern
Ambiguity	Contingency
Cultural	Moral

Adapted from Bush, 2006

2.7.4 Elements of Models

Brown & Moberg (1980) identify five elements of model. Those are:

1. Environment
2. Technology
3. Structure
4. Management Process
5. Decision Making

Bush & Glover (2014) state that the major elements of models that are standardized used for educational institutions are:

1. Goal: The various organization theories make different assumptions about the nature of goal-setting. Moreover, managerial leadership treats goal-setting as the prerogative of the positional leader, who may or may not consult others before determining and articulating the goals. Instead of relying on positional authority, such leaders use their charismatic power to persuade or inspire colleagues to endorse the goals and to work towards their achievement.

2. Organizational Structure: The notion of organizational structure takes on different meanings within the various models. Moreover, managerial leadership treats structure as hierarchical with decision-making arising from positional authority; a top-down approach particularly in centralized systems, the structure is vertical and accountability is to the next level in the hierarchy, within and beyond the organization.

3. Culture: There is increasing interest in the impact of culture on education. This may occur at two levels; societies and organizations. Societal culture provides the enduring backdrop for organizational culture, which leaders may be able to influence while organizational culture focuses on the value and beliefs of members, often enacted through shared norms and meanings. Culture is expressed through rituals and ceremonies and may lead to the identification of heroes and heroines who embody the school's cultural values.

4. Context: Educational institutions are universal but organization theorists tend to give insufficient attention to context when discussing the various models. Educational institution size can have a significant impact on the applicability of leadership models. Participative approaches are much easier to adopt in small size ones while large size ones are stratified by subject departments, and in other ways, leading to managerial and transactional approaches being more salient.

According to Keeves (1988) typical models have major elements as follows:

1. Teaching models must be used for prediction. The predicted results can be used to develop the instruments for examination and test.

2. Structural models must have causal relationship that can be used to describe that phenomenon.

3. Models must help to build imaginations, concepts, and interrelations as well as help to expand the frontier of knowledge acquisition.

4. Models should consist of structural relationship rather than associative relationship.

2.7.5 Purposes of Models

There are a number of reasons that a model is built. One of the purposes of building a model is to enable the analyst to predict the effect of changes to the system (Maria, 1997). According to Epstein (2008) there are sixteen reasons other than prediction to build models. The sixteen reasons are:

1. Explain (very distinct from predict)
2. Guide data collection
3. Illuminate core dynamics
4. Suggest dynamical analogies
5. Discover new questions
6. Promote a scientific habit of mind

7. Bound (bracket) outcomes to plausible ranges
8. Illuminate core uncertainties.
9. Offer crisis options in near-real time
10. Demonstrate tradeoffs / suggest efficiencies
11. Challenge the robustness of prevailing theory through perturbations
12. Expose prevailing wisdom as incompatible with available data
13. Train practitioners
14. Discipline the policy dialogue
15. Educate the general public
16. Reveal the apparently simple (complex) to be complex (simple)

2.7.6 Summary

Based on the above concepts and theories that have been revised, there are a number of models that are developed and used for many purposes. Those kinds of model are token models, type models, mathematic model, physical model, process model, information-based model, personal models, social interaction models, behavior modification model, analogue model, semantic model, schematic model, casual model, icon model, symbolic models, formal models, collegiate models, political models, subjective models, ambiguity models, cultural models and conceptual models. Moreover, the purposes of using the models mainly depend on a sector for which the models are developed.

Moreover, models can serve many purposes in many fields. The knowledge of models can provide administrators with a better understanding of why they do what they do in managing their departments and institutions. Moreover, recognizing the kinds and the purposes of models can help administrators contextualize decision making and helps to rationalize and explain actions that are taken. By reflecting on these models, administrators can consider whether and to what extent they might need to reassess and change their management style for the betterment of their institutions.

2.8. Factor Analysis

Factor analysis uses mathematical procedures for the simplification of interrelated measures to discover patterns in a set of variables and attempting to discover the simplest method of interpretation of observed data is known as parsimony, and this is essentially the aim of factor analysis (Harman, 1976; Child, 2006 cited in Yong and Pearce, 2013). Factor analysis is used in many fields such as

behavioral and social sciences, medicine, economics, and geography as a result of the technological advancements of computers. Factor analysis is used to identify latent constructs or factors and it is commonly used to reduce variables into a smaller set to save time and facilitate easier interpretations (Yong and Pearce, 2013). Factor analysis assumes that the covariance between a set of observed variables can be explained by a small number of underlying latent factors (Hox & Bechger, n.d). Factor analysis seeks to discover common factors and the technique for extracting factors attempts to take out as much common variance as possible in the first factor and then the subsequent factors are, in turn, intended to account for the maximum amount of the remaining common variance until no common variance remains (Suhr, n.d). Factor Analysis reduces the information in a model by reducing the dimensions of the observations. This procedure has multiple purposes. It can be used to simplify the data, reducing the number of variables in predictive regression models, in theory testing to verify scale construction and operationalization, and also used to construct indices. The goals of factor analysis are 1) to help an investigator determine the number of latent constructs underlying a set of items (variables), 2) to provide a means of explaining variation among variables (items) using few newly created variables (factors), and 3) to define the content or meaning of factors.

2.8.1 Definitions of Factor analysis

According to Suhr and shay (n.d), factor analysis could be described as orderly simplification of interrelated measures. It was traditionally used to explore the possible underlying structure of a set of interrelated variables without imposing any preconceived structure on the outcome (Child, 2006). Factor analysis refers to a family of statistical methods that represent the relationships among a set of observed variables in terms of a hypothesized smaller number of latent constructs, or common factors (Knoke ,n.d). Factor analysis is a collection of methods used to examine how underlying constructs influence the responses on a number of measured variables (DeCoster, 1998).

Based on the above definitions, factor analysis isa statistical method used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables called factors. It is a technique that is also used to reduce a large number of variables into fewer numbers of factors. This technique extracts maximum common variance from all variables and puts them into a common score.

2.8.2 Types of Factor Analysis

Factor analysis is a common statistical method used to find a small set of unobserved variables, also called latent variables or factors, which can account for the covariance among a larger set of observed variables, also called manifest variables (Albright, 2008). The factor analytic model (EFA or CFA) focuses solely on how, and the extent to which, the observed variables are linked to their underlying latent factors and it is concerned with the extent to which observed variables are generated by the underlying latent constructs and thus strength of the regression paths from the factors to the observed variables (the factor loadings) are of primary interest. There are two main factor analysis techniques: Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). These are very powerful statistical techniques that are widely used in a number field of research such as behavioral, psychometrics personality, and social sciences, medicine, economics, marketing and product management and geography.

1. Exploratory Factor Analysis

Exploratory factor analysis is a method of data reduction which infers presence of latent factors which are responsible for the shared variance in a set of observed variables/items. EFA is by definition 'exploratory' – the user does not specify a structure, and assumes each item/ variable could be related to each latent factor (Brown, 2006). Exploratory factor analysis attempts to discover the nature of the constructs influencing a set of responses (DeCoster, 1998). Exploratory factor analysis is a statistical method used to uncover the underlying structure of a relatively large set of variables. It is a technique within factor analysis whose overarching goal is to identify the underlying relationships between measured variables and it is commonly used by researchers when developing a scale, a scale is a collection of questions used to measure a particular research topic, and serves to identify a set of latent constructs underlying a battery of measured variables. It should be used when the researcher has no a priori hypothesis about factors or patterns of measured variables. In EFA, measured variables are any one of several attributes of people that may be observed and measured. Exploratory Factor Analysis is designed for situations where links between the observed and latent variables are unknown or uncertain. Hence after the formulation of questionnaire items, an EFA will be conducted to determine the extent to which the item measurements are related to the latent constructs.

According to DeCoster (1998) some common uses of EFA are to:

1. Identify the nature of the constructs underlying responses in a specific content area.
2. Determine what sets of items hang together" in a questionnaire.
3. Demonstrate the dimensionality of a measurement scale. Researchers often wish to develop scales that respond to a single characteristic.
4. Determine what features are most important when classifying a group of items.
5. Generate "factor scores" representing values of the underlying constructs for use in other analyses.

Exploratory Factor Analysis is designed for situations where links between the observed and latent variables are unknown or uncertain. Hence after the formulation of questionnaire items, an EFA will be conducted to determine the extent to which the item measurements are related to the latent constructs.

2. Confirmatory Factor Analysis

User defines which observed variables /items are related to the specified constructs or latent factors – based on a priori theory or the results of EFA (Brown, 2006). Confirmatory factor analysis is a multivariate equation model with one or more unobserved common factors describing or explaining the relationships among empirical measures. In confirmatory factor analysis (CFA) a researcher posits an a priori theoretical measurement model to describe or explain the relationship between the underlying common factors and the empirical measures. Then the analyst uses statistical fit criteria to assess the degree to which the sample data are consistent with the posited model; that is, to ask whether the results confirm the hypothesized model (Knoke, n.d). Confirmatory factor analysis tests whether a specified set of constructs is influencing responses in a predicted way (DeCoster, 1998). Confirmatory factor analysis is also a multivariate statistical procedure that is used to test how well the measured variables represent the number of constructs. It is a tool that is used to confirm or reject the measurement theory.

Confirmatory factor analysis (CFA) and exploratory factor analysis (EFA) are similar techniques, but in exploratory factor analysis (EFA), data is simply explored and provides information about the numbers of factors required to represent the data. In exploratory factor analysis, all measured variables are related to every latent variable. But in confirmatory factor analysis (CFA), researchers can specify the number of factors required in the data and which measured variable is related to which latent variable. Moreover, CFA allows the researcher to test the

hypothesis that a relationship between the observed variables and their underlying latent construct(s) exists. The researcher uses knowledge of the theory, empirical research, or both, postulates the relationship pattern a priori and then tests the hypothesis statistically.

Both types of factor analyses are based on the Common Factor Model (DeCoster, 1998). This model proposes that each observed response (measure 1 through measure 5) is influenced partially by underlying common factors (factor 1 and factor 2) and partially by underlying unique factors (E1 through E5). The strength of the link between each factor and each measure varies, such that a given factor influences some measures more than others (DeCoster, 1998).

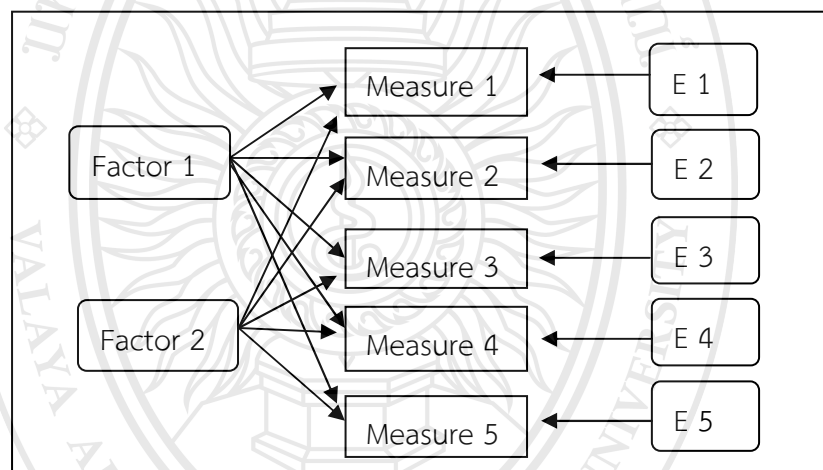


Figure 2.2 Common Factor Model

Source: Adapted from DeCoster (1998)

Factor analyses are performed by examining the pattern of correlations, or co-variances, between the observed measures. Measures that are highly correlated, either positively or negatively, are likely influenced by the same factors, while those that are relatively uncorrelated are likely influenced by different factors (DeCoster, 1998)

2.8.3 Steps of Confirm Factor Analysis

There are six basic steps to performing a CFA (DeCoster, 1998)

1. Define the factor model. The first thing needed to do is to precisely define the model that is wished to be tested. This involves selecting the number of factors, and defining the nature of the loadings between the factors and the measures. These loadings can be fixed at zero, fixed at another constant value,

allowed to vary freely, or be allowed to vary under specified constraints.

2. Collect measurements. The variables are needed to be measured on the same or matched experimental units.

3. Obtain the correlation matrix. The researcher needs to obtain the correlations or co-variances between each of your variables.

4. Fit the model to the data. The researcher will need to choose a method to obtain the estimates of factor loadings that were free to vary. The most common model-fitting procedure is Maximum likelihood estimation, which should probably be used unless the measures seriously lack multivariate normality.

5. Evaluate model adequacy. When the factor model is fit to the data, the factor loadings are chosen to minimize the discrepancy between the correlation matrix implied by the model and the actual observed matrix. The amount of discrepancy after the best parameters are chosen can be used as a measure of how consistent the model is with the data.

6. Compare with other models. If the researcher wants to compare two models, one of which is a reduced form of the other, he/she can just examine the difference between their χ^2 statistics, which will also have an approximately χ^2 distribution. Almost all tests of individual factor loadings can be made as comparisons of full and reduced factor models.

2.8.4 Components of Factor Analysis

According to Yong and Pearce (2013), factor analysis has the following components:

1. Factor extraction: Factor analysis is based on the common factor model which is a theoretical model that postulates that observed measures are affected by underlying common factors and unique factors, and the correlation patterns need to be determined. There is an array of extraction methods available, but a few commonly used techniques that are available on SPSS are recommended such as Maximum Likelihood (Yong and Pearce, 2013). Maximum Likelihood attempts to analyze the maximum likelihood of sampling the observed correlation matrix (Tabachnick & Fidell, 2007 cited in Yong and Pearce, 2013). Maximum Likelihood is more useful for confirmatory factor analysis and is used to estimate the factor loadings for a population.

2. Rotation Methods: Factors are rotated for better interpretation since unrotated factors are ambiguous and the goal of rotation is to attain an optimal simple structure which attempts to have each variable load on as few factors as

possible, but maximizes the number of high loadings on each variable (Rummel, 1970).

There are two types of rotation methods: Orthogonal rotation and oblique rotation.

a. Orthogonal rotation is when the factors are rotated 90° from each other, and it is assumed that the factors are uncorrelated (DeCoster, 1998). There are two common orthogonal techniques: Quartimax and Varimax rotation. Quartimax involves the minimization of the number of factors needed to explain each variable while Varimax minimizes the number of variables that have high loadings on each factor and works to make small loadings even smaller (Gorsuch, 1983).

b. Oblique rotation is when the factors are not rotated 90° from each other, and the factors are considered to be correlated. The oblique rotation is more complex than orthogonal rotation, since it can involve one of two coordinate systems: a system of primary axes or a system of reference axes (Rummel, 1970). Additionally, oblique rotation produces a pattern matrix that contains the factor or item loadings and factor correlation matrix that includes the correlations between the factors. The common oblique rotation techniques are Direct Oblimin and Promax. Direct Oblimin attempts to simplify the structure and the mathematics of the output, while Promax is expedient because of its speed in larger datasets. Promax involves raising the loadings to a power of four which ultimately results in greater correlations among the factors and achieves a simple structure (Gorsuch, 1983).

3. Interpretations of factor loadings. When interpreting the factors, researchers need to look at the loadings to determine the strength of the relationships. Factors can be identified by the largest loadings, but it is also important to examine the zero and low loadings in order to confirm the identification of the factors (Gorsuch, 1983). Depending on the design of the study, a complex variable can be retained with the assumption that it is the latent nature of the variable, or the complex variable can be dropped when the interpretation is difficult. Another option is to choose a significant loading cut-off to make interpretation easier (Yong & Pearce, 2013).

4. Number of factors to retain. Extracting too many factors may present undesirable error variance but extracting too few factors might leave out valuable common variance. So it is important to select which criterion is most suitable to your study when deciding on the number of factors to extract (Yong & Pearce, 2013). The eigenvalues and scree test are used to determine how many

factors to retain. One criterion that can be used to determine the number of factors to retain is Kaiser's criterion which is a rule of thumb. This criterion suggests retaining all factors that are above the eigenvalue of 1 (Kaiser, 1960 cited in Yong & Pearce, 2013).

5. Factor scores. A factor score can be considered to be a variable describing how much an individual would score on a factor. One of the methods to produce factor score is called Bartlett method (or regression approach) which produces unbiased scores that are correlated only with their own factor (Yong & Pearce, 2013). Another method is called the Anderson-Rubin method which produces scores that are uncorrelated and standardized. The method that you choose will depend on your research question, but the Bartlett method is the most easily understood. Factor scores can be treated as variables for further statistical analyses of variables (e.g., ANOVA) or can be used to overcome the issue of multicollinearity as uncorrelated variables can be produced (Tabachnick & Fidell, 2007 cited in Yong & Pearce, 2013).

2.8.5 Purposes of Confirmatory Factor Analysis

According to DeCoster (1998) the main objective of a CFA is to determine the ability of a predefined factor model to fit an observed set of data. The common uses of CFA are to:

1. Establish the validity of a single factor model.
2. Compare the ability of two different models to account for the same set of data.
3. Test the significance of a specific factor loading.
4. Test the relationship between two or more factor loadings.
5. Test whether a set of factors are correlated or uncorrelated.
6. Assess the convergent and discriminant validity of a set of measures.

2.8.6 Advantages of Factor Analysis

Factor analysis provides such a number of advantages to researchers as:

1. from questionnaires, or a battery of tests which can be reduced to a smaller set, to get at an underlying concept, and to facilitate interpretations (Rummel, 1970). It is easier to focus on some key factors rather than having to consider too many variables that may be trivial, and so factor analysis is useful for placing variables into meaningful categories (Yong & Pearce, 2013). It helps to reduce a large number of variables by assembling common variables into new descriptive categories. It is called a factor score. A factor score can be considered to be a variable describing how much an individual would score on a factor (Yong and

Pearce, 2013). The new-formed categories of variables then can be analyzed statistically by using regression and correlation analysis, statistical analysis of variables (ANOVA), hypothesis testing, and discriminant analysis and so on. According to (Yong and Pearce, 2013) factor scores can be treated as variables for further statistical analyses of variables (ANOVA).

2. It is used to overcome the issue of multicollinearity as uncorrelated variables can be produced. This method is used to combine independent variables that correlate one another to form new variables called new factors by applying factor analysis method. Factor analysis searches for such joint variations in response to unobserved latent variables. The observed variables are modeled as linear combinations of the potential factors, plus “error” terms.

3. Factor analysis is part of general linear model (GLM) and this method also assumes several assumptions: there is linear relationship; there is no multicollinearity; it includes relevant variables into analysis; and there is true correlation between variables and factors. Several methods are available, but Principle Component Analysis is used most commonly.

4. Factor analysis is a useful tool for investigating variable relationships for complex concepts such as socioeconomic status, dietary patterns, or psychological scales. It allows researchers to investigate concepts that are not easily measured directly by collapsing a large number of variables into a few interpretable underlying factors.

2.8.7 Sampling Method of Factor Analysis

Factor analysis is a method that needs a large sample size. In EFA, the recommended sample size is at least 300 participants, and the variables that are subjected to factor analysis each should have at least 5 to 10 observations (Comrey & Lee, 1992 cited in Yong and Pearce, 2013). According Yong and Pearce (2013) the ratio of respondents to variables should be at least 10 : 1 and that the factors are considered to be stable and to cross-validate with a ratio of 30 : 1. Moreover, it is also recommended that a heterogeneous sample is used rather than a homogeneous sample as homogeneous samples lower the variance and factor loadings (Kline, 1998).

Sample size requirements in CFA also vary with the type of estimation method used and the distributional characteristics of the data (Kline, 2013). In general, somewhat smaller sample sizes are needed when the standard estimation method in SEM, maximum likelihood (ML) estimation, is used and the distributions are multivariate normal. In this case, a 20 : 1 ratio is recommended, that is, there should be at least 20 cases for each model parameter estimated in the analysis

(Jackson, 2003 cited in Kline, 2013). Moreover, a typical sample size in SEM is about 200 (Shah & Goldstein, 2006 cited in Kline, 2013), which may be adequate for analyzing a CFA model with 10 or so parameters. However, much larger sample sizes may be needed when a method other than ML estimation is used or distributions are severely non-normal. Another framework for estimating minimum sample sizes in CFA involves estimation of the statistical power of tests about either individual parameters or about the fit of the whole model to the data (Kline, 2013).

In this study, confirmatory factor analysis was used and therefore, the ratio of respondents to variables in this study is 20 respondents to 1 variable.

2.8.8 Summary

Factor analysis is a common statistical method used to find a small set of unobserved variables, also called latent variables, or factors, which can account for the covariance among a larger set of observed variables, also called manifest variables (Albright, 2008). It is also used to identify latent constructs or factors. It is commonly used to reduce variables into a smaller set to save time and facilitate easier interpretations and it is mathematically complex and the criteria used to determine the number and significance of factors are vast. There are two main factor analysis techniques: Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). Confirmatory and Exploratory Factor Analysis are powerful statistical techniques and they have similarities and differences. Researchers must keep in mind to select CFA to verify the factor structure and EFA to determine the factor structure. CFA allows the researcher to test the hypothesis that a relationship between the observed variables and their underlying latent construct(s) exists. The researcher uses knowledge of the theory, empirical research, or both, postulates the relationship pattern a priori and then tests the hypothesis statistically.

Factor analysis is a widely used method for situations in which a small set of unobserved (latent) variables is believed to underlie a larger set of observed (manifest) variables. Exploratory factor analysis, available in most general statistics packages, is a technique for identifying structure in data and generating hypotheses. Confirmatory factor analysis differs in that it is much more theory driven and is generally used to test explicit hypotheses.

2.9 Structural Equation Modeling

2.9.1 Definition of Structural equation modeling (SEM)

A few definitions of SEM as cited in Suhr (n.d.) are as follows:

SEM is a comprehensive statistical approach to testing hypotheses about relations among observed and latent variables (Hoyle, 1995). Similarly, SEM is a methodology for representing, estimating, and testing a theoretical network of (mostly) linear relations between variables (Rigdon, 1998). MacCallum & Austin (2000) defines SEM as a method used to test hypothesized patterns of directional and non-directional relationships among a set of observed (measured) and unobserved (latent) variables. Suhr (n.d.) also defines structural equation modeling (SEM) is a methodology for representing, estimating, and testing a network of relationships between variables (measured variables and latent constructs). Structural equation modeling uses various types of models to depict relationships among observed variables, with the same basic goal of providing a quantitative test of a theoretical model hypothesized by the researcher (Schumacker & Lomax, 2010). Structural equation modeling is a general term that has been used to describe a large number of statistical models used to evaluate the validity of substantive theories with empirical data. Statistically, it represents an extension of general linear modeling (GLM) procedures, such as the ANOVA and multiple regression analysis (Lei and Wu, 2007). SEMs are a family of analysis methods that represent translations of a series of hypothesized cause-effect relationships among variables; for making quantitative estimates of model parameters and their standard errors; for assessing the overall fit of a model to data; and for determining the equivalences of model parameters across several samples.

Structural equation models combine factor analysis principles with path analysis and other path modeling methods in specifying a set of linear equations representing hypothesized relations among latent constructs and their multiple indicators.

2.9.2 Basic Components of SEM

Structural equation models consist of two interrelated components, a measurement model and a structural model. The measurement model, which specifies how the latent constructs are indicated by their observed indicators, describes these indicators' measurement properties, reliabilities and validities, and is analogous to CFA. The structural equation model, which specifies causal relationships among the latent variables, describes their direct and indirect effects,

and allocates explained and unexplained variance of the dependent constructs. In other words, the measurement model defines relations between the observed and unobserved variables. It also provides the link between scores on a measuring instrument and the underlying constructs they are designed to measure. The measurement model represents therefore the Confirmatory Factor Analysis (CFA), in that it specifies the pattern by which each measure loads on a particular factor. It concentrates on validating the model but it does not explain the relationships between constructs. Additionally, it represents how the measured variables come together to represent constructs and is used for validation and reliability checks. In contrast, the structural model defines relations among the unobserved variables. Accordingly it specifies the manner by which particular latent variables directly or indirectly influence changes in the values of certain other latent variables in the model. It is concerned with how constructs are associated with each other and is used for hypotheses testing (Hox & Bechger, n.d.)

2.9.3 Purposes of SEM

There are at least four major reasons for the popularity of SEM (Schumacker & Lomax, 2010). The first reason suggests that researchers are becoming more aware of the need to use multiple observed variables to better understand their area of scientific inquiry. A second reason involves the greater recognition given to the validity and reliability of observed scores from measurement instruments. A third reason pertains to how structural equation modeling has matured over the past 30 years, especially the ability to analyze more advanced theoretical SEM models. Finally, SEM software programs have become increasingly user friendly. According to (Kline, 1998 cited in Suhr, n.d.), there are two main goals in SEM: 1) to understand the patterns of correlation/covariance among a set of variables and 2) to explain as much of their variance as possible with the model specified.

2.9.4 Processes of SEM analysis

There is a logical sequence of five steps or processes in SEM analysis namely model specification, model identification, model estimation, model testing, and model modification (Schumacker & Lomax, 2010).

1. Model specification

According to Schumacker & Lomax (2010) model specification involves using all of the available relevant theory, research, and information to develop a theoretical model. Thus, prior to any data collection or analysis, the researcher specifies a particular model that should be confirmed using variance–

covariance data. Model specification involves determining every relationship and parameter in the model that is of interest to the researcher. This was the hardest part of structural equation modeling (Schumacker & Lomax, 2010). The goal of the applied researcher is to determine the best possible model that generates the sample covariance matrix and sample covariance matrix implies some underlying, yet unknown, theoretical model or structure (known as covariance structure), and the researcher's goal is to find the model that most closely fits that covariance structure (Schumacker & Lomax, 2010). Model specification is a necessary first step in analyzing a confirmatory factor model, just as it was for multiple regression and path models. Many different relationships among a set of variables can be postulated with many different parameters being estimated. Thus, many different factor models can be postulated on the basis of different hypothesized relationships between the observed variables and the factors.

2. Model identification

Once a confirmatory factor model has been specified, the next step is to determine whether the model is identified. In structural equation modeling, it is crucial that the researcher resolves the identification problem prior to the estimation of parameters. Model identification depends on the designation of parameters as fixed, free, or constrained. Once the model is specified and the parameter specifications are indicated, the parameters are combined to form one and only one Σ (model implied variance-covariance matrix) (Schumacker & Lomax, 2010). Traditionally, there have been three levels of model identification. They depend on the amount of information in the sample variance-covariance matrix S necessary for uniquely estimating the parameters of the model. The three levels of model identification are as follows:

2.1 A model is under-identified (or not identified) if one or more parameters may not be uniquely determined because there is not enough information in the matrix S .

2.2 A model is just-identified if all of the parameters are uniquely determined because there is just enough information in the matrix S .

2.3 A model is over-identified when there is more than one way of estimating a parameter (or parameters) because there is more than enough information in the matrix S (Schumacker & Lomax, 2010). Schumacker & Lomax (2010) stress that if a model is either just- or over-identified, degree of freedom equal 0 or greater than 0 (positive), then the model is identified. If a model is under-identified,

then the parameter estimates are not to be trusted, that is, the degrees of freedom for the model is negative. Again, if the degree of freedom equal 0, the model is just-identified; if the degree of freedom is higher than 0, the model is over-identified; and if the degree of freedom is lower than 0, the model is under-identified.

3. Model estimation

Model estimation is used to estimate parameters in a model—that is, estimates of the population parameters in a structural equation model. The estimation process involves the use of a particular fitting function to minimize the difference between Σ and S . Several fitting functions or estimation procedures are available. Some of the earlier estimation methods included unweighted or ordinary least squares (ULS or OLS), generalized least squares (GLS), and maximum likelihood (ML) (Schumacker & Lomax, 2010). The ULS estimates are consistent, have no distributional assumptions or associated statistical tests, and are scale dependent—that is, changes in observed variable scale yield different solutions or sets of estimates while the GLS and ML methods are scale free, which means that if we transform the scale of one or more of our observed variables, the untransformed and transformed variables will yield estimates that are properly related—that is, that differ by the transformation.

4. Model testing

Once the parameter estimates are obtained for a specified SEM model, the researcher should determine how well the data fit the model. There are two ways to think about model fit. The first is to consider some global type omnibus test of the fit of the entire model. The second is to examine the fit of individual parameters in the model (Schumacker & Lomax, 2010).

First, to consider the global tests in SEM known as model-fit criteria, researcher should consider a large number of model-fit indices. Many of these measures are based on a comparison of the model implied covariance matrix Σ to the sample covariance matrix S . If Σ and S are similar in some fashion, then one may say that the data fit the theoretical model. If Σ and S are quite different, then one may say that the data do not fit the theoretical model.

Second, to consider the individual parameters of the model, researchers should consider three main features of the individual parameters. One feature is whether a free parameter is significantly different from zero. A second feature is whether the sign of the parameter agrees with what is expected from the theoretical model. A third feature is that parameter estimates should make sense—that is, they

should be within an expected range of values (Schumacker & Lomax, 2010).

5. Model modification

If the fit of the implied theoretical model is not as strong as one would like, then the next step is to modify the model and subsequently evaluate the new modified model. In order to determine how to modify the model, there are a number of procedures available for the detection of specification errors so that more properly specified alternative models may be evaluated during re-specification process. In general, these procedures are used for performing what is called a specification search (Leamer, 1978 cited in Schumacker & Lomax, 2010). The purpose of a specification search is to alter the original model in the search for a model that is better fitting in some sense and yields parameters having practical significance and substantive meaning. If a parameter has no substantive meaning to the applied researcher, then it should never be included in a model. Substantive interest must be the guiding force in a specification search; otherwise, the resultant model will not have practical value or importance (Schumacker & Lomax, 2010).

2.9.5 Structural Equation Model Development

Structural equation models have been developed in a number of academic disciplines to substantiate and test theory. Structural equation models have further helped to establish the relationships between latent variables or constructs, given a theoretical perspective and this approach involves developing measurement models to define latent variables and then establishing relationships or structural equation models with the latent variables (Schumacker & Lomax, 2010). There are two approaches used to develop structural equation model: Two-step-approach to modeling and four-step-approach to modeling.

1. Two-step-approach to modeling. A two-step modeling approach is used to emphasize the analysis of the two conceptually distinct latent variable models: measurement models and structural models (James, Mulaik & Brett, 1982 cited in Schumacker & Lomax, 2010). The measurement model provides an assessment of convergent and discriminant validity, and the structural model provides an assessment of predictive validity (Anderson & Gerbing, 1988 cited in Schumacker & Lomax, 2010). The measurement model, or factor model, specifies the relationships among measured (observed) variables underlying the latent variables while the structural model specifies relationships among the latent variables as posited by theory. Moreover, the measurement model provides an assessment of convergent and discriminant validity while the structural model provides an

assessment of nomological validity (Schumacker & Lomax, 2010).

2. Four-step-approach to modeling.

Mulaik & Millsap (2000) also presented a four-step approach to testing a nested sequence of SEM models:

Step 1: Pertains to specifying an unrestricted measurement model, namely conducting an exploratory common factor analysis to determine the number of factors, latent variables that fit the variance-covariance matrix of the observed variables.

Step 2: Involves a confirmatory factor analysis model that tests hypotheses about certain relations among indicator variables and latent variables. Basically, certain factor loadings are fixed to zero in an attempt to have only a single nonzero factor loading for each indicator variable of a latent variable. Sometimes this leads to a lack of measurement model fit because an indicator variable may have a relation with another latent variable.

Step 3: Involves specifying relations among the latent variables in a structural model. Certain relations among the latent variables are fixed to zero so that some latent variables are not related to one another.

Step 4: Continues if an acceptable fit of the structural model is achieved, that is, $CFI > .95$ and $RMSEA < .05$. In Step 4, a researcher tests planned hypotheses about free parameters in the model.

Several approaches are possible; (a) perform simultaneous tests in which free parameters are fixed based on theory or estimates obtained from other research studies, (b) impose fixed parameter values on freed parameters in a nested sequence of models until a misspecified model is achieved (misspecified parameter) or, (c) perform a sequence of confidence-interval tests around free parameters using the standard errors of the estimated parameters.

Suhr (n.d.) suggested approach to SEM analysis proceeds through the following process:

1. Review the relevant theory and research literature to support model specification
2. Specify a model (e.g., diagram, equations)
3. Determine model identification (e.g., if unique values can be found for parameter estimation; the number of degrees of freedom, df , for model testing is positive)
4. Select measures for the variables represented in the model

5. Collect data
6. Conduct preliminary descriptive statistical analysis (e.g., scaling, missing data, collinearity issues, outlier detection)
7. Estimate parameters in the model
8. Assess model fit
9. Re-specify the model if meaningful
10. Interpret and present results.

2.9.6 Goodness of Fit

Of primary interest in Structural Equation Modeling is the extent to which a hypothesized data “fits”, or in other words, adequately describes the sample data. The model fitting process involves determining the goodness-of-fit between the hypothesized model and the sample data. Goodness of fit (GOF) indicates how well the specified model reproduces the observed covariance matrix among the indicator items. The values of any GOF measure result from a mathematical comparison of these two matrices. The closer the values of these two matrices are to each other, the better the model is said to fit. Given below is a description of the goodness-of-fit indicators used to evaluate model fitness in Structural Equation Modeling (SEM) (Joreskog & Sorbom, 1981).

1. Goodness of Fit Chi-Square (χ^2)

The Chi square goodness of fit metric is used to assess the correspondence between theoretical specification and empirical data in a CFA. By default, the null hypothesis of SEM is that the observed sample and SEM estimated covariance matrices are equal, meaning perfect fit. The chi-square value increases as differences (residuals) are found when comparing the two matrices. With the chi-square test, the statistical probability that the observed sample and SEM estimated covariance matrices are equal is assessed. The probability is the traditional p- value associated with parametric statistical tests. Chi-square GOF test is the only statistical test of the difference between matrices in SEM and is represented mathematically by the following equation where N is the overall sample size (Joreskog & Sorbom, 1981).

$$\chi^2 = (N-1) (S - \Sigma_k)$$

Where:

- N is the overall sample size.
- S is sample covariance matrix
- Σ_k is SEM estimated covariance matrix

The value of χ^2 for a just-identified model generally equals zero and has no degrees of freedom. If $\chi^2 = 0$, the model perfectly fits the data. As the value of chi square increases, the fit of an over identified model becomes increasingly worse. Thus, chi square is actually a “badness-of-fit” index because the higher its value, the worse the model’s correspondence to the data.

2. Degrees of Freedom (df)

Degrees of freedom represent the amount of mathematical information available to estimate model parameters. The number of degrees of freedom for a SEM is calculated by the formula:

$$df = \frac{1}{2} [(p)(p + 1)] - k$$

Where: p is the total number of observed variables.
 k is the number of estimated (free) parameters.

The degrees of freedom in SEM are based on the size of the covariance matrix, which comes from the number of indicators in the model.

3. The Goodness-of-fit Index (GFI & AGFI)

The goodness-of-fit index (GFI) was the very first standardized fit index (Joreskog & Sorbom, 1981). $GFI = 1.0$ indicates perfect model fit, $GFI > .90$ may indicate good fit, and values close to zero indicate very poor fit. However, values of the GFI can fall outside the range 0–1.0. Values greater than 1.0 can be found with just identified models or with over identified models with almost perfect fit; negative values are most likely to happen when the sample size is small or when model fit is extremely poor. Another index originally associated with AMOS is the adjusted goodness-of-fit index (AGFI) (Joreskog & Sorbom, 1981). AGFI differs from the GFI only in the fact that it adjusts for the number of degrees of freedom in the specified model.

4. Root Mean Square Error of Approximation (RMSEA)

Root Mean Square Error Approximation (RMSEA) is one of the most widely used measures that attempts to correct for the tendency of the GOF test statistic to reject models with a large sample or a large number of observed variables. It better represents how well a model fits a population, not just the sample used for estimation. Lower RMSEA values indicate better fit. Earlier research suggest values of <0.05 . Browne and Cudeck, (1993) Hu and Bentler (1999) have suggested value of <0.06 to be indicative of good fit.

5. Root Mean Square Residual (RMR)

The Root Mean Square Residual represents the average residual value derived from the filling of the variance- covariance matrix for the hypothesized model to the variance covariance matrix of the sample data (S). Therefore, the RMR is the square root of the mean of the standardized residuals. Lower RMR values represent better fit and higher values represent worse fit. Recommended value of RMR is <0.02 .

6. Tucker Lewis Index (TLI)

The Tucker Lewis Index (Tucker and Lewis, 1973) is conceptually similar to the NFI, but varies in that it is actually a comparison of the Normed chi-square values for the null and specified model, which to some degree takes into account model complexity. Models with good fit have values that approach one (Hu & Bentler, 1999), and a model with a higher value suggests a better fit than a model with a lower value.

7. Comparative Fit Index (CFI)

The CFI is Normed so that values range between zero to one, with higher values indicating better fit. Because the CFI has many desirable properties, including its relative, but not complete, insensitivity to model complexity, it is among the widely used indices. CFI values above 0.90 are usually associated with a model that fits well. But a revised cut off value close to 0.95 was suggested (Hu and Bentler, 1999).

Table 2.6 Fit statistics of the Measurement model

Fit Statistics	Recommended
χ^2 significance $p \leq 0.05$	
GFI	> 0.90
AGFI	> 0.90
CFI	> 0.90
TLI	> 0.90
RMSEA	< 0.05
RMR	< 0.02

2.9.7 Shortcomings of Structural Equation Modeling

Although structural equation modeling has gained popularity across many disciplines in the past two decades due perhaps to its generality and flexibility,

this method still has a number of shortcomings that make scholars concerned in the reporting of structural equation modeling results. Breckler (1990), after having reviewed the personality and social psychology research literature, finds several shortcomings of structural equation modeling, namely that model-fit indices can be identical for a potentially large number of models, that assumptions of multivariate normality are required, that sample size affects results, and that cross-validation of models was infrequently addressed or mentioned. Boomsma, 2000 cited in Schumacker & Lomax (2010) stresses that many studies lacked a theoretical foundation for the theoretical model, gave a poor description of the model tested, provided no discussion of the psychometric properties of the variables and level of measurement, did not include sample data, and had a poor delineation or justification for the model modification process. He pointed out how difficult it can be to evaluate or judge the quality of published SEM research.

2.9.8 Guidelines and Recommendations for Reporting SEM Research

Due to a number of issues in structural equation modeling, research experts have provided some guidelines and recommendations for improving SEM research. The Publication Manual of the American Psychological Association (American Psychological Association, 2001, pp. 161, 164–167, and 185 cited in Schumacker & Lomax, 2010) states that researchers should include the means, standard deviations, and correlations of the entire set of variables so that others can replicate and confirm the analysis, as well as provide example tables and figures for reporting structural equation modeling research. Thompson, 2000 cited in Schumacker & Lomax (2010) provided 10 commandments for good structural equation modeling behavior: (1) do not conclude that a model is the only model to fit the data, (2) cross-validate any modified model with split-sample data or new data, (3) test multiple rival models, (4) evaluate measurement models first, then structural models, (5) evaluate models by fit, theory, and practical concerns, (6) report multiple model-fit indices, (7) meet multivariate normality assumptions, (8) seek parsimonious models, (9) consider variablescale of measurement and distribution, and (10) do not use small samples. Structural equation modeling requires larger sample sizes as models become more complex or the researcher desires to conduct cross-validation with split samples. In traditional multivariate statistics the rule of thumb is 20 subjects per variable (20 : 1). The rules of thumb used in structural equation modeling vary from 100, 200, to 500 or more subjects per study, depending on model complexity and cross-validation requirements (Schumacker & Lomax, 2010). Finally, a two-step/four step

approach is important because if measurement models do not fit the observed variables, then relationships among the latent variables in structural models are not very meaningful. SEM researchers should give a detailed justification of the SEM model tested along with alternative models, account for identification, address non-normality and missing data concerns, and include a complete set of parameter estimates with standard errors, correlation matrix (and perhaps residuals), and goodness-of-fit indices.

Schumacker & Lomax (2010) elaborate several key issues in SEM. First, in structural equation model analyses several different types of sample data matrices can be used (e.g., variance-covariance matrix, asymptotic variance-covariance matrix, Pearson correlation matrix, or polyserial, polychoric, or tetrachoric matrices). A second issue concerns model identification, that is, the number of distinct values in the sample variance-covariance matrix should equal or exceed the number of free parameters estimated in the model and the rank of the matrix should yield a non-zero determinant value. A researcher must also select from various parameter estimation techniques in model estimation, for example, unweighted least squares, maximum likelihood, or generalized least squares estimation under the assumption of multivariate normality, or asymptotically distribution-free estimation using ADF or CVM techniques when the multivariate normality assumption is not met. Schumacker & Lomax (2010) also provide a checklist as follows:

1. Provide a review of literature that supports your theoretical model.
2. Provide the software program used along with the version.
3. Indicate the type of SEM model analysis (multi-level, structured means, etc.).
4. Include correlation matrix, sample size, means, and standard deviations of variables.
5. Include a diagram of your theoretical model.
6. For interpretation of results, describe fit indices used and why; include power and sample size determination; and effect size measure.

2.9.9 Summary

Confirmatory factor analysis is the basis of the measurement model in full structural equation modeling (SEM) and can be estimated using SEM software. Structural Equation Modeling is a flexible and powerful statistical methodology used to examine the relationships between measured variables and latent constructs.

A sound model is theory based and theory is based on findings in the literature, knowledge in the field, or one's educated guesses, from which causes and effects among variables within the theory are specified. A model is said to be over-identified if it contains fewer parameters to be estimated than the number of variances and covariances, just-identified when it contains the same number of parameters as the number of variances and covariances, and under-identified if the number of variances and covariances is less than the number of parameters.

2.10 Cambodian Education

2.10.1 The Evolution of Education in Cambodia

Cambodia has experienced a serious troubled history since the end of the Khmer Empire following French colonization in 1863 and then two other regimes: Lon Nol from 1970-1975, and Pol Pot, known as Khmer Rouge, from 1975-1979 (Chandler, 2008). Internal conflict, turmoil and turbulence which were caused by foreign invasion as well as long civil wars that had taken place almost three decades in the second half of the twentieth century, have left deep scars of fears and trauma in the hearts and minds of the Cambodian people (Rath, 2010). Most of the infrastructure, roads, schools, universities, hospitals, pagodas and commercial and historical buildings were devastated and millions of lives were lost. Such various conflicts and mass destructions in a long period have severely affected the educational system and development of Cambodian education in all levels. Moreover, historic records and other important documents related to the history of education were also destroyed and disappeared. This causes unavailability for researchers to trace the history of higher education back to Angkor Empire Period. It is very difficult and impossible to investigate the Cambodia's formal education system from the Angkor period to the pre-French colonization due to lack of historic records (Duggan, 1996). However, in order to gain a thorough understanding of the matter, one needs to take a brief look at the role of traditional education in Cambodian society before the French colonization and then pay carefully attention to see how the system has evolved over time (Leng, 2010).

1. History of Education in Cambodia before 1970s

Modern education progressed very slowly in Cambodia. According to the famous scholars, the educational system of Cambodia in the thirteen century was seen as monastic in style, and Buddhist monks living in the pagodas played important role in conveying knowledge to the learners (Ayres, 2000a; Tully, 2005; and

Whitaker et al., 1973). Monks taught Cambodian children, mainly boys, some carpentry skills along with how to read and write Khmer texts closely associated with the concepts of Buddhism and Cambodian culture. Lack of teachers, places, and time for transmitting knowledge to learners resulted in the vast majority of illiterate people during the pre-colonial period (Leng, 2010). French imposed colonization in Cambodia in 1863. This colonization period was a turning point in the history of Cambodian education, mainly through the introduction of secular subjects brought by France. Like other colonial powers, the French took control of all aspects of Cambodia's administration (Chandler, 2008; Tully, 2002). During the French colonization period, The French colonial rulers did not pay attention to educating Khmer people. The French colonizer did very little to develop Cambodia's education system with only a small system of Franco-Cambodian primary schools in the decades. Tully (2002) describes the education during the colonial period as follows: The schools suffered from poor teaching methods, lack of resources and funds, ignorant teachers and the reluctance of peasants to allow their children to attend classes when they could be of use in the fields. There was also a clash between the traditional values and beliefs of the monk-teachers, and the post- Enlightenment, European content of the new curriculum, which the monks often considered heretical. (p. 220)

It was not until the late 1930s that the first high school, which was heavily influenced by the French education system, opened (Duggan, 1997). According to Ayres (2000a), the French purpose of modernizing Cambodian education system was more to engender indigenous loyalty than to promote the development of Cambodia or its people. Ayres (2000a) claims that the French protectorate of Cambodia reflected the bias of education in Cambodia. French patronage opened schools for the purpose of serving the children of the royal families, the French residents, members of Cambodian elites and children of Vietnamese immigrants recruited by the French to undertake administrative tasks. Still, almost all peasant children continued to be educated in the pagodas (Ayres, 2000a; Fergusson & Masson, 1997). Nonetheless, French has left its legacy to Cambodia during its colonization in Cambodia. Lycee Sisowath, (it is now renamed as Sisowath high school) was opened in 1935 and the National Institute of Juridical, Political and Economic Sciences was opened in 1949 (Ayres, 2000a; Hayden, 1967; Tully, 2002).

The educational system was made better progress in King Sihanouk's leadership. Prince Norodom Sihanouk, one of the famous kings of

Cambodia, became the King in 1941 when the French promoted him on the throne in the place of his uncle, Prince Moniret, and Sihanouk's leadership brought about a political stability and fast country development for Cambodian people that many of their neighboring nations envied (Warner, 1966). He then gained independence from France in 1953. After gaining independence from France, the government of King Norodom Sihanouk made substantial progress in the field of education in the 1950s and 1960s. King Norodom Sihanouk, known as the postcolonial leader of Cambodia, a father of independence and reconciliation, and Samdech Euv, saw formal education as a key vehicle for the modernization and development of Cambodia (Ayres, 2000b; Tully, 2005). Elementary and secondary education was expanded to various parts of the country, while higher learning institutions such as vocational institutions, teacher-training centers and universities were established. Unfortunately, the progress of these decades was obstructed by the civil war following the overthrow of King Sihanouk by Lon Nol in the 1970 and then destroyed by the Khmer Rouge regime (Chadler, 2008).

Lon Nol, with the support from America, overthrew Norodom Sihanouk in 1970. The problems with higher education, along with other social and political issues, resulted in such a movement. Like Sihanouk, Lon Nol saw the importance of education expansion as a key element to the success of Cambodia's development (Ayres, 2000a). However, the ideologies of this new regime were considered too closely aligned with the Western concepts of republicanism, capitalism and democracy, in opposition to Sihanouk's monarchy and socialism (Ayres, 2000a, Chadler, 2008). The emergence of these political ideologies as well as civil wars throughout the country disrupted the education program between 1970 and 1975 (Ayres, 2000a; Chandler, 2008). War not only destroyed educational facilities, it also forced most foreign university lecturers to flee the country (Chhum, 1973). With too few qualified local lecturers, there was a severe shortage of teaching staff in most Cambodian universities. This resulted in both poor quality of education and incompetent university graduates (Leng, 2010).

Pol Pot, known as a Khmer Rouge leader, came to power in Cambodia in mid April 1975. Afterwards, Cambodia's formal education system ceased to exist; schools, universities and educational administrations were severely abolished (Vann, 2012). In an attempt to rebuild a new Cambodia with new revolutionary men and women, the Khmer Rouge set out to eradicate the old elements of Cambodia's society, including the old education system (Chadler, 2008).

“A serious tragedy occurred in Cambodia between 1975 and 1979 when the Khmer Rouge took control and intentionally destroyed all existing social, economic, political and cultural infrastructures in the country” (Leng, 2010). Like their Maoist counterparts in China, the Khmer Rouge leaders emphasized manual labor and political correctness over knowledge. They claimed “rice fields were books, and hoes were pencils.” As such, Cambodia did not need an educational system (Chandler, 2008). The Khmer Rouge leaders deliberately destroyed the foundations of a modern education. People with higher education such as doctors, lawyers, teachers, professors, and former college students were killed or forced to work in labor camps (Chandler, 2008; Clayton, 1998). The Khmer Rouge criticized the educational systems of both Sihanouk and Lon Nol as Western ideologies. To get rid of these ideologies, it demolished physical infrastructures of education such as schools, buildings, burned educational materials and resources, and killed almost all educated people (Chandler, 2008; Clayton, 1998; Sloper, 1999). It is estimated that by the end of the Khmer Rouge time, between 75 and 80 percent of Cambodian educators either were killed, died of overwork, or left the country and 96 percent of university students were killed (Chandler, 2008; Clayton, 1998; Pit & Ford, 2004). At least half of the written material available in the Khmer language was destroyed. During the Khmer Rouge regime, the country met with severe setbacks in all sectors and the achievements made in education post-independence were essentially nullified. Schools at all levels were closed and people were to be reeducated. Educated people or social elites were subjected to mistrust, persecution, or execution. Earlier to this era of social, cultural, and human genocide, there were more than 200,000 teachers who lived in Cambodia. Of that number, only 5,000 teachers were documented to have survived from under the Khmer Rouge (Ayres, 2000a). In addition, 50 out of 725 university instructors survived, 207 out of 2,300 secondary school teachers survived, & just 2,717 out of 21,311 primary school teachers survived. The succeeding generation of young Cambodians who were children during the Khmer Rouge regime and after era was not formally educated and thus illiterate (Ayres, 2000). The Khmer Rouge was trying to eliminate all past ideas and values so as to introduce a new educational system based on Pol Pot’s concept of “socialism without a model” (Ayres, 1999, p. 209). During a long transition period, Cambodia had experienced various civil wars, direct and indirect foreign intervention, particularly the most destructive revolution by the Khmer Rouge. As a result, the effects have impaired all levels of education, including higher education. Much time is in need for

reforming and improving severely destroyed education system left from the past decades.

2. History of Education in Cambodia after 1970s

On 07 January, 1979, Vietnamese troops came to Cambodia, ousted the Khmer Rouge regime and formed the National Liberation Front of the Cambodian People, which soon became the People's Republic of Kampuchea (PRK) (Can, 1991; Clayton, 1999; Chandler, 1992). After coming to power with Vietnamese support in 1979, the government of the PRK attempted to redevelop the education system to respond the urgent need of the country. Because of the massive devastation of materials and human resources as well as physical infrastructures caused by the Khmer Rouge and lack of international recognition, the new regime was totally dependent for survival on assistance from Vietnam and Eastern-bloc countries, mainly the Soviet Union (Chandler, 2008). These countries provided strong support to Cambodia with both teaching and learning materials as well as training assistance at all levels, including higher education (Ayres, 2003). Although significant progress was made, the process of educational redevelopment was hampered by continuous civil war and lack of budget, resources, human as well as materials. The PRK government undertook a massive rehabilitation program aimed at enrolling as many students as possible. The slogan of the time was "those who know more teach those who know less." Those with almost any level of education were encouraged to work as teachers, and efforts were made to identify and encourage former teachers, professors, and bureaucrats in the field of education to participate in this difficult endeavor (Chandler, 2008; Ayres, 2003). Potential teachers were given short-term training for one month, three weeks or even two weeks and then assigned teaching jobs. With many buildings destroyed, classes were taught in shacks made of leaves with dirt floors or in some places instruction was given outside under the trees (Ayres, 2003). Given the enormity of destruction caused by the Khmer Rouge regime, one could see significant progress in the field of education during 1980s. This significant progress was made possible depending mainly on the help and support from a number of parties involved namely foreign and non-government organizations. Due to the Cambodia's political stability and economic liberalization in the early 1990s, foreign aids from Western countries started pouring into the country, first through non-governmental organizations and then directly from donor countries, as well (Clayton & Ngoy, 1997). This significantly helped the restoration and growth of the higher education sector in Cambodia. However, Western ideologies once again

permeated the study programs in higher education (Pit & Ford, 2004). But, from an empty handed position, the PRK government was able to reestablish a semblance of an educational system from pre-school to university. A number of students were offered scholarships by host countries in the former Soviet blocks to pursue higher education.

3. History of Higher Education in Cambodia

The higher education system of Cambodia essentially underwent a series of stages of development throughout the different political administrations. The historical role of education in Cambodian society has always been linked to ideologies which differed with each era (Leng, 2010). Firstly, under the French colonial rule, the education system was highly influenced by the French education system. During the Sang Kum Reas Niyum with Sihanouk, more developments in higher education occurred beginning with the establishment of the first institution, the National Institute of Legal, Political, and Economic Studies which trained civil servants and had just about 250 students (Ayres, 2000). The first university would be followed by eight other institutions of higher education. This period of development though would be delayed with the multitude of violent political uprising in the 1970s. The fall of the People's Republic of Cambodia under the Khmer Rouge ushered in a new era of educational development from 1979 to 1993. Given this historical context, the process of revitalization, development and reform of Cambodia's higher education system since the 1990s has experienced many challenges. Ayres (2000b) points out that the fundamental problem facing the higher educational system in Cambodia in that period was the result of the civil conflict which caused the destruction of educational facilities and financial constraints. One of the major problems during the early 1990s was the lack of financial resources and capable human capital in all fields, the legacies of many years of raging civil wars (Pit & Ford, 2004). The Cambodia educational system was reinstated and educational institutions at all levels were reopened to serve the nation (Ayres, 2000). The various educational institution models in educational system, such as the French, the Soviet and the Vietnamese educational models, with their conflicting political ideologies, also had an effect on everything in higher education, at both the institutional and the ministerial levels (Clayton, 2006). Afterwards, with support from the United Nations Transitional Authority in Cambodia and the newly elected government, transformative changes were made that would contribute towards the country's political and economic situation. In addition, the transition from a command

economy and urgent need to a market economy and to a different political perspective in the late 1980s and early 1990s has induced greater demands for a qualified labor force to meet labor market needs. Thus, the challenges to the development of higher education in Cambodia magnified (Ahrens & Kemmerer, 2002; Sloper, 1999). With great support from both local and international communities as well as non-government organizations, the Cambodian government began to strongly emphasize the need for higher education reform in academic programs, faculty and staff development, as well as with financial and managerial structures, in order to produce a skilled labor force for an open market economy (Ahrens & Kemmerer, 2002; Chet, 2006; Sloper, 1999). Even though higher education was viewed as the key to human resource development in the social, economy development, foreign financial support in this sub-sector was still limited, compared to basic general education (Duggan, 1997). Even more problematic, the public higher education system in Cambodia in the 1990s was still following the centralized, elitist and competitive model of French education, which allows only a limited number of students to enter universities (Pit & Ford, 2004; Slooper, 1999). Acceptance rates were very low because of a combination of financial constraints and lack of qualified educators. Lastly, the Paris Agreement of 1993 would create and usher in a newer freer market and more financial wealth to the nation that would lead to an increase in foreign interest and investment (Pit and Ford, 2004). However, with the additional number of foreign investments and economic reforms, that resulted in the necessity of having a greater number of resources to accommodate this new influx of investments. With more wealth, economic reforms, and educational sector needs, foreign and domestic investors started heavily engaging themselves in the education sector (Pit & Ford, 2004). Even though significant progress and reform had been made since the early 1990s in the educational sector, Cambodia's higher education during the 1990s was still in very poor condition and unresponsive to the growing need for a capable labor force (Pit & Ford, 2003). Similarly, although efforts have been made by the government to redevelop the higher education system, a lack of human and financial resources has compounded the already difficult journey towards higher education reform. In 1993, at the International Committee of Reconstruction of Cambodia in Tokyo, the "importance of education as a basic to sustainable economic growth and broader nation building" was acknowledged (Pit and Ford, 2004). However, the path towards improving higher education has been fraught with difficulties. While Cambodian education has made some gains from foreign

assistance, much of those investments were made in the primary education sector leaving the higher education sector neglected (Chet, 2006). Since Cambodia's transition into a free market economy in the 1990's, higher education and the development of greater human resource capital have been regarded as the path towards which greater social progressiveness and economic power could be achieved. Thus, higher education system must be improved and modernized.

2.10.2 Privatization of Higher Education in Cambodia

At the beginning of 1990s, only the government educational institutions were the main providers of higher education but the challenges kept arising due to the scarcity of resources, materials, facilities, poorly paid teachers, budgetary constraints (Neth, 2009). Due to the limited capacity of the public institutions to offer students access to higher education, and to response to a growing need of labor force as well as a high-speed increase in higher education enrolment rate, the Royal Government of Cambodia introduced new policy on higher education expansion in the mid-1990s to allow and encourage the participation of the private sector to provide education (Chet, 2006). The new policy was a privatization of higher education. Since then, there would be an emergence of private universities alongside newly remodeled public institutions. Since the government started introducing the idea of privatization of higher education in the late 1990s, the number of higher education institutions (HEIs) has been mushrooming and the student enrolment rates in higher education has sprung up dramatically (Vann, 2012). Before the emergence of private universities, only public universities existed in Cambodia. This existence could not satisfy the needs of the public who were eager to gain access to and pursue higher degrees in higher education. In the period, only a small number of Cambodian high school graduates were successful in gaining their access to the public higher education institutions (Van, 2012). The new government policy on privatization has effectively solved the problem of limited access to higher education and ensured the equitable access to education services. The privatization of higher education has seen a gradual growth in the enrolment of high school students, leading to an expansion of higher education institutions (Rath, 2010). According to Vann (2012), there were three factors that led to the fast expansion of private HEIs in the early 2000s. The first reason was that the RGC was keen to see competition between public and private HEIs, hoping that the competition would lead to quality improvement. The second reason was that the government of the time did not want to establish more public HEIs due to the

politicization of public-sector appointments. The third reason was that the Cambodian government wished to encourage the private sector to participate in the development of higher education as part of an effort to not further stretch the limited education budget, as private HEIs are self-financed institutions which do not create a financial burden on the government. The privatization made it possible for growth in enrolment in both public and private higher education institutions.

2.10.3 Higher Educational Administration in Cambodia

Cambodia is among many developing nations with a recent history of rapid growth within private higher education sector. Since Cambodia switched to a free-market economy in the early 1990s, higher education has been viewed as the key to human resource development in the economy. More interestingly, since the 1993 national elections, Cambodia has gained both technical and financial support from a number of donors particularly national and international development partners. Thus, the new government was better able to use those resources to reshape its education structure (Vann, 2012). However, while the demands for higher education began growing during the 1990s, the public sector was still in a very poor condition and unresponsive to the growing need for a capable labor force (Pit & Ford, 2003). This was partly due to the continuous shortage of financial and skilled human resources in this field and the past legacies caused by many years of civil wars (Pit & Ford, 2004). Moreover, foreign financial support in this sub-sector was very limited and neglected, especially compared to basic general education (Duggan, 1997).

Even more problematic, the public higher education system in Cambodia in the 1990s was still following the centralized, elitist and competitive model of French education which allowed only a limited number of students to enter universities (Pit & Ford, 2004). After privatization of higher education had been introduced to the private sectors, the government also allowed the public HEIs to charge fees in addition to the scholarship students selected by the MoEYS so that they could generate their income for supplementary salaries of faculty and staff as well as for administration, expenditure and their own institutional development. Fee-paying and non-fee paying enrolment has dramatically increased since then (Neth, 2009). Chet (2006) stated that during the year 2002–2003 alone, there emerged 16 private higher education institutions. Currently, up to date, there have been 121 higher education institutions (48 of higher education institutions run by the state and 73 run by private sectors) located in 19 provinces and Phnom Penh (Ministry of Education, Youth and Sport, 2016). These 121 higher education institutions are

controlled and supervised by 16 different ministries and institutions (see table below).

Table 2.7 Higher education institutions classified into parent ministries and institutions

No	Ministries/Institutions	Public	Private	Total
1	Ministry of Education, Youth and Sport	13	60	73
2	Ministry of Agriculture, Forestry, and Fishery	3	0	3
3	Ministry of Culture and Fine Arts	1	0	1
4	Ministry of Public Health	2	0	2
5	Ministry of Labor and Technical and Vocational Training	12	13	25
6	Ministry of Religion	3	0	3
7	Ministry of National Defense	5	0	5
8	Ministry of Interior	1	0	1
9	Ministry of Finance and Economics	1	0	1
10	Ministry of Public Work and Transportation	1	0	1
11	National Bank of Cambodia	1	0	1
12	Council of Ministers	1	0	1
13	Ministry of Social Affairs Labor Vocational Training and Youth Rehabilitation	1	0	1
14	Ministry of Mines and Energy	1	0	1
15	Ministry of Urbanism and Construction	1	0	1
16	Ministry of Tele communication	1	0	1
	Total	48	73	121

Source: Annual Educational Congress 2016

Because of the switch of Cambodian government policy on privatization of higher education, private higher education institutions have now been expanding rapidly, and their number has far exceeded that of the public institutions (Leng, 2012). Both public and private higher education institutions are now seen to play an important role in absorbing a massive number of high school graduates who need access to higher education. With the public higher education institutions accepting fee-paying students and the government policy of privatization of the HEI sector, the total number of student enrolment in both public and private HEIs dramatically increased nearly tenfold just only within a decade, from 10,000 in 1997 to 97, 524 in 2006. More interestingly, three years later, the total number enrolled increased by more than 70,000 students, swelling up to 168,000 in 2009 (Kwok et al., 2010). In

academic year 2014-2015, the student enrollment in higher education increased to 229,901 for undergraduate program, to 19,191 for post graduate program (Annual Educational Congress, 2015). Private HEIs are now the major providers of higher education in the country accounting for 83 per cent of the total higher education enrollment with fee-paying program (Chealy, 2009; Kwok et al., 2010). However, the quality of educational provision is still questionable (Leng, 2012; Chet, 2006; Pit & Ford, 2004). The privatization policy of the government helps higher education institutions attract more private investment and development in HE, expand HEIs from capital city to provinces, massify HEIs both public and private, promote more faculty income and encourage decentralization practices for HEIs to make their own decision about the priority for spending, implementing and development (Neth, 2009). The increase of educational providers especially higher education, both public and private, academic leadership must be taken into account. Ministry of Education, youth and Sport has provided a series of workshops concerning with the management and leadership in higher education in order to promote the awareness and understanding the leadership qualities among senior academic administrators aiming at building strong foundation of leadership of higher education institutions.

2.10.4 Accreditation of Higher Education Institutions in Cambodia

Higher Education plays a primary role in responding to globalization era and human resource development. Globalization and regional integration have significant impacts on all sectors of Cambodian economy; therefore, higher education development needs to adapt and conform to global and regional trend particularly educational quality provision (MoEYS, 2014).

Higher education institutions in Cambodia, both public and private universities, face many constraints and challenges in terms of scarcity of resources, poor governance, lack of autonomy, little culture of quality and research, poor human resource development, less modernized physical plants, financial shortage and the like (Rath, 2010). The mentioned constrains and challenges can result in poor quality improvement. Moreover, since the government has introduced privatization in higher education in late 1990s, there has been a big concern for quality in Cambodian higher education (Mak, 2005). To ensure that the quality of education will be met, the Accreditation Committee of Cambodia (ACC) was established by the Royal Kret NS/RKT/129, dated on 31 March, 2003 aiming at accrediting the higher education institutions in Cambodia and promoting the quality of higher education nationwide (ACC, 2010b). ACC is a mandate body established to

administer accreditation of all higher education institutions, which offer Bachelor degrees and/or higher degrees in Kingdom of Cambodia, and to ensure and effectively enhance the quality of higher education (ACC. 2010a). According to Rath (2010), “although quality assurance has been a legislative requirement in Cambodian universities since 2003, it is still relatively new concept for university leaders.” The Accreditation Committee of Cambodia (ACC) first established the Quality Assurance System in 2003 for Higher education assessment focusing solely on foundation year. The roles and duties of the ACC are: to determine accreditation policy and measures to assure academic quality for all HEIs in the Kingdom of Cambodia, to determine the accreditation status of HEIs, to approve curriculums for the foundation course for first-year university students in HEIs, to maintain records of institutional and program evaluation and quality assurance activities in each HEI, to make evaluations on the basis of visits to the HEIs, to cooperate with other national and international institutions involved with quality assurance and accreditation, to secure proper participation of stakeholders concerned with the outcomes of each academic institution that applies for accreditation, e.g. concerned ministries, professional associations, and to make broad announcement to the public of the results of the ACC findings in relation to its task of accreditation (Mak, 2005). This quality assurance system consisted of six minimum criteria with 66 main indicators. The six minimum criteria for assessing the Foundation Year Program are; 1) Department of Foundation Year Course (DFYC) meaning that a Department of Foundation Year Course established to be responsible for the running of the FYC program. 2) A Strategic Plan for Foundation Year Course meaning that a strategic plan be available to manifest its capabilities in taking at least five hundred students in full time or part time students in an equivalent number. 3) Foundation Year Course Curriculum meaning that a foundation year course curriculum be developed with the detail of its content and a clear structure of each subject. The foundation year curriculum shall cover at least ten subjects in response to the skills required by students to pursue their studies in Bachelor degree program and govern at least 30 credits. 4) Teaching Staff in Foundation Year Course Program stating that qualified teaching staff, sufficient in size, with educational background and working experiences in response to the curriculum requirements. 5) Physical Facilities and Learning Resources meaning that sufficient physical facilities and learning resources such as classrooms, laboratories, books and other necessary teaching-learning materials are required to support the study and research by students and teaching staff in response to the curriculum requirements.

6) Student Admission stating that student admission to FYC program shall be based on the results of the upper secondary education exam or other equivalent degree or/and based on legal framework of MoEYS in place. In 2009, ACC redesigned, developed and finalized a new quality assurance system by adjusting and adding three more standards to the previous establishment. The new quality assurance system consists of nine minimum standards known as Minimum Standards for Accreditation of Higher Education Institutions with 58 main indicators plus 263 detailed indicators (ACC, 2011). The nine minimum standards are; 1) Mission. 2) Governing Structure, Management and Planning. 3) Academic Program. 4) Academic Staff. 5) Student and Student Services. 6) Learning Services. 7) Physical Plants. 8) Financial Plan and Management. And 9) Dissemination of Information (ACC, 2010b). This quality assurance system is a useful instrument for assessing higher education quality and fairly providing accreditation to higher education institutions as a whole and enhancing the quality of higher education in the Kingdom of Cambodia. To be qualified and prepared for being assessed, each higher education institution has established its own internal quality assurance system by practicing internal quality assessment in order for oneself to prepare and fill the requirement gaps so that they can meet the ACC requirements.

2.10.5 Cambodian Higher Education Reform

Article 18 in Education Law of Cambodia promulgated in 2007 states that “higher Education or the third level (3rd Phumasekar) of education is the education following the secondary education in higher educational establishments.” Higher Education shall teach learners to have complete personality and characteristic and promote the scientific, technical, cultural and social researches in order to achieve capacity, knowledge, skill, morality, inventive and creative ideas and enterprise spirit to the development of the country. The framework and requirements of the levels of diplomas and certificates shall be determined by the Ministry in charge of Education. Higher educational establishments are of two types – university and institute. The criteria for the types of higher educational establishments and the admission requirements for higher education establishments shall be determined by the Ministry in charge of Education (RGC, 2007).

The Royal Government of Cambodia represents a crossroad for the educational development in Cambodia, along with the implementation of the Rectangular Strategy Phase 3 which was announced by Prime Minister in the first cabinet meeting on September 25, 2013. Based on the Rectangular Strategy Phase 3

and education strategic plan 2014-2018, the leaders of the MoEYS has identified challenges and issues and come up with 8 key measures to reform the educational sector. The key eight measures are; 1) Enhancing the quality and efficiency of education. 2) Strengthening personnel management. 3) Strengthening examinations. 4) higher education reform. 5) Developing technical and soft skills for youth. 6) in-depth reform of the public financial management. 7) Reforming physical education and sports. And 8) Creating intellectual bank in education sector (Hang, 2014). However, in-depth reform encounters some challenges such as the lack of highly qualified and quality teachers, the demand for student text books and stationeries cannot be met, salary payment and the delay of payment, lack of allowances to new teachers, ineffective personnel management, poor financial management system, limited research activities in tertiary education, training sport persons and lack of sport centers, and so on (Hang, 2014). Additionally, the Royal Government of Cambodia has strived to establish many policies, legal framework and regulations to promote educational quality for academic success in HEIs. The most fundamental legal document is the Cambodian Constitution. Article 65 in the Cambodian constitution clearly states that

The state shall protect and upgrade a citizen's rights to quality education at all levels and shall take necessary steps for quality education to reach all citizens. The state shall respect physical education and sports for the welfare of all Khmer citizens. In addition, the state shall establish a comprehensive and standardized educational system through the country that shall guarantee the principles of educational freedom and quality to ensure that all citizens have equal opportunity to earn a living (RGC, 1993; Amended 1999).

Another important legal document created by the RGC is that the Rectangular Strategy of Cambodian government for promoting growth, employability, effectiveness, efficiency in Cambodia. The Rectangular Strategy of RGC clearly states that:

The Royal Government will continue to strengthen its partnerships with the private sector and the national and international community to enhance and improve the quality of education services, both in vocational and technical training and in higher education, consistent with international standards and the development needs of the nation (Hun, 2004).

Other policies, legal frameworks, regulations and guidelines that help to promote the quality of education are Education Law promulgated in 2007, Quality Assurance System, 2003, Policy on Higher Education Vision 2030, 2014, Educational

Strategic Plan 2014-2018, Policy on Research Development in the Education sector, Master Plan and Action Plan for Research Development in the Education Sector, the Higher Education Quality and Capacity Improvement Project (HEQCIP) and so on. In sum, the RGC and Ministry of Education, Youth and Sport have strived to establish various policies, strategies, regulations, institution and academic support services for promoting the quality of higher education (Sam et al., 2012). Sam, et. al. (2012) sums up that:

Cambodian government and higher educational institutions have high commitment to set up many policies for promoting the quality of education, but these policy implementations have faced some controversial problems because of financial shortages, time constraints, inadequate human resources, and autonomy and academic freedom. Therefore, during 14 years of peace and political stability, the government has achieved in numerous national policies and strategies for developing human capital, socio- economy, and alleviation of poverty (p. 122).

2.10.6 The Roles of Higher Education in Cambodia

The role of higher education is undoubtedly pivotal (Shiel and McKenzie, 2008). It is one of the most important sectors for the growth and development of human resource which can take responsibility for social, economic, and scientific development of the country. However, it is under pressure to change. It is growing fast and its contribution to economic success and development is seen as vital. Specifically, the vast expansion of higher education, no matter what kinds of education they provide, has been critical in generating and promoting the supply of skilled graduates that can help to increase the productivity, employment, and social development (Hunt, 2011). The potential roles of colleges and universities in promoting and improving mutually beneficial interests and economic development can include human resource development, economic policy analysis, capacity building, technical assistance, research to develop new knowledge, transfer of newly developed knowledge, and support for developing new knowledge-based business (Richard & Richard, 1992). The universities and other institutions are expected to create knowledge, to improve equity, and to respond to student needs - and to do so more effectively. They are increasingly competing for students, research funds, and academic staff - both the private sector and internationally. In this more complex environment direct management by governments is no longer appropriate (OECD, 2003). Higher education institutions are having to work hard to meet funding and regulatory criteria and at the same time to strengthen and ensure their market position. There is an emphasis on institutional strategy and a shift in power away from individual departments. External

members sit on governing bodies formerly dominated by academic interests. Senior managers are selected for their leadership skills as well as for their academic prowess (OECD, 2003). Higher education institutions also play a very important role in shaping, reproducing and developing the quality of leadership. Most universities not only educate people for being leaders in government or non-government agencies, business sectors, science, law, medicine, and other professional bodies, but also educate people for being leaders in all fields. College and university faculty exert important influences on the leadership process through their research and scholarship, which seeks both to clarify the meaning of leadership and to identify the most effective approaches to leadership and leadership education (Astin & Astin, 2000). Colleges and universities provide rich opportunities for recruiting and developing leaders through the curriculum and co-curricular experiences not only support and augment the students' formal classroom and curricular experience, but can also create powerful learning opportunities for leadership development through collaborative group projects that serve the institution or the community (Astin & Astin, 2000).

Cambodian Higher education institutions have also been playing a major role in producing future leaders. They keep developing the personal qualities of the leaders by providing necessary skills that are most likely to be crucial to future effective leadership such as self-understanding, communication skills, problem solving skills, decision making skills, negotiation skills, empathy, honesty, integrity, and the ability to work collaboratively. Higher education offers many opportunities for the formation of leadership groups involving faculty, students, and staff through its schools, colleges, departments, committees, and various administrative service units. Leadership development programs and experiences for students can capitalize on the power of the student peer group through the classroom, residential living, and various curricular activities (Astin & Astin, 2000).

2.10.7 Summary

Due to the instability of political collapses and social and national conflicts very long period of time, education in Cambodia has dramatically changed in many forms. Before 1970s, the educational system followed French system. The quality of education in that period was believed and witnessed to be in high standards. From 1970 to 1975, the quality of education in Cambodia seemed to fall down because of the disturbance of fatal civil wars provoked by foreign countries that caused Cambodia severe destruction. However, Cambodia had sent some students to pursue their higher degrees in foreign countries such as France, America.

More problematic and destructive, Cambodia drowned in a deep massive killing regime from 1975 to 1979 when Khmer rouge took control Cambodia. The education provision was ignored by Khmer rouge leaders. Only few people could receive education. Others were forced to work without enough food. As a result, million people died. From 1979 till present, education system in Cambodia has been developed gradually in response to the urgent need of social and economic development. Both lower and higher education systems have been reformed. Moreover, the government has privatized education to private sectors in the purpose of working together to develop human resources that can satisfy labor market's need. The educational system in Cambodia has been prioritized by the Royal Government of Cambodia so far. The RGC has been establishing a number of legal documents and policies frameworks such as Education Law promulgated in 2007, Quality Assurance System, 2003 and redesigned in 2009, Policy on Higher Education Vision 2030, 2014, Educational Strategic Plan 2014-2018, Policy on Research Development in the Education sector, Master Plan and Action Plan for Research Development in the Education Sector, the Higher Education Quality and Capacity Improvement Project (HEQCIP) and so on. HEIS has continuously provided a series of workshops aiming at building leadership and management capacity of educational institution senior administrators in all levels from primary to higher education. It is, therefore, believed that the quality of Cambodian education particularly higher education will improve gradually in the future

CHAPTER III

RESEARCH METHODOLOGY

This chapter describes the research methodology which includes the research processes, the research design and preparation, population and sampling method and sample size, instrumentation, data collection, data analysis, and statistics used to analyze the collected data. The objectives of the study were 1) to study and analyze the concepts, theories and research findings about the leadership traits of administrators, 2) to develop a leadership trait model for university senior administrators in Cambodia, and 3) to confirm the leadership trait model of university senior administrators in Cambodia.

3.1 Research processes

In this study, a mixed method approach was applied and the processes of the study were described in subsequent steps as follows:

Step 1: To study and analyze the concepts, theories and research findings about the leadership traits of administrators

Step 1.1: To study and analyze the concepts, theories and research findings from related documents such as books, reports, journals, electronic documents, and research findings that are related to leadership traits of administrators.

Step 1.2: To Interview 10 experienced people. The purposes of the interview were to elicit and to ask for more data and information closely connected to leadership traits of administrators. The collected data from the interview was analyzed by applying Content Analysis method.

Population and sample size

The 10 target respondents were selected purposively for the interview. The first interviewee was from Provincial Department of Education, Youth and Sport; the second, the third and the fourth interviewees were from accredited universities; the fifth and the sixth interviewees were from vocational training institutes; the seventh interviewee was from COERR Language Center of Battambang; the eighth interviewee was from USA International School, Battambang; and the ninth interviewee was from anon-government organization and the last person was an experienced lecturer from higher education institution.

The qualifications of the selected experts for the interviews

1. An experienced person was from Provincial Department of Education, Youth and Sport

A director of Provincial Department of Education, Youth and sport, Battambang

2. Three experienced persons were from accredited higher education institutions

2.1 Aviced-president of University of Management and Economics

2.2 Aviced-president of University of Battambang

2.3 A president of Dewy International University

3. Two experienced persons were from vocational training institutes

3.1 A director of Vocation Training Development Institute, Battambang

3.2 A director of National Vocational Institute of Battambang

4. One experienced person was from COERR Language Skill Center, Battambang.

A deputy director of COERR Language Skill Center, Battambang

5. One experienced person was from USA International School, Battambang.

A director general of USA International School, Battambang

6. One experienced person was from on-government organization

A human resource manager of Cambodian Children's Trust (CCT) who was responsible for HR professional development and HR management

7. One experienced lecturer was from higher education institution

An experienced lecturer who has been teaching more than ten years in higher education institutions in the fields of leadership and management

Step 2: To develop the leadership trait model for university senior administrators in Cambodia

Step 2.1: To conduct a first group discussion. 12 experienced people from different working places were invited to participate in the first focus group discussion with the purpose of asking for more concepts and ideas related to leadership traits of administrators. They were also asked to give suggestions and feedbacks about the main traits, sub-elements, and the main elements.

Step 2.2: To draft a leadership trait model for university senior administrators in Cambodia by analyzing and synthesizing the collected data from step 1.1 and step 1.2

Step 2.3: To develop the drafted model by conducting the second focus group discussion. The purposes of the second focus group were to ask the participants for their opinions, concepts, additional comments, and suggestions as well as corrective feedbacks related to the main leadership traits, the sub-elements, and the main elements as well as the drafted model so that the acceptable

leadership trait model could be developed. The collected data gained from the focus group was analyzed by applying Content Analysis method.

Population and Sample Size

In this step, 12 Knowledgeable and experienced people mostly working in the educational sector, using purposive sampling method, were invited to attend in a focus group discussion. Of 12 experts, one was from Directorate General of Higher Education, Ministry of Education, Youth and Sport; one was from Department of Higher Education, Ministry of Education, Youth and Sport; Four experienced persons were from accredited higher education institutions; one was from Regional Teacher Training Center, Battambang; two were from vocational training institutes; one was from Provincial Department of Education, Youth, and Sport; one person was experienced lecturer who had at least ten-year experiences in teaching in higher education institutions; and one person was from non-government organization. The purposes of the focus group discussion were to elicit ideas, opinions, and perceptions from the participants about the leadership trait, the sub-elements, the main elements as well as the leadership trait model for making sure that the drafted model was reasonable, suitable and it could be adjusted and well developed.

Qualifications of the focus group participants

The participants invited to share and provide constructive ideas, opinions and perceptions about the leadership traits, the sub-elements, the main elements as well as the leadership trait model had the following qualifications.

1. A deputy director general of Directorate General of Higher Education Department, Ministry of Education, Youth, and Sport, Phnom Penh
2. A director of Department of Higher Education, Ministry of Education, Youth, and Sport, Phnom Penh
3. Two university presidents, one vice-president, and one branch director
 - 3.1 A president of University of Management and Economics
 - 3.2 A president of University of Battambang
 - 3.3 A vice-president of International University
 - 3.4 A branch director of Vanda Institute, Battambang
4. A directors of Regional Teacher Training Center, Battambang
5. Two directors of vocational training institutes
 - 5.1 A director of Battambang Institute of Technology
 - 5.2 A director of Regional Polytechnic Institute Techo Sen, Battambang
6. A deputy director of Provincial Department of Education, Youth, and Sport
7. An experienced lecturer of University of Management and Economics.

8. A governance director of Cambodian Children's Trust

Step 3: To confirm the leadership trait model of university senior administrators in Cambodia

The Confirmatory Factor Analysis method was applied by using computer program called LISREL 8.72.

Population of Higher Education Institutions

The target population of higher education institutions in this study referred to only the HEIs which are under the control of Ministry of Education, Youth and Sport. Presently, there are only 73 higher education institutions, 13 public HEIs and 60 private HEIs, which are under the control of Ministry of Education, Youth and Sport (MoEYS, 2017). The target HEI population in this study was therefore 73. Of 73 HEIs which are under the control of Ministry of Education, Youth and Sport, 47 are located in the capital city, Phnom Penh while 26 are located in other provinces. The 73 HEIs were classified by the researcher into 4 groups based on their geographical locations as follows:

1. The central group (big group): Referred to higher education institutions which are located in the capital city of Cambodia, Phnom Penh, accounting for 47 HEIs.

2. The North-East group: Referred to higher education institutions which are located in the provinces such as Preyveng, Svayrieng, Kampongcham, Tbong Khmom, accounting for 8 HEIs.

3. The North-West group: Referred to higher education institutions which are located in the provinces namely Kampong Chhnang, Battambang, Posat, Banteaymeanchey, and Siemreap, Kompongthom, accounting for 12 HEIs.

4. The South-West group: Referred to higher education institutions which are located in such provinces as Takeo, Kampot, Kompongsoum, and Kanpongspue, accounting for 6 HEIs.

Table 3.1 The target population of HEIs classified by geographical groups

N ^o	Geographical Groups	Higher Education Institutions
1	Central Group	47
2	North-East Group	8
3	North-West Group	12
4	South-West Group	6
Total		73

Population and Sample Size of Respondents

In this study, the target population of the respondents were presidents, vice presidents, deans, vice deans, department heads, office heads, and staff as well as lecturers who were directly or indirectly engaged in leading and management process. There were two phases in identifying the sample size in this study:

First, the researcher had to make decision about the sample size of the HEIs. 37 HEIs (about 50%) were selected for sample size based on their proportion of geographical areas. Only 4-year-program and accredited HEIs were selected from the target HEI population. Multi-staged sampling method was applied. Then the population of the study could be calculated among 37 HEIs. Only full time administrators and lecturers were included as population. The population of the study from selected 37 HEIs was 1845. (See table 3.2)

Second, the researcher calculated the sample size of the study. The sample size of the study was based on sample size decision of CFA requirement. Sample size requirements in CFA also vary with the type of estimation method used and the distributional characteristics of the data (Kline, 2013). However, a 20 : 1 ratio is recommended. Although at least the sample size ratio 20 respondents to 1 variable is recommended, the researcher decided to select 400 respondents, based on its proportion by using multiple-staged sampling method, from 37 HEIs that are fully accredited by Accreditation Committee of Cambodia (ACC). Respondents in this study were presidents, vice presidents, deans, vice deans, department heads, office heads, staff as well as lecturers. The sample size was calculated based on the proportion as follows:

$$N = (n/P) \times p$$

Where:

N: Sample size in each geographical group

n: Total sample size

P: Total population

p: Population in each geographic group

EX: The sample size in Central Group was calculated as follows:

$$N = (400/1845) \times 1195 = 259$$

Moreover, the researcher selected the number of respondents from each HEI based on the total population of respondents in each HEI. The number of selected respondents from each HEI varies due to the number of population in each university as well.

Table 3.2 The population and the sample size of HEIs, respondents classified by their geographical groups

N ⁰	Geographical Groups	Higher Education Institutions		Target Respondents	
		Population	Sample Size	Population	Sample Size
1	Central Group	47	24	1195	259
2	North-East Group	8	4	199	43
3	North-West Group	12	6	303	66
4	South-West Group	6	3	148	32
Total		73	37	1845	400

3.2 Research Instrument

In order to collect data for confirming the leadership trait model of university senior administrator in Cambodia, a set of self-developed questionnaire with two parts was used.

Part 1: Demographic data: The demographic data consisted of 6 question items regarding gender, age, highest degree, professional title, work experience as educational administrator, and institutional status.

Part 2: Leadership trait questionnaire: Leadership questionnaire focused on investigating the level of agreeableness on leadership traits of university senior administrators in Cambodia.

Five point Likert rating scales were also used with meanings as follows:

- Number 5 means “strongly agree” with 5 points
- Number 4 means “agree” with 4 points
- Number 3 means “neutral” with 3 points
- Number 2 means “not agree” with 2 points
- Number 1 means “not agree at all” with 1 point

The mean value was interpreted as follows:

Mean value ranging from 4.50-5.00 was regarded that the trait was very important.

Mean value ranging from 3.50-4.49 was regarded that the trait was important.

Mean value ranging from 2.50-3.49 was regarded that the trait was neutral.

Mean value ranging from 1.50-2.49 was regarded that the trait was not important.

Mean value ranging from 1.00-1.49 was regarded that the trait was not important at all.

3.3 Research Instrument Development and Testing

3.3.1 Research Instrument Development

The processes of developing the research instrument for this study were as follows:

1. In order to develop a set of questionnaire for the study, the researcher created a number of questions based on the variables that were summarized by analyzing and synthesizing the concepts, theories, research results from printed books, journals, reports, and research findings as well as based on the ideas and opinions from the interviews and focus group discussion.

2. After the questions were written, the researcher developed a set of questionnaire with advisor and co-advisor's help.

3.3.2 Research Instrument Testing

1. Validity of the Instrument

To make the questions in the questionnaire in this study valid, after the question items were written and a set of questionnaire was developed, 5 experts were invited to test the question items and the developed questionnaire for validity and accuracy by using an instrument called IOC value (Item Objective Congruence). The purpose of testing was to find the fitness and congruence of question items in the questionnaire particularly to make sure that the questions in the questionnaire and the objectives of the study were parallel. The questions that had higher congruent value than 0.50 were selected and some questions that had lower congruent value than 0.50 were rewritten with the recommendations from the experts before starting a try-out. The congruent value of IOC of the question items was between 0.60-1.00. They were acceptable.

2. Reliability of the Instrument

In order to make the question items in the developed questionnaire reliable, the researcher conducted a try-out data collection task without using any sampling method. The researcher selected 32 university senior administrators from 4 universities to fill out the questionnaire. Then the collected data from the try-out task was analyzed by using Cronbach's method namely Cronbach's Alpha Coefficient. Alpha was developed by Lee Cronbach in 1951 to provide a measure of the internal consistency of a test or scale and it is expressed as a number between 0 and 1. In general, score reliabilities that exceed 0.90 are

considered excellent, coefficients in the range of about 0.80 are considered good, but coefficients appreciably less than 0.70 are potentially problematic (Kline, 2013). So it is concluded that a maximum alpha value of 0.90 has been recommended. The reliability value of the question items in the self-developed questionnaire for this study was 0.885. The questionnaire was therefore reliable.

3.4 Data Collection Procedures

The data collection in this study was done in 37 Cambodian public and private HEIs under the control of Ministry of Education, Youth and Sport. The data was collected through questionnaire distributed directly and by email to the target respondents. The processes of data collection were done as the following steps:

1. After getting approval from the research committee of Valaya Alongkorn Rajabhat University under the Royal Patronage (VRU) on the research proposal, the researcher requested an official letter from VRU for data collection. Then the requesting letter for data collection was first sent to Ministry of Education, Youth and Sport through Department of Higher Education to request for cooperation and participation from parent ministry so that the researcher was able to have legal right to meet the presidents of target universities to ask for permission for conducting data collection. To ease the process of getting access to the target respondents in educational institutions, the researcher needed help from a director general of Higher Education Department. The researcher proposed approval letter from the director general and asked him to inform the management teams in higher educational institutions about the necessity of the researcher. In order to gain approval from the parties involved, the researcher needed some supporting documents such as official letter from VRU, research proposal, documents related to his study as well as other documents for proving that he had been a student and had been conducting his study for fulfilling the graduation requirement.

2. Getting permission from the university presidents, the respondents were purposively selected with the help and coordination from the presidents and vice presidents of target higher education institutions.

3. Then, the questionnaire was distributed to all target respondents by direct distribution and by E-mail. The researcher gave his E-mail address and phone number to all respondents for contact when needed. The researcher requested the respondents to complete the questionnaire within two weeks then he would collect the distributed questionnaire in the following week. Confidential was assured for the respondents by the researcher.

4. After having received the questionnaire from the respondents, the researcher rechecked all returned questionnaire and selected only the completely answered questionnaire. Then, coding was done and data entry was conducted. For any questionnaire that was not answered completely, the researcher made a date with the respondents in order to ask for more information. Luckily, all the question items in the returned questionnaire were fully completed and acceptable.

3.5 Data Analysis

After data was entered into computer program, data analysis was done. The data analysis processes in this study were as follows:

1. To analyze the demographic information of the respondents, the researcher applied computer program for identifying percentage (%).
2. To analyze the data related to leadership traits of administrators provided by experts and experienced persons, the researcher applied Content Analysis method.
3. To analyze the data that showed the level of agreeableness on the questions in the questionnaire of the leadership traits of administrators, a computer program was used for identifying mean and standard deviation.
4. To confirm the leadership trait model of university senior administrators in Cambodia, the researcher used a computer program called LISREL 8.72 for Confirmatory Factor Analysis.

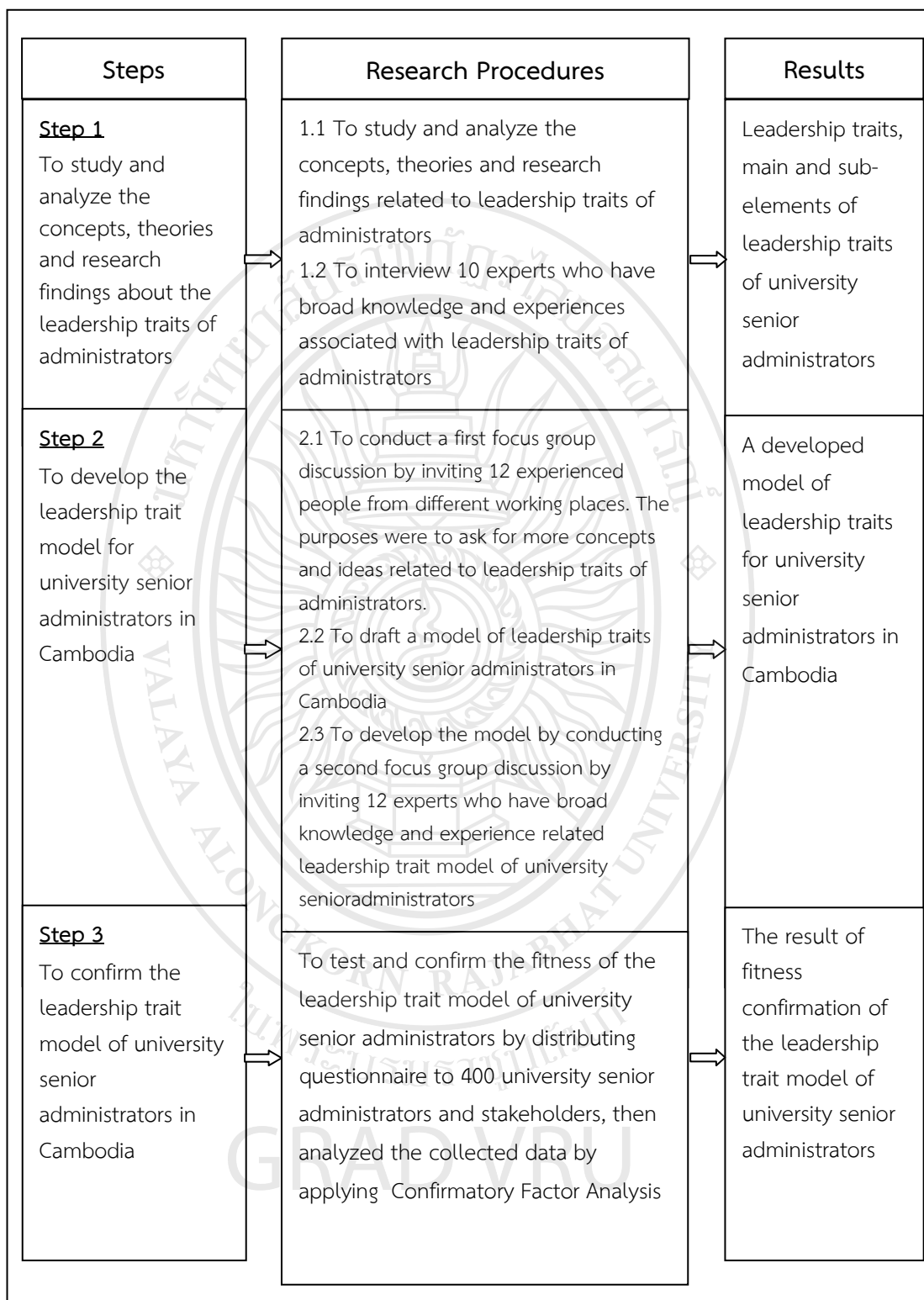


Figure 3.1: Research Procedure

CHAPTER IV

THE RESULTS OF DATA ANALYSIS

The study entitled “The Development of Leadership Trait Model for University Senior Administrators in Cambodia” had three main objectives: 1) to study and analyze the concepts, theories and research findings about the leadership traits of administrators, 2) to develop a leadership trait model for university senior administrators in Cambodia, and 3) to confirm the leadership trait model of university senior administrators in Cambodia.

The results of the study were presented in the subsequent parts as follows:

4.1 Part 1: The results of leadership traits of administrators found by studying and analyzing the concepts, theories, and research findings as well as from interviewing 10 experienced people.

Table 4.1 The Main leadership traits of administrators from concepts, theories, and research findings as well as from interviewing 10 experienced people.

The same main leadership traits from concepts, theories, research findings, and interview			Different main leadership traits from concepts, theories, and research findings	Different main leadership traits from interview
1. Physical Appearance	20. Self-confident	39. Knowledgeable	1. Sense of Humor	1. Mental Strength
2. Physical Strength	21. Well-educated	40. Responsibility	2. Realistic	2. Time Management
3. Physical Fitness	22. Dominance	41. Dependable	3. Wealthy	3. Strategic Planning
4. Patient	23. Personable	42. Delegation	4. Self-Controlled	4. Leadership
5. Stable	24. Human Relation	43. Role-Model	5. Optimism	5. Managerial skills
6. Flexible	25. Sociable	44. Problem-solving	6. Empathy	
7. Sympathy	26. Communication	45. Tactful	7. Ambition	
8. Caring	27. Dedicated	46. Intelligence	8. Assertiveness	
9. Integrity	28. Commitment	47. Alertness	9. Charismatic	
10. Ethical	29. Decisiveness	48. Analytical	10. Diplomatic	
11. Generosity	30. Participation	49. Judgment	11. Cooperation	
12. Humility	31. Supportive	50. Awareness	12. Effectiveness	
13. Enthusiasm	32. Inspiring	51. Creative	13. Focus	
14. Disciplined	33. Motivation	52. Initiative	14. Advisory	
15. Honest	34. Hard-working	53. Inquisitive	15. Organized	
16. Openness	35. Persistence	54. Self-Development	16. Insightfulness	
17. Trustful	36. Achievement-Oriented	55. Open-minded	17. Agreeable	
18. Fairness	37. Visionary			
19. Courageous	38. Competence			

By comparing all the main leadership traits from the two different sources, as shown in the table 4.1, it was found that after studying and analyzing the concepts, theories, and research findings as well as after interviewing 10 experienced people, 55 same main leadership traits emerged. Moreover, 17 different main leadership traits were also found from the concepts, theories, and research findings whereas 5 different main leadership traits were found from the interview. As a result, all 77 main leadership traits existed. Then the 77 main traits were classified into 11 sub-elements.

Table 4.2 77 main leadership traits and 11 sub-elements summing up after revising the concepts, theories, research findings as well as after interviewing 10 Experienced people

Main Traits	Sub-Elements	Main Traits	Sub-Elements	Main Traits	Sub-Elements	
1. Physical Appearance	1. Physical Attributes (3)	1. Well-educated	5. Social Background (5)	1. Visionary	8. Competency Attributes (10)	
2. Physical Strength		2. Dominance		2. Competence		
3. Physical Fitness		3. Wealthy		3. Knowledgeable		
1. Patience	2. Emotional Attributes (6)	4. Personable		4. Advisory		
2. Self-controlled		5. Charismatic		5. Organized		
3. Stable		1. Human Relation	6. Interpersonal Attributes (4)	6. Responsible		
4. Flexible		2. Sociable		7. Dependable		
5. Optimism		3. Diplomatic		8. Delegation		
6. Sympathy		4. Communication		9. Role Model		
1. Empathy	3. Moral and Ethical Attributes (8)	1: Dedicated	7. Achievement-Oriented Attributes (13)	10. Problem-solving		
2. Caring		2. Commitment		1. Tactful		
3. Integrity		3. Decisiveness		2. Mental strength		
4. Ethical		4. Participation		3. Intelligence		
5. Generosity		5. Cooperation		4. Alertness		
6. Humility		6. Supportive		5. Analytical		
7. Enthusiasm		7. Inspiring		6. Judgment		
8. Disciplined		8. Motivation		7. Insightfulness		
1. Honest	4. Personality Attributes(10)	9. Hard-working		8. Awareness		
2. Openness		10. Persistence		9. Creative		
						9. Intellectual Attributes (10)

Table 4.2 (Continued)

Main Traits	Sub-Elements	Main Traits	Sub-Elements	Main Traits	Sub-Elements
3. Trustful		11. Achievement-oriented		10. Innovative	
4. Fairness		12. Effectiveness		1. Inquisitive	10. Academic Attributes (4)
5. Courageous		13. Focus		2. Self-development	
6. Ambition				3. Agreeable	
7. Assertiveness				4. Open-minded	
8. Self-confidence				1. Time management	11. Management and Leadership Attributes (4)
9. Sense of Humor				2. Strategic planning	
10. Realistic				3. Management skills	
				4. Leadership	

Table 4.2 shows that all 77 main traits were classified into 11 sub-elements. The 11 sub-elements are Physical Attributes with 3 main traits, Emotional Attributes with 6 main traits, Moral and Ethical Attributes with 8 main traits, Personality Attributes with 10 main traits, Social Background with 5 main traits, Interpersonal Attributes with 4 main traits, Achievement-Oriented Attributes with 13 main traits, Competency Attributes with 10 main traits, Intellectual Attributes with 10 main traits, Academic Attributes with 4 main traits, and Management and Leadership Attributes with 4 main traits.

The 11 sub-elements were then classified into 2 main elements.

Table 4.3 The 11 sub-elements and 2 main elements and of leadership traits

Sub-Elements	Main Elements
1. Physical Attributes	Personal Traits
2. Emotional Attributes	
3. Moral and Ethical Attributes	
4. Personality Attributes	
5. Social Background	

Table 4.3 (Continued)

Sub-Elements	Main Elements
6. Interpersonal Attributes	Professional Traits
7. Achievement-Oriented Attributes	
8. Competency Attributes	
9. Intellectual Attributes	
10. Academic Attributes	
11. Management and Leadership Attributes	

Table 4.3 shows that the 11 sub-elements were divided into two main elements in which the first main element, Personal Traits, consisted of 5 sub-elements while the second main element, Professional Traits, consisted of 6 sub-elements.

1. The first main element, which was named as Personal Traits, consisted of 5 sub-elements namely Physical Attributes, Emotional Attributes, Moral and Ethical Attributes, Personality Attributes, and Social Background.

2. The second main element, which was named as Professional Traits, consisted of 6 sub-elements including Interpersonal Attributes, Achievement-Oriented Attributes, Competency Attributes, Intellectual Attributes, Academic Attributes, and Management and Leadership Attributes.

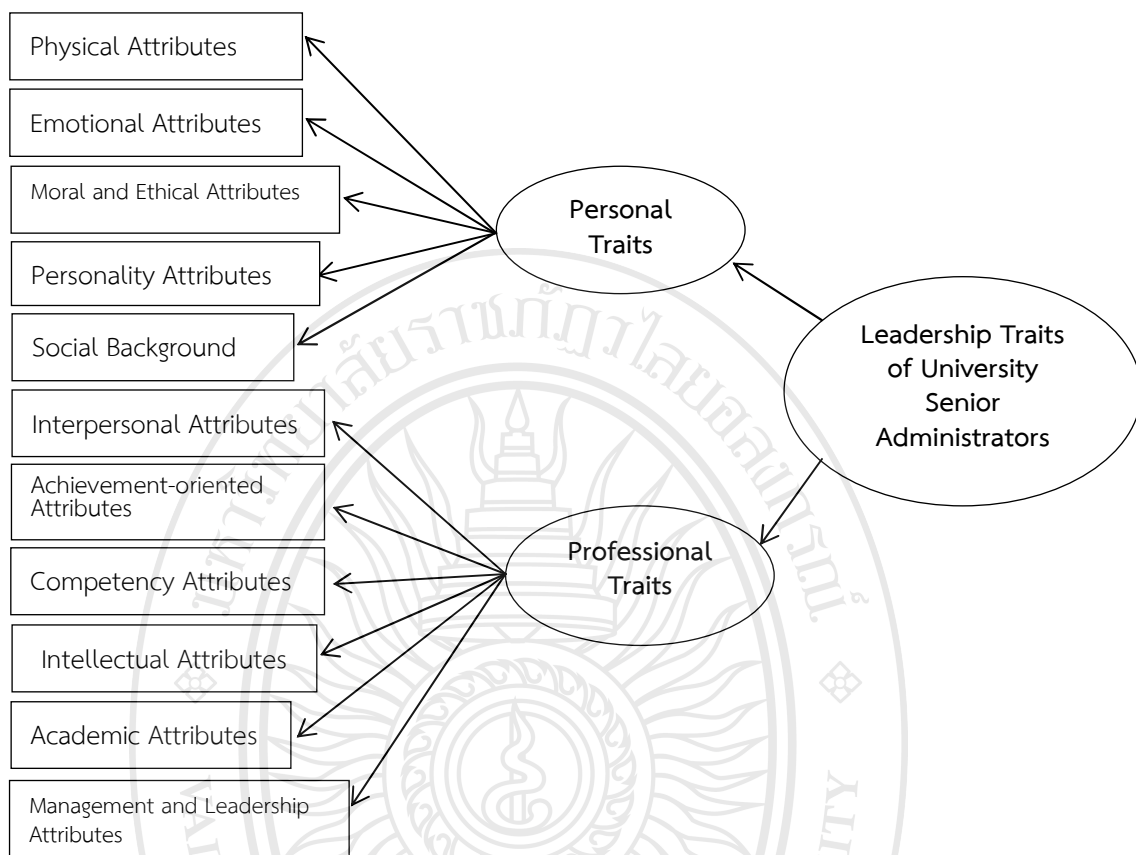


Figure 4.1 The second drafted model of leadership traits of university senior administrators in Cambodia

4.2 Part 2: The results of the development of a leadership trait model for university senior administrators

Part 2.1: The results of the first focus group discussion about the sub-elements and the main traits

Table 4.4 The sub-element, Physical Attribute, with its 3 main traits

1. Physical Attributes	Suggestions from the Focus Group
1.1 Physical Appearance	The participants in the focus group suggested dividing the traits that were combined under the main trait called “Physical Appearance” into two groups by adding one more new main trait named “Physical Self-image.” Moreover, the participants also suggested dividing the traits that were combined under the main trait called “Physical Strength” into two groups by adding one more new main trait named “Physical Vitality”.
1.2 Physical Strength	
1.3 Physical Fitness	

Table 4.4 shows that before the focus group discussion, the sub-element, Physical Attribute, had only three main traits. But after the focus group, the main traits increased from 3 to 5 namely: 1) physical Self-Image 2) physical Appearance, 3) physical Vitality, 4) physical Strength, and 5) physical Fitness.

Table 4.5 The sub-element, Emotional Attribute, with its 6 main traits

2. Emotional Attributes	Suggestions from the Focus Group
2.1 Patient	The participants in the focus group suggested extracting one main trait called “Sympathy” from the second sub-element “Emotional Attributes” and then they suggested putting it under another sub-element called “Moral and Ethical Attributes.”
2.2 Self-controlled	
2.3 Stable	
2.4 Flexible	
2.5 Optimism	
2.6 Sympathy	

According to table 4.5, due to the minor changes, the main traits in the sub-element called Emotional Attributes decreased from 6 to 5. All the remaining traits are 1) patient, 2) self-controlled, 3) stable, 4) flexible, and 5) optimism.

Table 4.6 The sub-element, Moral and Ethical Attributes, with its 8 main traits

3. Moral and Ethical Attributes	Suggestions from the Focus Group
3.1 Empathy	The participants in the focus group suggested adding one more main trait “Sympathy” that was extracted from the second sub-element, Emotional Attributes. They also suggested renaming this sub-element to a new name called “Ethical Attributes”.
3.2 Caring	
3.3 Integrity	
3.4 Ethic	
3.5 Generosity	
3.6 Humility	
3.7 Enthusiasm	
3.8 Disciplined	

Table 4.6 indicates that the sub-element with its new name called “Ethical Attributes” was added one more main trait. Totally, the sub-element “Ethical Attributes” increased its main traits from 8 to 9 namely: 1) empathy, 2) caring, 3) integrity, 4) ethic, 5) generosity, 6) humility, 7) enthusiasm, 8) disciplined, and 9) sympathy.

Table 4.7 The sub-element, Personality Attribute, with its 10 main traits

4. Personality Attributes	Suggestions from the Focus Group
4.1 Honest	The participants in the focus group suggested replacing the main trait “Ambition” by the trait “Competitiveness”. And then the main trait “Competitiveness” was recommended to put under another sub-element called “Achievement-Oriented Attributes. They also suggested replacing the main trait “Realistic” by the trait “Practical”. Two main traits, Responsible and Dependable, were taken away from another sub-element called “Competency Attributes” and then they were put under this sub-element. Moreover, they then recommended renaming the sub-element from “Personality Attributes” to Behavior Attributes.”
4.2 Openness	
4.3 Trustful	
4.4 Fairness	
4.5. Courageous	
4.6 Ambition	
4.7 Assertiveness	
4.8 Self-confidence	
4.9 Sense of Humor	
4.10 Realistic	

Table 4.7 shows that the main trait “Ambition” was replaced by the trait “Competitiveness” and then it was taken away and put under another sub-element. The main trait “Realistic” was replaced by the trait “Practical”. However,

two main traits, Responsible and Dependable, that were taken from another sub-element were put under this sub-element. This sub-element was also renamed to be “Behavior Attributes.” As a result, this sub-element, Behavior Attributes, increased its traits from 10 to 11 including: 1) honest, 2) openness, 3) trustful, 4) fairness, 5) courageous, 6) assertiveness, 7) self-confidence, 8) sense of humor, 9) practical, 10) responsible, and 11) dependable.

Table 4.8 The sub-element, Social Background, with its 5 main traits

5. Social Background	Suggestions from the Focus Group
5.1 Well-educated	The participants in the focus group suggested replacing the main trait called “Dominance” by another main trait called “Influential.”
5.2 Dominance	
5.3 Wealthy	
5.4 Personable	
5.5 Charismatic	

In table 4.8, it was not made any change. This sub-element “Social Background” still had the same 5 main elements namely: 1) well-educated, 2) influential, 3) wealthy, 4) personable, and 5) charismatic.

Table 4.9 The sub-element, Interpersonal Attributes, with its 4 main traits

6. Interpersonal Attributes	Suggestions from the Focus Group
6.1 Human Relation	The participants in the focus group suggested taking away one main trait called “Communication” and then putting it under another sub-element called “Soft-Skill Attributes,” which was suggested to make. In contrast, they recommended adding one main trait called “Extroversion” to this sub-element.
6.2 Sociable	
6.3 Diplomacy	
6.4 Communication	

Table 4.9 demonstrates that the sub-element called “Interpersonal Attributes” still had 4 main traits although it was made some changes by taking the main trait called “communication” away, but by adding a new main trait called “Extroversion.” All the main traits in this sub-element were: 1) human relation, 2) sociable, 3) diplomacy, and 4) extroversion.

Table 4.10 The sub-element, Achievement-Oriented Attributes, with its 13 main traits

7. Achievement-Oriented Attributes	Suggestions from the Focus Group
7.1 Dedicated	The participants in the focus group suggested taking away the main trait called “Decisiveness” and then putting it under another newly-made sub-element called “Soft-Skill Attributes.” Again, one more main trait called “Competitiveness” from another sub-element was put instead.
7.2 Commitment	
7.3 Decisiveness	
7.4 Participation	
7.5 Cooperation	
7.6 Supportive	
7.7 Inspiring	
7.8 Motivation	
7.9 Hard-working	
7.10 Persistence	
7.11 Achievement-oriented	
7.12 Effectiveness	
7.13 Focus	

According to the table 4.10, it was found that although there were some changes, this sub-element still had 13 main traits namely: 1) dedicated, 2) commitment, 3) competitiveness, 4) participation, 5) cooperation, 6) supportive, 7) inspiring, 8) motivation, 9) hard-working, 10) persistence, 11) achievement-oriented, 12) effectiveness, and 13) focus.

Table 4.11 The sub-element, Competency Attributes, with its 10 main traits

8. Competency Attributes	Suggestions from the Focus Group
8.1 Visionary	The participants in the focus group suggested taking 3 main traits out. The 2 taken-out traits, Responsibility and Dependability, were put under another sub-element called “Behavior Attributes” whereas another taken-out trait, Problem-Solving, was put under another sub-element called “Soft-Skill Attributes.”
8.2 Competence	
8.3 Knowledgeable	
8.4 Advisory	
8.5 Organized	
8.6 Responsible	
8.7 Dependable	
8.8 Delegation	
8.9 Role Model	
8.10 Problem-solving	

Table 4.11 shows that there were some changes for this sub-element. After the focus group, this sub-element decreased its main traits from 10 to only 7. Those main traits were: 1) visionary, 2) competence, 3) knowledgeable, 4) advisory, 5) organized, 6) delegation, and 7) role model.

Table 4.12 The sub-element, Intellectual Attribute, with its 10 main traits

9. Intellectual Attributes	Suggestions from the Focus Group
9.1 Tactful	The participants in the focus group suggested taking out 1 main trait called “Analytical” from this sub-element. It was then put under another sub-element called “Soft-Skill Attributes.” However, the participant recommended adding 1 new main trait called “Smart” to this sub-element.
9.2 Mental strength	
9.3 Intelligence	
9.4 Alertness	
9.5 Analytical	
9.6 Judgment	
9.7 Insightfulness	
9.8 Awareness	
9.9 Creative	
9.10 Innovative	

According to table 4.12, it was found that although minor changes were made, this sub-element still had 10 main traits namely: 1) tactful, 2) mental strength, 3) smart, 4) intelligence, 5) alertness, 6) judgment, 7) insightfulness, 8) awareness, 9) creative, and 10) innovative.

Table 4.13 The sub-element, Academic Attributes, with its 4 main traits

10. Academic Attributes	Suggestions from the Focus Group
10.1 Inquisitive	The participants in the focus group suggested adding 1 new main trait called “Eager to Learn” to this sub-element. Moreover, the participants suggested renaming this sub-element to a new one called “Development Attributes”.
10.2 Self-development	
10.3 Agreeable	
10.4 Open-minded	

Table 4.13 demonstrates that one new main trait was added to this sub-element. After the focus group, this sub-element, with its new name called

“Development Attributes” increased its main traits from 4 to 5 including: 1) eager to learn, 2) inquisitive, 3) self-development, 4) agreeable, and 5) open-minded.

Table 4.14 The sub-element, Management and Leadership Attributes, with its 4 main traits

11. Management and Leadership Attributes	Suggestions from the Focus Group
11.1 Time management	The participants in the focus group did not make any suggestion. They all agreed upon the 4 main traits with their sub-element.
11.2 Strategic planning	
11.3 Management skills	
11.4 Leadership	

Table 14 indicated that there was no change after the focus group discussion. As a result, this sub-element still had 4 main traits called: 1) time management, 2) strategic planning, 3) management skills, and 4) leadership.

Table 4.15 The newly- made sub-element, Soft-Skill Attributes, with its 5 main traits

12. Soft-Skill Attributes	Suggestions from the Focus Group
12.1 Communication	As mentioned above, the participants in the focus group suggested creating 1 new sub-element called “Soft-Skill Attributes.” They recommended combining 5 taken-out main traits and then putting them under this new sub-element.
12.2 Decision-Making	
12.3 Problem-Solving	
12.4 Analytical	
12.5 Critical Thinking	

Table 4.15 indicates that the new sub-element called “Soft-Skill Attributes” was newly created. It consisted of 5 main traits that were taken from other sub-elements. The 5 main traits were: 1) communication was taken from the sub-element called “Interpersonal Attribute”, 2) decision-Making was taken from the sub-element called “Achievement-Oriented Attribute”, 3) problem-solving was taken from the sub-element called “Competency Attributes”, 4) analytical was taken away from the sub-element called “Intellectual Attributes”, and 5) critical Thinking was newly created.

At the end of the first focus group discussion, the main traits increased from 77 to 83 and the sub-elements increased from 11 to 12 as shown in table 4.16 below.

Table 4.16 The summary of 12 sub-elements with their individual main traits

Main Traits	Sub-Elements	Main Traits	Sub-Elements	Main Traits	Sub-Elements
1. Physical Self-Image	1. Physical Attributes	1. Well-educated	5. Social Background	1. Tact	9. Intellectual Attributes
2. Physical Appearance		2. Influential		2. Mental strength	
3. Physical Vitality		3. Wealthy		3. smartness	
4. Physical Strength		4. Personableness		4. Intelligence	
5. Physical Fitness		5. Charisma		5. Alertness	
1. Patience	2. Emotional Attributes	1. Human Relation	6. Interpersonal Attributes	6. Judgment	
2. Self-control		2. Sociability		7. Insightfulness	
3. Stability		3. Diplomacy		8. Awareness	
4. Flexibility		4. Extroversion		9. Creativeness	
5. Optimism		1. Dedication		10. Innovativeness	
1. Empathy	3. Ethical Attributes	2. Commitment	7. Achievement-Oriented Attributes	1. Eager to learn	10. Development Attributes
2. Care		3. Competitiveness		2. Inquisitiveness	
3. Integrity		4. Participation		3. Self-development	
4. Ethic		5. Cooperation		4. Agreeableness	
5. Generosity		6. Supportiveness		5. Open-Mindedness	
6. Humility		7. Inspiration		1. Time management	11. Management and Leadership Attributes
7. Enthusiasm		8. Motivation		2. Strategic planning	
8. Disciplined		9. Hard-working		3. Management skills	

Table 4.16 (Continued)

Main Traits	Sub-Elements	Main Traits	Sub-Elements	Main Traits	Sub-Elements
9. Sympathy		10. Persistence		4. Leadership	
1. Honesty	4. Behavior Attributes	11. Achievement-oriented	8. Competence Attributes	1. Communication	12. Soft-Skill Attributes
2. Openness		12. Effectiveness		2. Decision-making	
3. Trust		13. Focus		3. Problem-solving	
4. Fairness		1. Vision		4. Analysis	
5. Courage		2. Competence		5. Critical-thinking	
6. Assertiveness		3. Knowledge			
7. Self-confidence		4. Advisory			
8. Sense of Humor		5. Organized			
9. Practicality		6. Delegation			
10. Responsibility		7. Role Model			
11. Dependability					

Table 4.17 The 12 sub-elements and 2 main elements

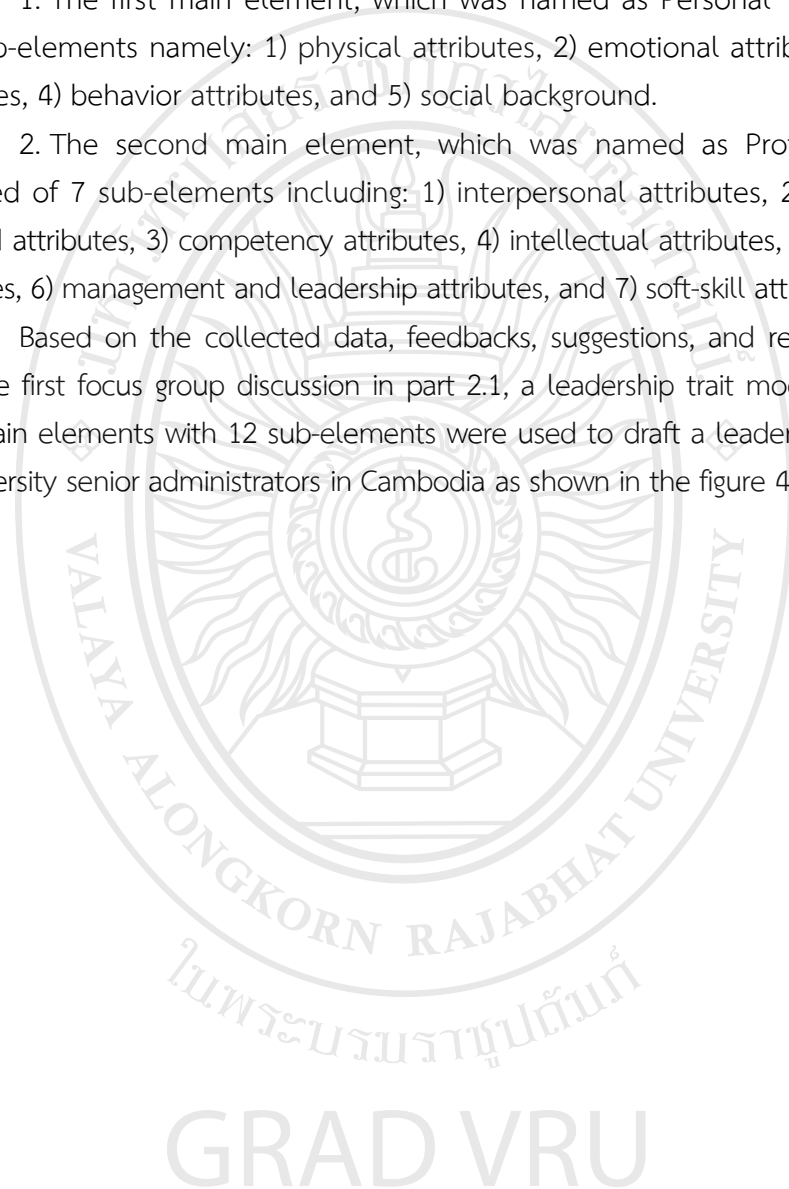
Sub-Elements	Main Elements
1. Physical Attributes	Personal Traits
2. Emotional Attributes	
3. Ethical Attributes	
4. Behavior Attributes	
5. Social Background	
6. Interpersonal Attributes	Professional Traits
7. Achievement-Oriented Attributes	
8. Competency Attributes	
9. Intellectual Attributes	
10. Development Attributes	
11. Management and Leadership Attributes	
12. Soft-Skill Attributes	

Table 4.17 shows that the 12 sub-elements were divided into two main elements in which the first main element, Personal Traits, consisted of 5 sub-elements while the second main element, Professional Traits, consisted of 7 sub-elements.

1. The first main element, which was named as Personal Traits, consisted of 5 sub-elements namely: 1) physical attributes, 2) emotional attributes, 3) ethical attributes, 4) behavior attributes, and 5) social background.

2. The second main element, which was named as Professional Traits, consisted of 7 sub-elements including: 1) interpersonal attributes, 2) achievement-oriented attributes, 3) competency attributes, 4) intellectual attributes, 5) development attributes, 6) management and leadership attributes, and 7) soft-skill attributes.

Based on the collected data, feedbacks, suggestions, and recommendations from the first focus group discussion in part 2.1, a leadership trait model was drafted. All 2 main elements with 12 sub-elements were used to draft a leadership trait model for university senior administrators in Cambodia as shown in the figure 4.2 below.



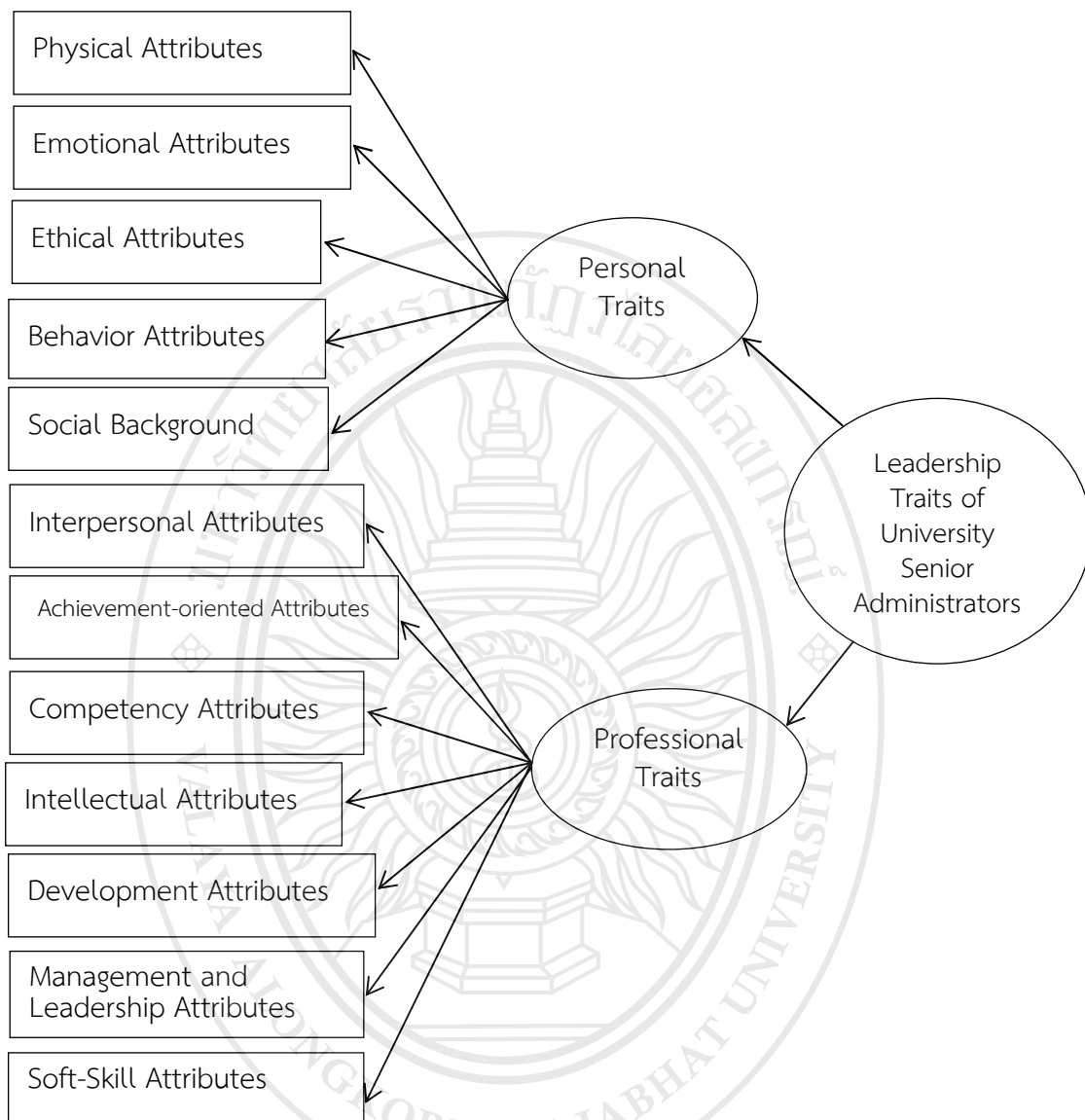


Figure 4.2 The third drafted model of leadership traits for university senior administrators in Cambodia

Part 2.2 The results of the second focus group discussion about main elements and their sub-elements

Table 4.18 The main element, Personal Traits, with its 5 sub-elements

1. Personal Traits	Suggestions from the Focus Group
1.1 Physical Attributes	The participants in the focus group suggested recombining the sub-elements with this main element. They recommended recombining the two existing sub-elements namely “Physical Attributes and Social Background”, and another sub-element from another main element called “Development Attributes” under this main element. 3 other sub-elements were suggested to be taken away and put under another main element.
1.2 Emotional Attributes	
1.3 Ethical Attributes	
1.4 Behavior Attributes	
1.5 Social Background	

Table 4.18 indicates that the main element called “Personal Traits” decreased its sub-elements from 5 to 3. The remaining sub-elements in this main element were Physical Attributes and Social Background plus another sub-element called Development Attributes that was taken from the main element Professional Traits. As a result, the main element, Personal Traits, consisted of 3 sub-elements namely: 1) physical attributes, 2) social background, and 3) development attributes.

Table 4.19 The main element, Professional Traits, with its 7 sub-elements

2. Professional Traits	Suggestions from the Focus Group
2.1 Interpersonal Attributes	The participants in the focus group suggested taking away 2 sub-elements from this main element. The 2 taken-away sub-elements were Intellectual Attributes and Development Attributes. They also suggested putting the 2 taken-away sub-elements under other main elements. They suggested creating new main element that should be named as “Personality Traits.” They additionally suggested that 1 taken-away, Development Attributes, should be put under the main element called “Personal
2.2 Achievement-Oriented Attributes	
2.3 Competency Attributes	
2.4 Intellectual Attributes	
2.5 Development Attributes	
2.6 Management and Leadership Attributes	
2. Professional Traits	

Table 4.19 (Continued)

2. Professional Traits	Suggestions from the Focus Group
2.7. Soft-Skill Attributes	Traits” while another taken-away sub-element, Intellectual Attributes, should be put under another newly-made main element called “Personality Attributes.”

Table 4.19 demonstrates that the main element “Professional Traits” decreased its sub-elements from 7 to 5. As a result, the main element “Professional Traits”, therefore, consisted of only 5 sub-elements namely: 1) interpersonal attributes, 2) achievement-oriented attributes, 3) competency attributes, 4) management and leadership attributes, and 5) soft-skill attributes.

Table 4.20 The newly-made main element, Personality Traits, with its 4 sub-elements

3. Personality Traits	Suggestions from the Focus Group
3.1 Emotional Attributes	Personality Traits is the new main element that participants in the focus group suggested creating. As mentioned above, the new main element named “Personality Traits” was created and the participants had recommended putting 3 sub-elements that were taken from the main element “Personal Traits” and 1 sub-element that was taken from the main element “Professional Traits” under this newly-made main element.
3.2 Ethical Attributes	
3.3 Intellectual Attributes	
3.4 Behavior Attributes	

Table 4.20 shows that the new main element, Personality Traits, was created. Additionally, 3 sub-elements from Personal Traits and 1 sub-element from Professional Traits were put under this newly-made main element. The new main element “Personality Traits”, therefore, consisted of 4 sub-elements called: 1) emotional attributes, 2) ethical attributes, 3), intellectual attributes and 4) behavior attributes.

Table 4.21 The 3 main elements with their individual sub-elements

Sub-Elements	Main Elements
1. Physical Attributes	Personal Traits
2. Social Background	
3. Development Attributes	
4. Emotional Attributes	Personality Traits
5. Ethical Attributes	
6. Intellectual Attributes	
7. Behavioral Attributes	
8. Interpersonal Attributes	Professional Traits
9. Achievement-Oriented Attributes	
10. Competency Attributes	
11. Management and Leadership Attributes	
12. Soft-Skill Attributes	

Table 4.21 indicates that finally the total 3 main elements with their 12 sub-elements emerged. The 1st main element called “Personal Traits” consisted of 3 sub-elements including: 1) physical attributes, 2) social background, and 3) development Attributes; the 2nd main element called “Personality Traits” consisted of 4 sub-elements such as: 1) emotional attributes, 2) ethical attributes, 3) intellectual attributes, and 4) behavioral attributes; and the 3rd main element call “Professional Traits” consisted of 5 sub-elements namely: 1) interpersonal attributes, 2) achievement-oriented attributes, 3) competency attributes, 4) management and leadership attributes, and 5) soft-skill attributes.

In conclusion, at the end of Part 2.2, the main elements increased from 2 to 3 including: 1) personal traits, 2) personality traits, and 3) professional traits whereas the 12 sub-elements remained although there were some minor changes. The main element called “Personal Traits” decreased its sub-elements from 5 to 3 namely 1) physical attributes, 2) social background, and 3) development attributes; the main element called “Professional Traits” decreased its sub-elements from 7 to 5 including: 1) interpersonal attributes, 2) achievement-oriented attributes, 3) competency attributes, 4) management and leadership attributes, and 5) soft-skill attributes; while the new main element call “Personality Traits” had 4 sub-elements namely: 1) emotional attributes, 2) ethical attributes, 3) intellectual attributes, and 4) behavioral attributes.

Part 2.3 The result of developing the drafted leadership trait model for university senior administrators in Cambodia

In the last session of the second focus group discussion, the participants helped to give suggestions and feedbacks about the development of the drafted model. After tough and constructive discussions, the final and acceptable leadership trait model for university senior administrators was developed and finalized as shown in the figure 4.3 below.

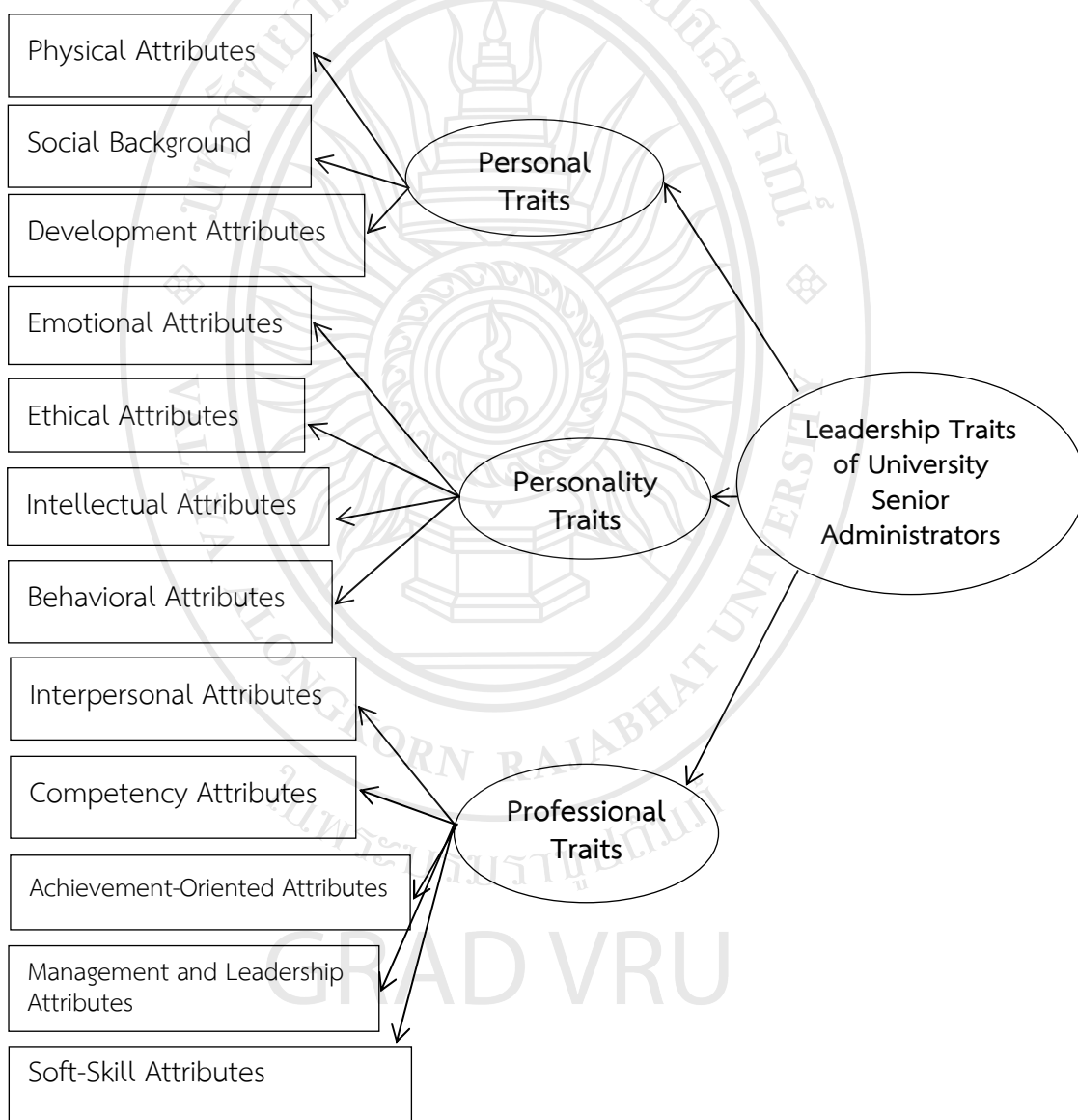


Figure 4.3 The results of confirmation of the leadership trait model of university senior administrators in Cambodia.

4.3 Part 3: The results of confirmation of the leadership trait model of university senior administrators in Cambodia.

Part 3.1 General information about the respondents

Table 4.22 General Information of Respondents

General Information		Respondents	
		Numbers	Percentage
Sex			
	Male	336	84.00
	Female	64	16.00
	Total	400	100.00
Age			
	Lower than 25	11	2.75
	25 – 35 years	98	24.50
	36 – 45 years	195	48.75
	46 years up	96	24.00
	Total	400	100.00
Education			
	Lower than Bachelor	3	0.75
	Bachelor	28	7.00
	Master	303	75.75
	Doctor/PhD	66	16.50
	Total	400	100.00
Current Position			
	President	16	4.00
	Vice-president	52	13.00
	Dean	47	11.75
	Vice-dean	42	10.50
	Department head	47	11.75
	Office head	45	11.25
	Administrative staff	27	6.75
	Lecturer	110	27.50
	Others	14	3.50
	Total	400	100.00

Table 4.22 (Continued)

General Information	Respondents	
	Numbers	Percentage
Work Experience		
Lower than 5 years	39	9.75
5 – 10 years	124	31.00
11 – 15 years	136	34.00
16 years up	101	25.25
Total	400	100.00
Institutional Status		
Public	118	29.50
Private	282	70.50
Total	400	100.00

Table 4.22 shows the respondents' information in terms of sex, age, education background, current positions, work experiences, and institutional status.

According to the table 4.22, of the 400 respondents, 336 (84%) respondents were male while 64 (16%) others were female.

In terms of ages, 11 (2.75%) respondents' ages were lower than 25 years old; 98 (24.50%) respondents were between the ages of 25-35 years old; 195 (48.75%) respondents were between the ages of 36-45 years old; whereas 96 (24%) respondents' ages were higher than 46 years old.

For respondents' education backgrounds, only 3 (0.75%) respondents hold lower degree than Bachelor; 28 (7%) respondents hold Bachelor Degree; 303 (75.75%) respondents hold Master Degree; and 66 (16.50%) respondents hold Doctor/PhD Degree.

With regard to the current positions, 16 (4%) respondents were presidents; 52 (13%) respondents were vice-presidents; 47 (11.75%) respondents were deans; 42 (10.50%) respondents were vice-deans; 47 (11.75%) respondents were department heads; 45 (11.25%) respondents were office heads; 27 (6.75%) respondents were administrative staff; 110 (27.50%) respondents were lecturers; and 14 (3.50%) other respondents were from other positions.

For work experiences in education sector, 39 (9.75%) respondents have worked less than 5 years; 124 (31%) respondents have worked between 5–10 years;

136 (34%) respondents have worked between 11-15 years; and 101 (25.25%) respondents have more than 16-year experience in education field.

Regarding the institutional status, of 400 respondents, 118 (29.50%) were from public education institutions, while 282 (70.50%) others were from private educational institutions.

Part 3.2: The result of Data Analysis

Table 4.23 Leadership Traits of Administrators in Personal Traits

Leadership Traits of Administrators	Mean	Standard Deviation	Degree of Agreeableness
Sub-element 1: Physical Attributes			
1. Leaders have appropriate height and weight.	3.52	1.07	important
2. Leaders have positive self-image.	3.83	0.74	important
3. Leaders are physically mature.	3.63	0.84	important
4. Leaders are spiritually mature.	4.26	0.76	important
5. Leaders always dress up properly in every Situation.	3.82	0.78	important
6. Leaders always maintain good appearance.	3.97	0.70	important
7. Leaders are very active in doing things.	4.35	0.69	important
8. Leaders show a sense of urgency in doing things.	3.66	0.88	important
9. Leaders have high energy and are very energetic.	4.20	0.73	important
10. Leaders are physically strong.	3.89	0.79	important
11. Leaders are physically healthy and fit.	4.30	0.80	important
average	3.95	0.41	important
Sub-element 2: Social Background			
1. Leaders hold high educational background.	4.08	0.85	important
2. Leaders have high social status in society.	3.74	0.85	important
3. Leaders have strong influence on others.	4.39	0.77	important
4. Leaders have authoritative power.	3.92	0.76	important

Table 4.23 (continued)

Leadership Traits of Administrators	Mean	Standard Deviation	Degree of Agreeableness
5. Leaders have high economic status in society.	3.57	0.86	important
6. Leaders are liked and loved.	4.07	0.83	important
7. Leaders look attractive and interesting.	3.94	0.81	important
8. Leaders popularize in the eyes of public.	4.07	0.86	important
9. Leaders are highly charismatic.	4.16	0.83	important
average	3.99	0.54	important
Sub-element 3. Development Attributes			
1. Leaders are interested in feedbacks.	4.17	0.62	important
2. Leaders are eager to learn new things.	4.29	0.59	important
3. Leaders never stop chasing something new; they are curious and inquisitive about new knowledge.	4.19	0.63	important
4. Leaders never stop learning; they are true life-long learners.	4.49	0.64	important
5. Leaders learn from mistakes and experiences.	4.39	0.60	important
6. Leaders continuously and gradually develop themselves.	4.52	0.63	Very important
7. Leaders support opinions of others; they always agree and accept constructive feedbacks.	3.98	0.72	important
8. Leaders are receptive to others' ideas and inputs.	3.99	0.66	important
9. Leaders are open-minded to new ideas.	4.57	0.61	Very important
average	4.29	0.42	important
overall	4.07	0.35	important

Table 4.23 represents the level of agreeableness on the leadership traits of administrators of the main element called Personal Traits along with its three sub-elements namely Physical Attributes (11 items), Social Background (9 items), and

Development Attributes (9 items). Totally, there were 29 items. Based on the table 4.23, the overall degree of agreeableness on leadership traits of administrators in Personal Traits was important ($\bar{X} = 4.07$, S.D. = 0.35). Individually, the degree of agreeableness on Physical Attributes was important ($\bar{X} = 3.95$, S.D. = 0.41); the degree of agreeableness on Social Background was also important ($\bar{X} = 3.99$, S.D. = 0.54); and the degree of agreeableness on Development Attributes was also important ($\bar{X} = 4.29$, S.D. = 0.42). Regarding all items, it indicated that the degree of agreeableness on 2 items was very important, whereas the degree of agreeableness on 27 other items was important.

Table 4.24 Leadership Traits of Administrators in Personality Traits

Leadership Traits of Administrators	Mean	Standard Deviation	Degree of Agreeableness
Sub-element 1: Emotional Attributes			
1. Leaders are able to put up with stress.	3.86	0.67	important
2. Leaders are able to well balance their emotions in all situations.	3.99	0.61	important
3. Leaders are able to control themselves when facing undesired situations or getting Unsatisfying results.	4.00	0.59	important
4. Leaders can fit themselves in all situations.	3.86	0.71	important
5. Leaders are always calm and have stable feelings.	3.91	0.78	important
6. Leaders can adapt and adjust themselves to the changing environments.	4.26	0.68	important
7. Leaders are flexible to the situations they are in.	4.41	0.72	important
8. Leaders never refuse to change when Necessary.	3.72	0.80	important
9. Leaders have high expectation, and always think positively.	4.08	0.60	important
10. Leaders are optimistic about the future; they always feel positive about what they are doing.	4.13	0.59	important
average	4.02	0.40	important

Table 4.24 (Continued)

Leadership Traits of Administrators	Mean	Standard Deviation	Degree of Agreeableness
Sub-element 2: Ethical Attributes			
1. Leaders show high sensitivity to others and Understand what other people are feeling.	4.03	0.68	important
2. Leaders take great care of their subordinates.	4.20	0.62	important
3. Leaders never take their subordinates' needs and feelings for granted.	3.61	1.05	important
4. Leaders behave positively, and have strong value.	4.20	0.64	important
5. Gentle manner is one of the best qualities of good leaders.	4.12	0.65	important
6. Leaders respect their subordinates and others; they treat everyone with respect.	4.17	0.77	important
7. Integrity is one of the best qualities of great leaders.	4.50	0.68	Very important
8. Leaders do something and behave based on the principles of ethics and morality.	4.28	0.60	important
9. Leaders like sharing with others what they know and have; they are generous.	4.10	0.59	important
10. Being humble is one of the most important characteristics of good leaders.	3.89	0.71	important
11. Leaders are passionate and have strong passion with people they work with.	3.80	0.80	important
12. Leaders are compassionate and sympathetic with their followers.	3.88	0.67	important
13. Leaders are highly disciplined people.	4.44	0.72	important
average	4.09	0.41	important

Table 4.24 (Continued)

Leadership Traits of Administrators	Mean	Standard Deviation	Degree of Agreeableness
Sub-element 3: Intellectual Attributes			
1. Leaders are tactful about leading and managing their organizations.	4.20	0.67	important
2. Leaders have good memory and are mentally strong.	4.24	0.68	important
3. Leaders are smart in leading and managing their organization.	4.44	0.65	important
4. Leaders have high IQ and very intelligent.	4.30	0.80	important
5. Leaders are always proactive and alerted.	4.09	0.55	important
6. Leaders work and lead their organizations carefully.	4.24	0.54	important
7. Leaders are considerate; they judge the situations reasonably.	4.31	0.58	important
8. Leaders have high and strong perceptiveness.	4.08	0.61	important
9. Leaders have broad insight about work and situations.	4.29	0.64	important
10. Leaders keep everything informed.	4.12	0.73	important
11. Leaders are aware of information and situations related to their work and their Organizations.	4.19	0.53	important
12. Leaders are highly imaginative, creative and innovative persons.	4.43	0.67	important
average	4.24	0.40	important
Sub-element 4: Behavior Attributes			
1. Leaders always do what they say and promise.	4.18	0.76	important
2. Leaders generate loyalty and do something straightfully.	4.32	0.66	important
3. Transparency is one of the qualities of good leaders.	4.05	0.67	important

Table 4.24 (Continued)

Leadership Traits of Administrators	Mean	Standard Deviation	Degree of Agreeableness
4. Leaders build trust through open and Collaborative relationship with their followers and stakeholders.	4.38	0.63	important
5. Leaders promote fairness in their organizations.	4.15	0.58	important
6. Leaders dare to face all situations courageously.	4.17	0.62	important
7. Leaders look for opportunities and take risks for grappling them.	4.07	0.64	important
8. Leaders have high ambitions and are eager to compete aggressively.	4.11	0.78	important
9. Leaders feel proud of themselves.	3.92	1.08	important
10. Leaders believe in themselves; they are confident.	4.43	0.70	important
11. Leaders have senses of humor. They make their followers happy with hope.	3.98	0.68	important
12. Leaders perform their tasks practically based on real situations.	4.05	0.57	important
13. Leaders are responsible for what they have done and admit their mistakes.	4.38	0.73	important
14. Leaders are dependable.	4.05	0.95	important
average	4.16	0.42	important
overall	4.13	0.35	important

Table 4.24 represents the level of agreeableness on the leadership traits of administrators of the main element called Personality Traits along with its four sub-elements namely Emotional Attributes (10 items), Ethical Attributes (13 items), Intellectual Attributes (12 items), and Behavior Attributes (14 items). Totally, there were 49 items. Based on the table 4.24, the overall degree of agreeableness on the leadership traits of administrators in Personality Traits was important ($\bar{X} = 4.13$, S.D. = 0.35). Separately, the degree of agreeableness on Emotional Attributes was important ($\bar{X} = 4.02$, S.D. = 0.40); the degree of agreeableness on Ethical Attributes was also important

(\bar{X} = 4.09, S.D. = 0.41); the degree of agreeableness on Intellectual Attributes was important (\bar{X} = 4.24, S.D. = 0.40); and the degree of agreeableness on Behavior Attributes was important (\bar{X} = 4.16, S.D. = 0.42). With regard to all items, it was found that the degree of agreeableness on 1 item was very important, while the degree of agreeableness on 48 other items was important.

Table 4.25 Leadership Traits of Administrators on Professional Traits

Leadership Traits of Administrators	Mean	Standard Deviation	Degree of Agreeableness
Sub-element 1: Interpersonal Attributes			
1. Leaders possess strong interpersonal skills.	4.46	0.69	important
2. Leaders get along well with others.	4.09	0.61	important
3. Leaders are happy to talk to others.	3.87	0.78	important
4. Leaders can be approached easily.	3.79	0.75	important
5. Leaders like attending social events; they like socializing with people.	3.70	0.83	important
6. Leaders promote team spirit in their workplaces.	4.16	0.61	important
7. Leaders talk to others in diplomatic manners.	4.03	0.62	important
8. Leaders smile and talk to people in friendly ways.	4.04	0.67	important
average	4.02	0.46	important
Sub-element 2: Competency Attributes			
1. Leaders look forward to future and prepare for it.	4.17	0.57	important
2. Leaders have broad vision; they are visionary persons.	4.51	0.65	very important
3. Leaders share vision with their followers.	4.25	0.60	important
4. Leaders have expertise of their work.	3.99	0.69	important
5. Leaders possess necessary skills and abilities and are capable of the work they manage and lead.	4.26	0.57	important
6. Leaders have broad knowledge and experiences related to their work.	4.24	0.63	important

Table 4.25 (Continued)

Leadership Traits of Administrators	Mean	Standard Deviation	Degree of Agreeableness
Sub-element 2: Competency Attributes (continued)			
7. Leaders are advisors and provide consultancy to their subordinates.	4.35	0.59	important
8. Leaders get ready for their everyday tasks and prioritize work productively.	4.12	0.54	important
9. Leaders are always well-prepared and well-organized.	4.26	0.67	important
10. Leaders know how to delegate tasks to their subordinates and encourage them to work independently.	4.37	0.61	important
11. Leaders set an example and act as role-models for their subordinates.	4.47	0.64	important
average	4.27	0.39	important
Sub-element 3: Achievement-oriented Attributes			
1. Leaders dedicate and devote their time on organizations.	4.18	0.62	important
2. Leaders have strong willingness and high commitment.	4.55	0.58	very important
3. Leaders have strong determination about their job.	4.44	0.59	important
4. Leaders promote participations and involvement within the organization.	4.17	0.56	important
5. Leaders foster teamwork in their workplaces.	4.17	0.54	important
6. Leaders show high levels of support and concern for their subordinates.	4.37	0.61	important
7. Leaders encourage and persuade their followers to work to achieve the set goals.	4.41	0.61	important
8. Leaders inspire others in their organizations to do their best.	4.47	0.61	important

Table 4.25 (Continued)

Leadership Traits of Administrators	Mean	Standard Deviation	Degree of Agreeableness
Sub-element 3: Achievement-oriented Attributes (continued)			
9. Leaders know how to motivate their followers.	4.26	0.61	important
10. Leaders work hard and strive to achieve goals.	4.30	0.57	important
11. Leaders try their best and persist to work motivationally.	4.16	0.54	important
12. Leaders highly focus on their work and tasks.	4.18	0.62	important
13. Leaders work very hard to achieve their set goals.	4.43	0.71	important
14. Leaders stay focused on achievement; they are achievement-oriented.	4.31	0.65	important
15. Leaders focus on effectiveness and productivity of their work.	4.15	0.57	important
16. Leaders are focused and have high concentration on what they do.	4.10	0.56	important
average	4.29	0.40	important
Sub-element 4: Management and Leadership Attributes			
1. Leaders manage time effectively.	4.31	0.64	important
2. Leaders strongly emphasize on careful planning and plan their work strategically with clear time line.	4.34	0.61	important
3. Leaders effectively manage human resource in their organization.	4.13	0.59	important
4. Leaders supervise their people in their organization in disciplinary ways.	3.84	0.69	important
5. Leaders provide guidance to their subordinates in productive ways.	4.33	0.61	important
6. Leaders organize and manage tasks productively.	4.16	0.54	important
7. Managerial skills are important to leaders.	4.25	0.74	important

Table 4.25 (Continued)

Leadership Traits of Administrators	Mean	Standard Deviation	Degree of Agreeableness
Sub-element 4: Management and Leadership Attributes (continued)			
8. Leaders use power properly.	4.23	0.71	important
9. Leaders have strong desires to lead.	4.40	0.68	important
10. Ownership is one of the best qualities of good leaders.	4.06	0.73	important
11. Leaders possess leadership qualities.	4.50	0.67	very important
average	4.23	0.41	important
Sub-element 5: Soft-Skill Attributes			
1. Leaders are good at speaking and listening; They talk and listen to people intentionally.	4.19	0.61	important
2. Leaders are fluent of speech; they are well-prepared before speaking or making speeches.	4.16	0.61	important
3. Leaders are good at communications.	4.52	0.62	Very important
4. Leaders are good at making sound decisions based on facts and situations..	4.44	0.66	important
5. Leaders study causes of the problems through logical analysis and careful thinking.	4.16	0.56	important
6. Leaders know how to solve problems effectively; they approach problems with facts and logic.	4.30	0.66	important
7. Leaders analyze and evaluate work or situations logically.	4.20	0.65	important
8. Analytical skills are important to leaders.	4.22	0.61	important
9. Leaders think clearly and logically.	4.20	0.59	important
10. Leaders possess cognitive ability.	4.26	0.61	important
11. Leaders think critically.	4.28	0.60	important
average	4.27	0.42	important
overall	4.23	0.36	important

Table 4.25 represents the level of agreeableness on the leadership traits of administrators of the main element called Professional Traits along with its five sub-elements namely Interpersonal Attributes (8 items), Competency Attributes (11 items), Achievement-Oriented Attributes (16 items), Management and Leadership Attributes (11 items), and Soft-Skill Attributes (11 items). Totally, there were 57 items. The table 4.25 indicates that the overall degree of agreeableness on the leadership traits of administrators in Professional Traits was important ($\bar{X} = 4.23$, S.D. = 0.36). Individually, the degree of agreeableness on Interpersonal Attributes was important ($\bar{X} = 4.02$, S.D. = 0.46); the degree of agreeableness on Competency Attributes was important ($\bar{X} = 4.27$, S.D. = 0.39); the degree of agreeableness on Achievement-Oriented Attributes was important ($\bar{X} = 4.29$, S.D. = 0.40); the degree of agreeableness on Management and Leadership Attributes was important ($\bar{X} = 4.23$, S.D. = 0.41); and the degree of agreeableness on Soft-Skill Attributes was important ($\bar{X} = 4.27$, S.D. = 0.42). To consider overall items, the degree of agreeableness on 4 items was very important, while the degree of agreeableness on 53 other items was important.

Part 3.3: The results of Confirmatory Factor Analysis of the leadership trait model of university senior administrators in Cambodia.

Acronyms and abbreviations that are used to represent the statistical meanings in this study are as follows:

LT	means	Leadership Trait
PNT	means	Personal Traits
PNT1	means	Physical Attributes
PNT2	means	Social Background
PNT3	means	Development Attributes
PLT	means	Personality Traits
PLT1	means	Emotional Attributes
PLT2	means	Ethical Attributes
PLT3	means	Intellectual Attributes
PLT4	means	Behavior Attributes
PFT	means	Professional Traits
PFT1	means	Interpersonal Attributes
PFT2	means	Competency Attributes
PFT3	means	Achievement-Oriented Attributes
PFT4	means	Management and Leadership Attributes
PFT5	means	Soft-Skill Attributes
GFI	means	Goodness of Fit Index

AGFI	means	Adjusted Goodness of Fit Index
RMSEA	means	Root Mean Square Error of Approximation
\bar{X}	means	Mean
S.D.	means	Standard Deviation
χ^2	means	Chi-Square
df	means	Degree of Freedom
R2	means	RSquare
P-value	means	Significance

The Confirmatory Factor Analysis of the leadership trait model of university senior administrators in Cambodia.

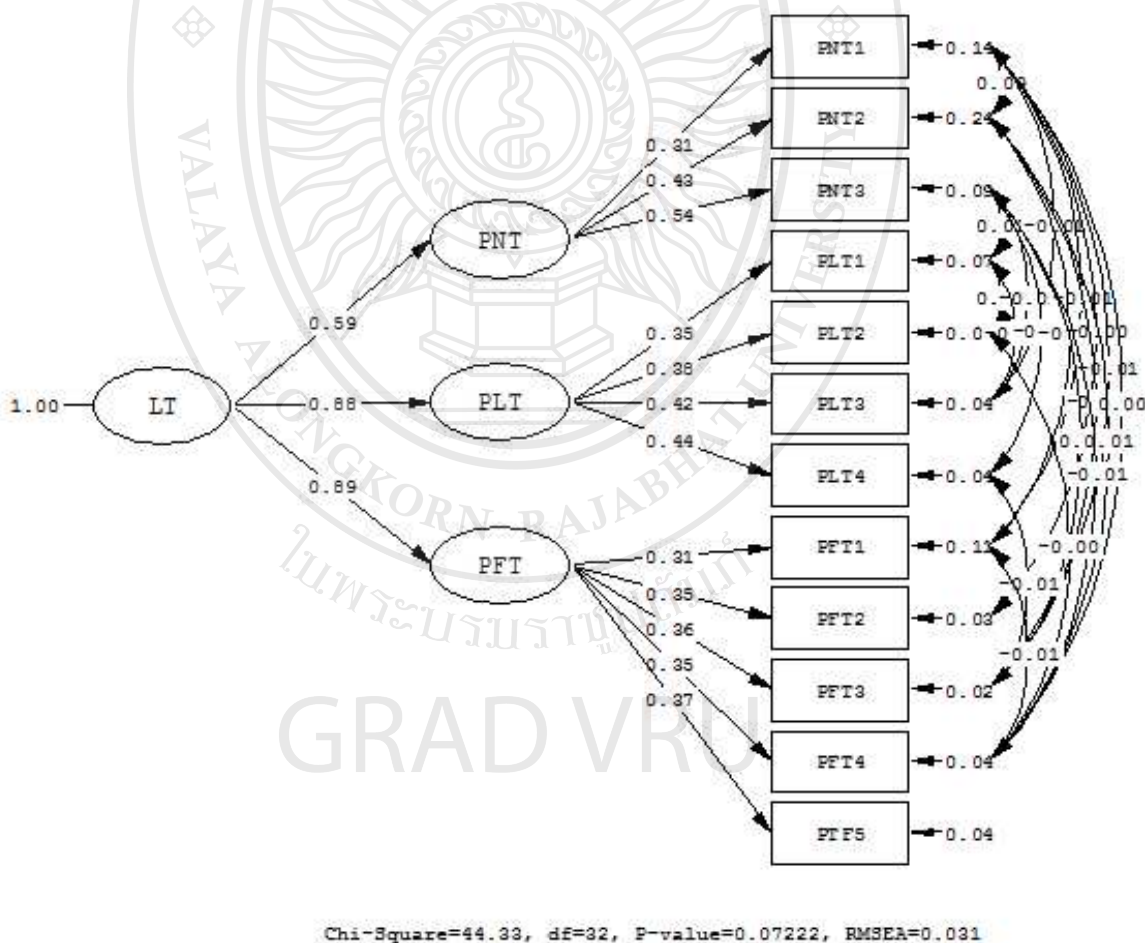


Figure 4.4 The Confirmatory Factor Analysis of the leadership trait model of university senior administrators in Cambodia

Table 4.26 The Confirmatory Factor Analysis of the leadership trait model of university senior administrators in Cambodia

Traits of Administrators	\bar{x}	S.D.	Interpretation	Factor Loading	R ²
1. Personal Traits(PNT)	4.07	0.35	Important	0.59**	0.64
1.1 Physical Attributes (PNT1)	3.95	0.41	Important	0.31**	0.17
1.2 Social Background (PNT2)	3.99	0.54	Important	0.43**	0.19
1.3 Development Attributes (PNT3)	4.29	0.42	Important	0.54**	0.50
2. Personality Traits (PLT)	4.13	0.35	Important	0.88**	0.78
2.1 Emotional Attributes (PLT1)	4.02	0.40	Important	0.35**	0.54
2.2 Ethical Attributes (PLT2)	4.09	0.41	Important	0.38**	0.60
2.3 Intellectual Attributes (PLT3)	4.24	0.40	Important	0.42**	0.77
2.4 Behavior Attributes (PLT4)	4.16	0.42	Important	0.44**	0.76
3. Professional Traits (PFT)	4.23	0.36	Important	0.89**	0.80
3.1 Interpersonal Attributes (PFT1)	4.02	0.46	Important	0.31**	0.45
3.2 Competency Attributes (PFT2)	4.27	0.39	Important	0.35**	0.83
3.3 Achievement-oriented Attributes (PFT3)	4.29	0.40	Important	0.36**	0.84
3.4 Management and Leadership Attributes (PFT4)	4.23	0.41	Important	0.35**	0.74
3.5 Soft-Skill Attributes (PFT5)	4.27	0.42	Important	0.37**	0.78

** p < .01

Based on Figure 4.3 and Table 4.26, the result of Confirmatory Factor Analysis of the leadership trait model of university senior administrators in Cambodia indicated that the model was well consistent with empirical data. Regarding the statistical value of Chi-Square χ^2 , it was 44.33, no significant difference was found, whereas the value of df was 32. Based on the criterion of χ^2/df , its value was approximately 1.39, which was lower than 2. Moreover, it was found that the Goodness of Fit Index value (GFI) was 0.98, the Adjusted Goodness of Fit Index value (AGFI) was 0.96, and the Root Mean Square Error of Approximation (RMSEA) was .031, which was lower than .05. According the principle of congruence with non-rejected hypothesis, it was found that the research model was well congruent with the empirical data. It also showed that the leadership trait model of university senior administrators in Cambodia (LT) consisted of 3 main elements namely 1) Personal Traits (PNT) consisted of 3 sub-elements such as Physical Attributes (PNT1), Social Background (PNT2), and Development Attributes (PNT3); 2) Personality Traits (PLT)

consisted of 4 sub-elements such as Emotional Attributes (PLT1), Ethical Attribute (PLT2), Intellectual Attributes (PLT3), and Behavior Attributes (PLT4), and 3) Professional Traits (PFT) consisted of 5 sub-elements such as Interpersonal Attributes (PFT1), Competency Attributes (PFT2), Achievement-Oriented Attributes (PFT3), Management and Leadership Attributes (PFT4), and Soft-Skill Attributes (PFT5).

The table 4.26 also showed that the overall degree of agreeableness of the leadership traits of administrators in Personal Traits was important with $\bar{X} = 4.07$ and S.D. = 0.35). Individually, the degree of agreeableness in Physical Attributes was important with $\bar{X} = 3.95$ and S.D. = 0.41; the degree of agreeableness in Social Background was important with $\bar{X} = 3.99$, S.D. = 0.54; and the degree of agreeableness in Development Attributes was also important with $\bar{X} = 4.29$ and S.D. = 0.42. The overall degree of agreeableness of the leadership traits of administrators in Personality Traits was important with $\bar{X} = 4.13$ and S.D. = 0.35. Separately, the degree of agreeableness in Emotional Attributes was important with $\bar{X} = 4.02$ and S.D. = 0.40; the degree of agreeableness in Ethical Attributes was also important with $\bar{X} = 4.09$ and S.D. = 0.41; the degree of agreeableness in Intellectual Attributes was important with $\bar{X} = 4.24$ and S.D. = 0.40; and the degree of agreeableness in Behavior Attributes was important with $\bar{X} = 4.16$ and S.D. = 0.42. The overall degree of agreeableness of the leadership traits of administrators in Professional Traits was important with $\bar{X} = 4.23$ and S.D. = 0.36. Individually, the degree of agreeableness in Interpersonal Attributes was important with $\bar{X} = 4.02$ and S.D. = 0.46; the degree of agreeableness in Competency Attributes was important with $\bar{X} = 4.27$ and S.D. = 0.39; the degree of agreeableness in Achievement-Oriented Attributes was important with $\bar{X} = 4.29$ and S.D. = 0.40; the degree of agreeableness in Management and Leadership Attributes was important with $\bar{X} = 4.23$ and S.D. = 0.41; and the degree of agreeableness in Soft-Skill Attributes was important with $\bar{X} = 4.27$ and S.D. = 0.42.

The results also showed that the factor loading of all 12 sub-elements was positive, which was between 0.31 to 0.54, and there was statistically significant difference at 0.01 level. The sub-element, Physical Attributes (PNT1), had factor loading of 0.31 with the variance of main element, Personal Traits (PNT), accounting for 17%. The sub-element, Social Background (PNT2), had the factor loading of 0.43 with the variance of main element, Personal Traits (PFT), accounting for 19%. The sub-element, Development Attributes (PNT3), had the factor loading of 0.54 with the variance of main element, Personal Traits (PNT), accounting for 50%. The sub-element, Emotional Attributes (PLT1), had the factor loading of 0.35 with the variance of main element, Personality Traits (PLT), accounting for 54%. The sub-

element, Ethical Attributes (PLT2), had the factor loading of 0.38 with the variance of main element, Personality Traits (PLT), accounting for 60%. The sub-element, Intellectual Attributes (PLT3), had the factor loading of 0.42 with the variance of main element, Personality Traits (PFT), accounting for 77%. The sub-element, Behavior Attributes (PLT4), had the factor loading of 0.44 with the variance of main element, Personality Traits (PLT), accounting for 76%. The sub-element, Interpersonal Attributes (PFT1), had the factor loading of 0.31 with the variance of main element, Professional Traits (PFT), accounting for 45%. The sub-element, Competency Attributes (PFT2), had the factor loading of 0.35 with the variance of main element, Professional Traits (PFT), accounting for 83%. The sub-element, Achievement-Oriented Attributes (PFT3), had the factor loading of 0.36 with the variance of main element, Professional Traits (PFT), accounting for 84%. The sub-element, Management and Leadership Attributes (PFT4), had the factor loading of 0.35 with the variance of main element, Professional Traits (PFT), accounting for 74%. And the sub-element, Soft-Skill Attributes (PFT5), had the factor loading of 0.37 with the variance of main element, Professional Traits (PFT), accounting for 78%. It was also found that the factor loading of the 3 main elements had positive value, which was between 0.59 to 0.89, and there was statistically significant difference at .01. The main element, Personal Traits, had the factor loading of 0.59 with the variance of the leadership trait model of university senior administrators in Cambodia (LT) accounting for 64%. The main element called Personality Traits (PLT) which had the factor loading of 0.88 with the variance of the leadership trait model of university senior administrators in Cambodia (LT) accounting for 78%. And the main elements called Professional Traits (PFT) had the factor loading of 0.89 with variance of the leadership trait model of university senior administrators in Cambodia (LT) accounting for 80%.

CHAPTER V

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATION

This chapter summarizes the findings of the study and presents the conclusions, discussions, and recommendations drawn from the findings. The chapter starts from the introduction of the study topic and the objectives. The following remainders of the chapter make the conclusions drawn from the study, discussions of the findings, and recommendations for future practice and research.

The study entitled "The Development of Leadership Trait Model for University Senior Administrators in Cambodia" had three main objectives: 1) to study and analyze the concepts, theories and research findings about the leadership traits of administrators, 2) to develop a leadership trait model for university senior administrators in Cambodia, and 3) to confirm the leadership trait model of university senior administrators in Cambodia.

5.1 Conclusion

The results of the research were concluded as follows:

5.1.1 Leadership Traits of university senior administrators in Cambodia

The results of the study and analysis of the leadership traits of administrators were found as follows:

83 main leadership traits of administrators were found from studying and analyzing the concepts, theories, research findings, from interviewing 10 experienced people as well as from conducting focus group discussion. Of the 83 main traits, the same 55 main traits were found from concepts, theories, and research findings and from the interview. The 55 main traits are physical appearance, physical strength, physical fitness, patient, stable, flexible, sympathy, caring, integrity, ethical, generosity, humility, enthusiasm, disciplined, honest, openness, trustful, fairness, courageous, self-confident, well-educated, influential, personable, human Relation, sociable, communication, dedicated, commitment, decisiveness, participation, supportive, inspiring, motivation, hard-working, persistence, achievement-oriented, creative, visionary, competence, knowledgeable, responsibility, dependable, delegation, role-model, problem-solving, tactful, intelligence, alertness, analytical, judgment, awareness, , initiative, inquisitive, self-development, and open-minded.

However, the 17 different main traits were found from the concepts, theories, and research findings that the interviewees did not mention. The 17 main traits are sense of humor, focus, practical, wealthy, self-controlled, optimism,

empathy, competitiveness, assertiveness, charismatic, diplomatic, cooperation, effectiveness, advisory, organized, insightfulness, and agreeable.

In contrast, the interviewees provided 5 different main traits that were not found from the concepts, theories, and research findings. The 5 main traits are mental strength, time management, strategic planning, leadership, and managerial skills. To sum up the main traits found from studying and analyzing the concepts, theories, and research findings with the main traits found from the interview, 77 main traits existed.

The first focus group participants agreed upon all the 77 main traits. But they recommended recombining some individual traits, so 6 more main traits were added to the list of 77 main traits. The 6 added main traits are physical self-image, physical vitality, extroversion, smartness, eager to learn, and critical thinking.

It then could be concluded that 83 main leadership traits were found by studying and analyzing the concepts, theories, research findings, by interviewing 10 experienced people, as well as by conducting the first focus group discussion.

5.1.2 The development of leadership trait model for university senior administrators in Cambodia

The results of the focus group discussions indicated that the 83 main leadership traits of university senior administrators were classified into 12 sub-elements. Each sub-element with its main traits was shown as the following:

1. Physical Attributes: Consisted of 5 main traits namely: 1) physical self-image, 2) physical appearance, 3) physical vitality, 4) physical strength, and 5) physical fitness.

2. Emotional Attributes: Consisted of 5 main traits such as: 1) patience, 2) self-control, 3) stability, 4) flexibility, and 5) optimism.

3. Ethical Attributes: Consisted of 9 main traits including: 1) empathy, 2) care, 3) integrity, 4) ethic, 5) generosity, 6) humility, 7) enthusiasm, 8) disciplined, and 9) sympathy.

4. Behavior Attributes: Consisted of 11 main traits namely: 1) honesty, 2) openness, 3) trust, 4) fairness, 5) courage, 6) assertiveness, 7) self-confidence, 8) sense of humor, 9) practicality, 10) responsibility, and 11) dependability.

5. Social Background: Consisted of 5 main traits namely: 1) well-educated, 2) influential, 3) wealthy, 4) personableness, and 5) charisma.

6. Interpersonal Attributes: Consisted of 4 main traits such as: 1) human relation, 2) sociability, 3) diplomacy, and 4) extroversion

7. Achievement- Oriented Attributes: Consisted of 13 main traits

including: 1) dedication, 2) commitment, 3) competitiveness, 4) participation, 5) cooperation, 6) supportiveness, 7) inspiration, 8) motivation, 9) hard-working, 10) persistence, 11) achievement-oriented, 12) effectiveness, and 13) focus.

8. Competence Attributes: Consisted of 7 main traits such as: 1) vision, 2) competence, 3) knowledge, 4) advisory, 5) organized, 6) delegation, and 7) role model.

9. Intellectual Attributes: Consisted of 10 main traits namely: 1) tact, 2) mental strength, 3) smartness, 4) intelligence, 5) alertness, 6) judgment, 7) insightfulness, 8) awareness, 9) creativeness, and 10) innovativeness.

10. Development Attributes: Consisted of 5 main traits such as: 1) eager to learn, 2) inquisitiveness, 3) self-development, 4) agreeableness, and 5) open-mindedness.

11. Management and Leadership Attributes: Consisted of 4 main traits such as: 1) time management, 2) strategic planning, 3) management skills, and 4) leadership.

12. Soft-Skill Attributes: Consisted of 5 main traits namely: 1) communication, 2) decision-making, 3) problem-solving, 4) analysis, and 5) critical-thinking.

The results of the focus groups also showed that the 12 sub-elements were classified into 3 main elements. Each main element with its sub-elements was shown as follows:

1. Personal Traits: Consisted of 3 sub-elements namely: 1) physical attributes, 2) social background, and 3) development attributes.

2. Personality Traits: Consisted of 4 sub-elements including: 1) emotional attributes, 2) ethical attributes, 3) intellectual attributes, and 4) behavioral attributes.

3. Professional Traits: Consisted of 5 sub-elements namely: 1) interpersonal attributes, 2) competency attributes, 3) achievement-oriented attributes, 4) management and leadership attributes, and 5) soft-skill attributes.

Based on the results from the focus group discussions, the developed leadership trait model for university senior administrators in Cambodia consisted of 3 main elements and 12 sub-elements as presented below:

1. Main elements: 1) personal traits, 2) personality traits, and 3) professional traits.

2. Sub-elements: 1) physical attributes, 2) social background, 3) development attributes, 4) emotional attributes, 5) ethical attributes, 6) intellectual attributes, 7) behavior attributes, 8) interpersonal attributes, 9) competency attributes, 10) achievement-oriented attributes, 11) management and leadership attributes, and 12) soft-skill attributes.

5.1.3 The confirmation of the leadership trait model of university senior administrators in Cambodia could be summarized as follows:

The results showed that the degree of agreeableness of the sub-

elements and the main elements were important. Regarding the degree of agreeableness of 12 sub-elements: 1) Physical Attributes was important with $\bar{X} = 3.95$, S.D. = 0.41. 2) Social Background was important with $\bar{X} = 3.99$, S.D. = 0.54; 3) Development Attributes was important with $\bar{X} = 4.29$, S.D. = 0.42. 4) Emotional Attributes was important with $\bar{X} = 4.02$, S.D. = 0.40. 5) Ethical Attributes was also important with $\bar{X} = 4.09$, S.D. = 0.41. 6) Intellectual Attributes was important with $\bar{X} = 4.24$, S.D. = 0.40. 7) Behavior Attributes was important with $\bar{X} = 4.16$, S.D. = 0.42. 8) Interpersonal Attributes was important with $\bar{X} = 4.02$, S.D. = 0.46. 9) Competency Attributes was important with $\bar{X} = 4.27$, S.D. = 0.39. 10) Achievement-Oriented Attributes was important with $\bar{X} = 4.29$, S.D. = 0.40. 11) Management and Leadership Attributes was important with $\bar{X} = 4.23$, S.D. = 0.41. and 12) Soft-Skill Attributes was important with $\bar{X} = 4.27$, S.D. = 0.42. Regarding the degree of agreeableness of the 3 main elements: 1) Personal Traits was important with $\bar{X} = 4.07$, S.D. = 0.35. 2) Personality Traits was important with $\bar{X} = 4.13$, S.D. = 0.35. 3) Professional Traits was important with $\bar{X} = 4.23$, S.D. = 0.36.

The result of Confirmatory Factor Analysis of the leadership trait model of university senior administrators in Cambodia clearly indicated that the model was well consistent with empirical data. Regarding the statistical value of Chi-Square χ^2 , it was 44.33, no significant difference was found, whereas the value of df was 32. Based on the criterion of χ^2/df , its value was approximately 1.39, which was lower than 2. Moreover, it was found that the Goodness of Fit Index value (GFI) was 0.98, the Adjusted Goodness of Fit Index value (AGFI) was 0.96, and the Root Mean Square Error of Approximation (RMSEA) was .031, which was lower than .05. According to the principle of congruence with non-rejected hypothesis, it was found that the research model was well congruent with the empirical data.

For the factor loading, it was found that the factor loading of all 12 sub-elements was positive, which was between 0.31 to 0.54. The sub-element, Physical Attributes (PNT1), had the factor loading of 0.31. The factor loading of Social Background (PNT2) was 0.43. The factor loading of Development Attributes (PNT3) was 0.54. The factor loading of Emotional Attributes (PLT1) was 0.35. The factor loading of Ethical Attributes (PLT2) was 0.38. The factor loading of Intellectual Attributes (PLT3) was 0.42. The factor loading of Behavior Attributes (PLT4) was 0.44. The factor loading of Interpersonal Attributes (PFT1) was 0.31. The factor loading of Competency Attributes (PFT2) was 0.35. The factor loading of Achievement-Oriented Attributes (PFT3) was 0.36. The factor loading of Management and Leadership Attributes (PFT4) was 0.35. And the factor loading of Soft-Skill Attributes (PFT5) was 0.37.

It was also found that the factor loading of the 3 main elements had

positive value, which was between 0.59 to 0.89. The main element, Personal Traits, had the factor loading of 0.59. The main element called Personality Traits (PLT) which had the factor loading of 0.88. And the main elements called Professional Traits (PFT) had the factor loading of 0.89.

5.2 Discussion

The research results were discussed based on its objectives as follows:

5.2.1 Leadership traits of university senior administrators

The results of the research showed that totally there were 83 main leadership traits of university senior administrators. Of 83 main leadership traits, interviewees provided the same 55 leadership traits as the concepts, theories, and research findings; 17 leadership traits found in the concepts, theories, and research findings were different from the leadership traits found from the interview. 5 leadership traits provided by the interviewees were different from the leadership traits found from the concepts and theories. And the focus group participants suggested recombining the traits and gained 6 more leadership traits.

The interviewed experts stated that in order to be effective leaders in higher education institutions, senior administrators should possess necessary innate traits or develop leadership traits as the traits mentioned above. It was consistent with Bass (1990a) who stated that some specific personality traits that people inherit from their births may lead them into leadership roles. These innate and instinctive personality traits or behavioral characteristics are inherent in the family and passed on genetically. Furthermore, leaders need to develop their own positive traits by a number of ways such as learning from well-known leaders, attending leadership workshops, reading leadership books, and so on. The focus group participants also agreed upon the mentioned traits since, they stated, possessing positive traits can help leaders become effective. If leaders do not own positive traits from birth, they should develop them and instill them gradually. This is congruent with Gibson, et. al.(2006) who concluded that positive traits can differentiate effective leaders from ineffective leaders. However, two focus group participants mentioned that effective leaders must understand the situation they are in. Nothing fits all. They additionally stressed that effective leaders, although they possess positive traits, must choose the course of action based on the situation. This is consistent with Shaema and Jain (2013) who claimed that all situations are different so what leaders do depending on the real situation they are engaged. One focus group participant strongly believed that possessing only positive traits is not enough. Leaders must smartly apply them

based on the right situation. Likewise, Bolden (2004) believed that effective leaders must possess the combination of traits and talents that is suited to the situation. It should be additionally discussed that the research results indicated that effective leadership was important to university senior administrators in Cambodia. Senior administrators who possess positive leadership traits can help their institutions reach and achieve their set goals. They can also satisfy their followers in their institutions. Then the subordinates can perform their tasks motivationally and productively. Administrators who possess desired leadership qualities can lead their followers better comparing to those institutions that employ administrators without appropriate leadership qualities. Effective leadership influences the effectiveness of subordinates' performance in the organization. Goals can be reached and objectives can be met and achieved by effective leaders. Leaders with necessary leadership traits help increase effectiveness of administration. It was found that leaders should possess a number of traits such as vision, ability, communication, broad knowledge and experience, self-confidence, self-motivation, drive and so on. It was consistent with Bateman and Snell (2004) who contended that certain qualities belong potentially to everyone but effective leaders must possess these qualities to an exceptional degree. The qualities that are necessary for outstanding leaders are vision, ability, enthusiasm, stability, concern for others, knowledge of business, motivation, drive, self-confidence, persistence, vitality, charisma, and integrity. The findings were also congruent with Deen (2013) who summarized ten useful leadership traits that effective leaders must possess and develop. Those traits are honesty, ability to delegate, ability to communicate, sense of humor, confidence, commitment, positive attitude, creativity, ability to inspire, and intuition.

The above results should be trusted since the researcher had studied and analyzed the famous concepts, theories, and research findings from books, reports, journals, electronic sources and research findings written by 33 following well-known authors such as DuBrin (1995) Zaccaro (2001) Gates (2011) Economy (2014) Adam & Bornstein (2016) Trewatha & Newport (1982) Stogdill (1974) Bass (1990a) Kouzes & Posner (2002) Dubrin (1997) Northous (2011) Vangundy (1998) Sothimon (2007) Keith (2012) Ricketts (2009) Mannings & Curtis (2003) Bateman & Snell (2004) Barnard (1996) Deen (2013) House & Aditya (1997) ACCA (2009) Bennis & Goldsmith (1989) Musaaazi (1982) Lussier & Achua (2004); Navikan (2001) Gardner (1989) Marques (2007) Zepp (2011) Mothilal (2010) Gheselli (1971) Lekganyane et al. (2006) Wilson (2004) and Longsombun (2009). Moreover, the researcher also interviewed 10 experienced people who worked in educational sectors. The interviewees

were also experienced people who were senior administrators in 10 different institutions that were engaged in educational programs. Additionally, the researcher conducted focus group discussions for looking for more data related to leadership traits of educational administrators. The 12 focus group participants who were experienced people jointly discussed intentionally to make the data acceptable. The above results should, therefore, be reliable and trusted.

5.2.2 The development of the leadership trait model for university senior administrators in Cambodia

The results of developing a leadership trait model for university senior administrators in Cambodia which concluded that the leadership trait model of university senior administrators consisted of 3 main elements with 12 sub-elements including: 1) the Personal Traits consisted of 3 sub-elements such as Physical Attributes, Social Background, and Development Attributes, 2) Personality Traits consisted of 4 sub-elements such as Emotional Attributes, Ethical Attributes, Intellectual Attributes, and Behavioral Attributes, and 3) Professional Traits consisted of 5 sub-elements such as Interpersonal Attributes, Competency Attributes, Achievement-Oriented Attributes, Management and Leadership Attributes, and Soft-Skill Attributes, the researcher would prefer to claim that the 3 main elements and 12 sub-elements mentioned above finally got from conducting two focus group discussions. The focus group discussions' participants actively helped share ideas and provided constructive suggestions by intensively scrutinizing and screening the main elements, sub-elements, and the leadership traits of administrators so that they could be creditable and acceptable. Moreover, the experts who participated in the focus group discussions did brainstorming with group dynamics, actively discussed about the main, sub-elements, and leadership traits as well. By active discussion, and suggestions jointly worked by the focus group participants from the two times, the data was therefore rich and various. The two focus group discussions also helped the researcher get more data, information, and positive concepts that were trusted and creditable. It could therefore be said that focus group discussion could greatly benefit the development of a leadership trait model for university senior administrators in Cambodia in this study. The benefits of focus group discussion were consistent with the concepts of Freitas et al. (1998). Freitas et al. (1998) state that focus groups provide a lot of advantages as it is comparatively easier to drive or conduct. It allows to explore topics and to generate hypotheses; and it generates opportunity to collect data from the group interaction, which concentrates on the topic of the researcher's interest; it has high "face validity" (data). It was also congruent with the concepts of Kimel (2003). Kimel (2003) claims that focus groups can provide

concentrated amounts of rich data, in participants' own words, on precisely the topic of interest.

The 3 main elements and 12 sub-elements belonging to the leadership trait model for university senior administrators were discussed below:

1. The first main elements, Personal Traits, consisted of 3 sub-elements including Physical Attributes, Social Background, and Development Attributes.

Physical Attributes: The research findings showed that the average mean score of Physical Attributes was important, accounting for 3.95. It clearly indicated that the physical attributes was important to every leader. To be effective, leaders must be physically fit and strong, have good physical appearance and positive self-image. Bass (1990a) stressed that leaders should possess positive physical characteristics. Leaders should be mature, have high energy, good appearance, appropriate height and weight. Similarly Trewatha and Newport (1982) also provided the importance of leadership to physical characteristics. They stated that leaders should have appropriate height and weight, strength, and physical tolerance.

Social Background: The research findings showed that the average mean score of Social Background was important, accounting for 3.99. It clearly indicated that having a high profile of social background was important to every leader. It was consistent with Bass (1990a) who stated that leaders should have good social background. Leaders should be well-educated, hold a proper social status in society, and be wealthy. Navikan (2001) also claimed that social backgrounds are partial factors that can help leaders become effective. Leaders should have good educational background, and hold high social and economic status.

Development Attributes: The research findings showed that the average mean score of Development Attributes was important, accounting for 4.07. This demonstrated that gradual self-development was important to every leader. Leaders should search for new knowledge and develop skills and abilities gradually. The participants in the focus group discussions suggested that leaders should be eager to learn something new, seek for new knowledge and skills, and be open to new ideas from subordinates.

2. The second main element, Personality Traits, consisted of 4 sub-elements including Emotional Attributes, Ethical Attributes, and Intellectual Attributes, and Behavior Attributes.

Emotional Attributes: The research findings showed that the average mean score of Emotional Attributes was important, accounting for 4.02. This clearly indicated that leaders should well control their emotions. They should be

flexible, adaptable, be open to change and be open to new ideas. It was consistent with Gate (2011) who stressed that leaders should adapt to new surroundings and situations and do their best to adjust with them.

Ethical Attributes: The research findings showed that the average mean score of Ethical Attributes was important, accounting for 4.09. It indicated that leaders should have high degree of ethic and morality. Economy (2014) contended that good leaders must be ethical, reliable, and integrity.

Intellectual Attributes: The research findings showed that the average mean score of Intellectual Attributes was important, accounting for 4.24. It indicated that effective leaders should possess intellectual capacity, the ability to lead their institutions. Barnard (1996) stressed that leaders should be intelligent, be able to be updated with news, events, and information related to business. Leaders should be smart, tactful, and considerate. Gheselli (1971) contended that leaders should have sound judgment, good reasoning and thinking capacity.

Behavior Attributes: The research findings showed that the average mean score of Behavior Attributes was important, accounting for 4.16. It clearly demonstrated that leaders should behave properly in all situations. Leaders are honest, trustful, and fair to everyone. It was consistent with Harrel (2003) who described effective leadership as a by-product of having and demonstrating the right attitude and behavior. The timeless characteristics of honesty, integrity, and accountability are what inspire people to trust and follow their leaders.

3. The third main element, Professional Traits, consisted of 5 sub-elements including Interpersonal Attributes, Competency Attributes, and Achievement-Oriented Attributes, Management and Leadership Attributes, and Soft-Skill Attributes.

Interpersonal Attributes: The research findings showed that the average mean score of Interpersonal Attributes was important, accounting for 4.02. It clearly indicated that leaders should have interpersonal and social skills because leaders need to work with others and with their subordinates. Navikan (2001) stated that one of the important characteristics of good leaders is social characteristic. He contended that leaders should be enthusiastic, approachable, interrelated, team spirit, human relation, and unity.

Competency Attributes: The research findings showed that the average mean score of Competency Attributes was important, accounting for 4.27. It demonstrated that leaders should be capable with their work. Leaders should have broad vision and share it with their followers. Kouzes & Posner (2002) and Trewatha

& Newport (1982) concluded that leaders should be competent and intelligent with their work they are doing.

Achievement-Oriented Attributes: The research findings showed that the average mean score of Achievement-Oriented Attributes was important, accounting for 4.29. This clearly pointed out that leaders should focus on achievement. It was consistent with Navika (2001) and Bass (1990a) who contended that good leaders are task-oriented, goal-oriented, and achievement-oriented.

Management and Leadership Attributes: The research findings showed that the average mean score of Management and Leadership Attributes was important, accounting for 4.23. It also indicated that effective leaders should possess management and leadership skills. Leaders emphasizes on strategic planning, managing human resource effectively, organizing and managing tasks productively. Tepsarng (1999) and Sergiovanni (1982) stressed that leaders are strategic planners. Leaders should plan their work activities (short or long term) to be consistent with the objectives and time frame.

Soft-Skill Attributes: The research findings showed that the average mean score of Soft-skill Attributes was important, accounting for 4.27. This could be concluded that leaders should possess a wide range of soft skills such as communication skill, problem-solving skill and so on. It was consistent with Adam & Bornstein (2016) and Sothimon (2007) who contended that good leaders should possess communication skills, decision-making skills, analytical skills, critical thinking skills, and problem-solving skills.

5.2.3 The confirmation of the Leadership Trait Model of University Senior Administrators in Cambodia

The results of the confirmation of the Leadership Trait Model of University Senior Administrators in Cambodia were discussed as followed:

The results showed that the factor loading of all 12 sub-elements was positive, which was between 0.31 to 0.54, and there was statistically significant difference at 0.01 level. From the highest to the lowest, the factor loading of Development Attributes (PNT3) was 0.54; the factor loadings of Behavior Attributes (PLT4) was 0.44; the factor loading of Social Background (PNT2) was 0.43; the factor loadings of Intellectual Attributes (PLT3) was 0.42; the factor loading of Ethical Attributes (PLT2) was 0.38; the factor loading of Soft-Skill Attributes (PFT5) was 0.37; the factor loading of Achievement-Oriented Attributes (PFT3) was 0.36; the factor loading of Emotional Attributes (PLT1), Competency Attributes (PFT2), and Management and Leadership Attributes (PFT4) was equal accounting for 0.35; and the factor loading of

Interpersonal Attributes (PFT1) and Physical Attributes (PNT1) was equal accounting for 0.31.

For the main elements, the results indicated that the factor loading had positive value, which was between 0.59 to 0.89, and there was statistically significant difference at 0.01. From the highest to the lowest, the factor loading of the main elements called Professional Traits (PFT) was 0.89. It was followed by another main element called Personality Traits (PLT) which had the factor loading of 0.88. The last main element, Personal Traits, had the factor loading of 0.59.

Based on the results of the study, the Confirmatory Factor Analysis of the leadership trait model of university senior administrators in Cambodia clearly indicated that the developed leadership trait model was well congruent with the empirical data. Statistical values were high comparing to the principles. Regarding the statistical value of Chi-Square χ^2 , it was 44.33, no significant difference was found, whereas the value of df was 32. Based on the criterion of χ^2/df , its value was approximately 1.39, which was lower than 2. Moreover, it was found that the Goodness of Fit Index value (GFI) was 0.98, the Adjusted Goodness of Fit Index value (AGFI) was 0.96, and the Root Mean Square Error of Approximation (RMSEA) was 0.031, which was lower than .05. According the principle of congruence, it was found that the research model was well congruent with the empirical data. This research results also demonstrated that the developed leadership trait model of university senior administrators in Cambodia was appropriately consistent with the real situations and the real practices of educational administrators since this model was carefully developed based on the concise concepts, theories, as well as the quality data for development guidelines. The concepts, theories and the trusted data helped define concise performance and the actions that are consistent with research objectives for making uses of indicators including attributes, category, and measurement. The conceptual framework could assist in defining variables and developing the model or showing the relationship among variables so as it could make model reliable. Another reason was that the sample size of the study used to test the consistence of the leadership trait model of university senior administrators in Cambodia was appropriately and adequately selected. The sample size was also suitable and reliable for the research study since the respondents participating in providing data were those who worked in higher education institutions. It could be said that the selected sample size was good representativeness for the study.

The researcher would additionally like to stress that the results of testing for the consistence of the leadership trait model of university senior

administrators in Cambodia showed that the model was well consistent with the empirical data. The results also showed that the leadership trait model of university senior administrators in Cambodia that the researcher had developed should be trusted, reliable and exact. It also directly responded to the subject matter, good representativeness, consistent with the measurement and the indicators of leadership traits of university senior administrators. The model was objective and had minor errors; it was the model that was impartial without any bias or incline to any part. More importantly, the model was sensitive, be able to build variance for the data. It also had senses of practicality, availability, and interpretability. The characteristics of the developed leadership trait model for university senior administrators in Cambodia that were mentioned above could be concluded that they helped the researcher get appropriate indicators for leadership traits of educational administrators.

Furthermore, considering the main elements in the leadership trait model for university senior administrators in Cambodia which indicated that the factor loading of 3 main elements had positive value, which was between 0.59 to 0.89, and there was statistically significant difference at .01. The main elements called Professional Traits (PFT) had the highest factor loading score accounting for 0.89. This indicated that the main element, Professional Traits, was very important that university administrators in Cambodia should possess or develop. Other than professionalism as an important ingredient to administrators, they must be responsible since what administrators do can affect other performance in the organization. Administrators must pay attention to what they are doing so that they can gain trusts from their subordinates or stakeholders. Administrators should be professional in their work, intentionally expand their profession through long period of training and development, and independently use their profession appropriately. Another main element called Personality Traits (PLT) had the second highest factor loading score of 0.88. This pointed out that university administrators should possess or develop certain personality traits that can help them manage and lead their institutions effectively. University administrators are leaders who can built trusts within their institutions, be flexible and adaptable with changes in education context. They are responsible for making quality of education possible, smart in managing and allocating resources. The last main element, Personal Traits, had the factor loading of 0.59. Although its score was not very high, it also demonstrated that personal traits are important to university senior administrators. University administrators should have physical qualities, interesting social backgrounds, and be learned persons.

5.3 Recommendation

In order to make use of the results of the study entitled “The Development of Leadership Trait Model for University Senior Administrators in Cambodia”, the researcher would like to provide some recommendations that can be useful for university administrators and stakeholders and the recommendations for future researchers who are willing to conduct more research related to the leadership traits of administrators as follows:

1. Recommendations for making use of this research results

1.1 University policy makers in Cambodia should use the findings from this study as inputs for setting development plans for building their human resource capacity in their institutions.

1.2 University administrators in all levels should use these research findings as guidelines for developing their own leadership qualities that can help them become effective administrators. Gradually developing leadership traits are very important to every administrator for the sake of performing tasks and taking responsibilities in order to achieve institutional goals and objectives.

1.3 The Ministry of Education Youth and Sport should use these research results as guidelines for promoting and enhancing administrative performance. The Ministry should use the model as guidelines for setting goals and policy for educational institutions ranging from general education to higher education for administration improvement. The Ministry should put the research results into educational administration training programs or workshops that can help educational administrators instill their own leadership qualities.

1.4 Leadership trainers should use these research findings for their training programs for developing human resources in all sectors ranging from business to education.

2. Recommendations for future researchers

2.1 Future researchers should study in deep about the variables that have relationship to or effects on leadership trait model for university senior administrators in Cambodia.

2.2 Future researchers should study in details about casual model relationship between factors or variables that can affect the leadership trait model for university senior administrators in Cambodia.

2.3 Future researchers should make use of these research findings for further expanding other research areas in education.



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APPENDIXS

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APPENDIX A

1. LISTS OF FOCUS PARTICIPANTS
2. INTERVIEWEES
3. EXPERTS

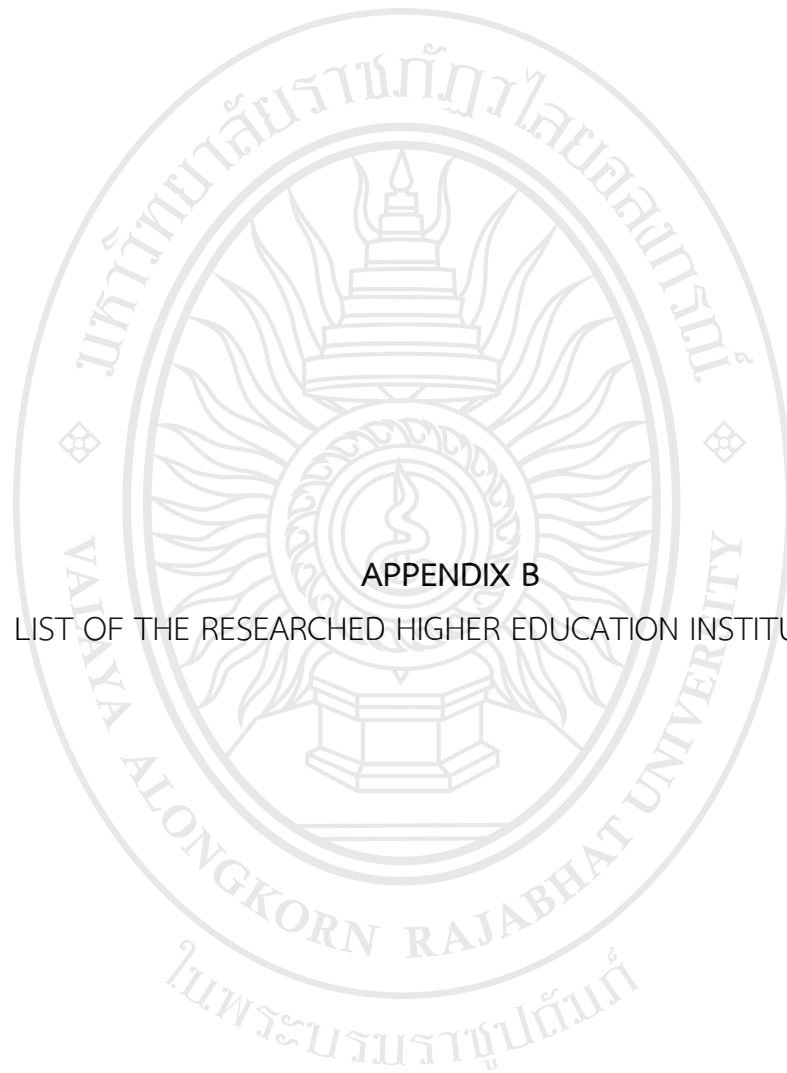
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Names of Experts Who Were Invited to Attend the Focus Group Discussions

1. Dr.Nith Bunlai Deputy Director General, Directorate General of Higher Education, Phnom Penh
2. Kong Phumika Director of Department of Higher Education, Phnom Penh
3. H.E Dr.Tun Pheakdey President of University of Management and Economics
4. H.E Sieng Emtotim Rector of University of Battambang
5. Saing Sen Vice-President of International University
6. Rhong Saran Branch Director of Vanda Institute, Battambang
7. Sok Hing Director of Regional Teacher Training Center, Battambang
8. Ouk Davandy Director of Battambang Institute of Technology
9. Chhay Sophea Director of Regional Polytechnic Institute TechoSen, Battambang
10. Yi Songky Deputy Director of Department of Education, Youth and Sport, Battambang
11. Sin Sothy Lecturer of University of Management and Economics
12. Pon Jedtha Governance Director of Cambodian Children's Trust, a Non-Government Organization
13. Pov Sanith Director of Department of Labor and Vocational Training, Battambang
14. Chhean Ratannak Deputy Director of USA International School
15. Pel Saroeurt Lecturer of University of Management and Economics
16. Dy Robear Dean of Faculty of Arts, Humanity, and Foreign Languages, University of Management and Economics
17. Phim Phon Former Director of Provincial Department of Education, Youth, and Sport
18. Leng Channy Lecturer of Regional Polytechnic Institute TechoSen, Battambang

**Names of 10 Experts Who Were Interviewed for Additional Data Related to
Leadership Traits of Administrators**

- | | |
|--------------------|---|
| 1. Ngy Set | Director of Provincial Department of Education,
Youth and Sport, Battambang |
| 2. Sam Ranny | Vice-President of University of Battambang |
| 3. Tun Narith | Vice-President of University of Management and
Economics |
| 4. Khem Reaksmeay | President of Dewey International University |
| 5. Yuth Jeitana | Director of Vocational Training Development
Institute |
| 6. Nov Nhin | Director of National Vocational Institute of
Battambang |
| 7. Chhim Bunly | Deputy Director, COERR Language Skill Center |
| 8. Chea Heang | Director General of USA International School |
| 9. Mao Narith | Human Resource Manager of Cambodian
Children's Trust, a Non-Government
Organization |
| 10. Puth Chamroeun | Lecturer of University of Management and
Economics, Battambang |



APPENDIX B

LIST OF THE RESEARCHED HIGHER EDUCATION INSTITUTIONS

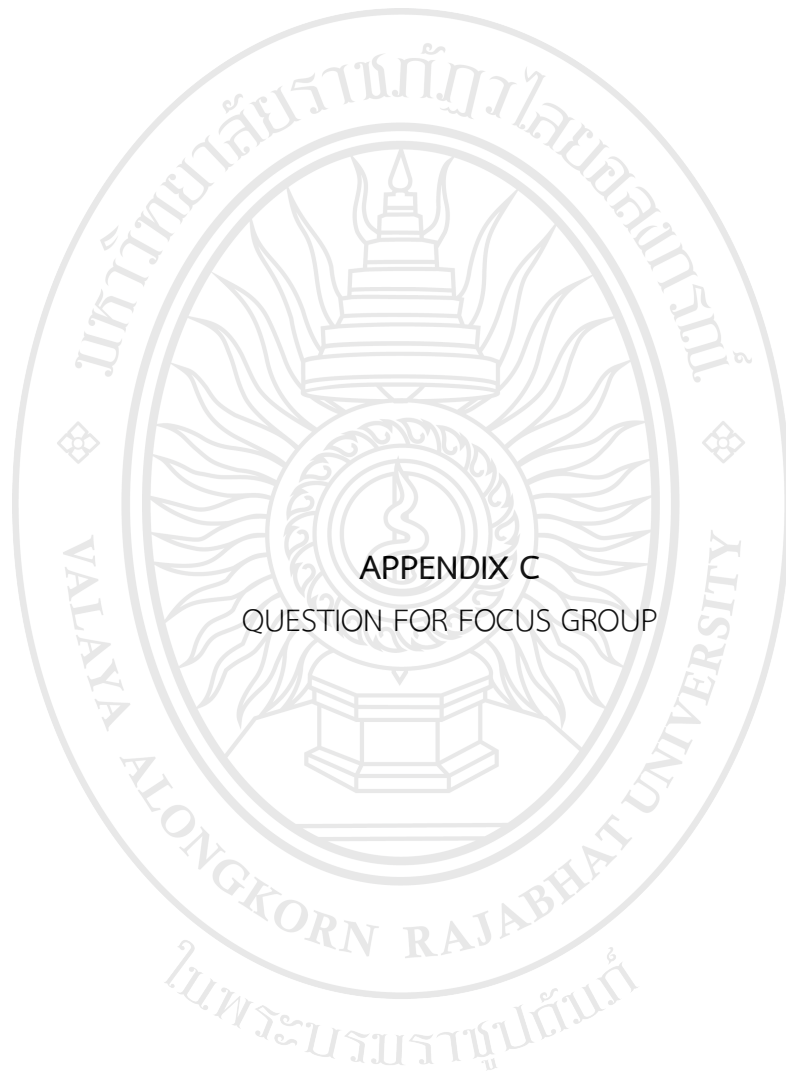
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Names of 5 Experts Who Were Invited to Test the Research Instrument

1. Assistant Professor Dr.Chanchai Wongsirasawat Lecturer of Valaya Alongkorn Rajabhat University under the Royal Patronage
2. Assistant Professor Dr.Orasa Charoontham Lecturer of ValayaAlongkornRajabhat University under the Royal Patronage
3. H.E Dr.Buth Kimsean Deputy Governor of Battambangprovince
4. H.E Dr.Tep Khunnal Chairman of Board of Director, University of Management and Economics
5. Dr.Sam Ranny Vice-President of University of Battambang



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APPENDIX C
QUESTION FOR FOCUS GROUP

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Questions for Focus Group Discussion 1
Dissertation Topic
The Development of Leadership Trait Model for University senior
Administrators in Cambodia

Main purpose: To develop the leadership trait model for university senior administrators in Cambodia.

Sub-purposes: The purposes of the first focus group are 1) to ask participants to provide suggestions, recommendations, or corrective feedbacks about the leadership traits of administrators, 2) to ask participants to provide suggestions, recommendations, or corrective feedbacks about the trait combination; and 3) to ask participants for suggestions, recommendation about the combinations of main traits to sub-elements, and the combinations of sub-elements to main elements.

1. As experienced persons in education sector, what leadership traits do you think educational administrators should possess and develop? Please provide and share as many as you can think of.

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2. As experienced persons in education sector, do you agree with all the leadership traits that were presented to you? Why?

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3. As experienced persons in education sector, do you think that possessing positive leadership traits are important to senior administrators in higher education? Explain.

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4. In your opinion as experienced persons in education sector, how can administrators in education develop their leadership traits?

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5. As presented to you about the combinations of individual traits into main traits, do you have any suggestions or feedbacks about the trait combinations?

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6. As presented to you about the combinations of main traits into sub-elements, do you have any suggestions or feedbacks about the combinations?

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7. As presented to you about the combinations of sub-elements into main elements, do you have any suggestions or feedbacks about the combinations?

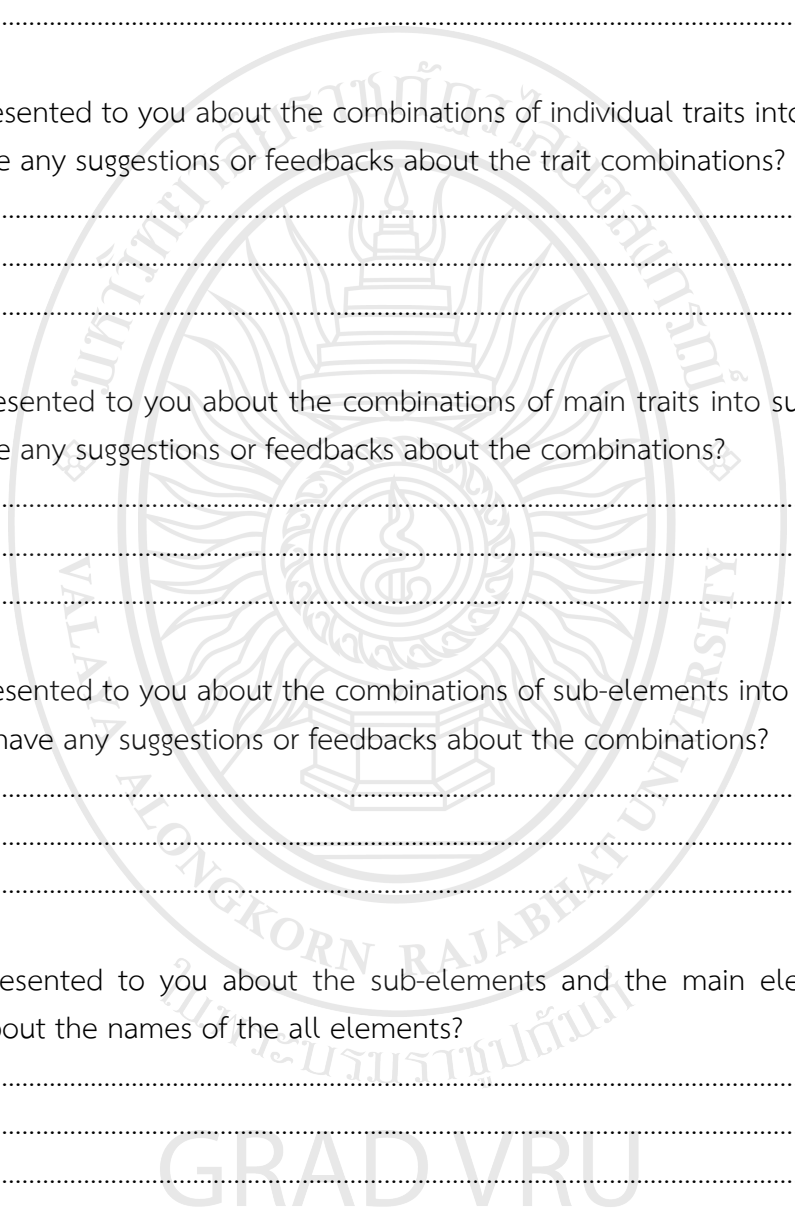
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8. As presented to you about the sub-elements and the main elements, do you agree about the names of the all elements?

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9. Do you have any more constructive comments or suggestions about the drafted leadership trait model for university senior administrators in Cambodia?

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10. Do you have any more comments or suggestions?

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Questions for Focus Group Discussion 2

Dissertation Topic

The Development of Leadership Trait Model for University senior Administrators in Cambodia

Main purpose: To develop the leadership trait model for university senior administrators in Cambodia.

Sub-purposes: The purposes of the second focus group are 1) to ask participants to provide suggestions, recommendations, or corrective feedbacks about the combinations of sub-elements into main elements; 2) to ask participants to provide suggestions, recommendations, or corrective feedbacks about the drafted model; and 3) to ask participants to help develop an acceptable model for university senior administrators in Cambodia.

1. How do you think about the combinations of sub-elements into main elements?

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.....

2. Do you agree with the model that has been drafted? Why?

.....

.....

.....

3. Please give me constructive ideas or corrective feedback to the model that has been drafted??

.....

.....

.....

4. In your opinions as experienced persons in educational sector, please provide me ideas, suggestions or feedbacks about the development of leadership trait model for university senior administrators?

.....
.....
.....

5. Do you have any more constructive comments or suggestions?

.....
.....
.....



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APPENDIX D
LEADERSHIP QUESTIONNAIRE

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Questionnaire
Dissertation Topic
The Development of Leadership Trait Model for University senior
Administrators in Cambodia

Part 1: Personal information of respondents. ព័ត៌មានផ្ទាល់ខ្លួន

Instruction: Please put a tick (✓) in brackets next to the word or phrase that describes you. សូមគូសសញ្ញា (✓) នៅក្នុងរង្វង់ក្រចក បន្ទាប់ពី ពាក្យឬ ឃ្លា ដែលត្រូវនឹងស្ថានភាពរបស់លោក/លោកស្រី។

N ^o	General Information of Respondents			
1	sex:	a. Male (.....)	b. Female (.....)	
2	Age:	a. Lower than 25 (.....)	b. 25 - 35 years (.....)	
		c. 36 - 45 years (.....)	d. 46 years- up (.....)	
3	Education:	a. Lower than bachelor (.....)	b. Bachelor (.....)	
		c. Master (.....)	d. Doctor/PhD (.....)	
4	Current Position	a. President (.....)	b. Vice-president (.....)	
		c. Dean (.....)	d. Vice-dean (.....)	
		e. Department head (.....)	f. Office head (.....)	
		g. Administration Staff (.....)	h. Lecturer (.....)	
		i. Others (.....)		
5	Work Experience	a. Lower than 5 years (.....)	b. 5 - 10 years (.....)	
		c. 11 - 15 years (.....)	d. 16 years up (.....)	
6	Institutional Status	a. Public (.....)	b. Private (.....)	

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Questionnaire
Dissertation Topic
The Development of Leadership Trait Model for University senior
Administrators in Cambodia

Part 2: Leadership Trait Questionnaire

Leadership Traits: Integrated patterns of personal characteristics that reflect a range of individual differences a leader has that make him or her have great influence on subordinates or organization. Leadership Traits គឺជាបណ្តុំនៃលក្ខណៈសម្បត្តិផ្ទាល់ខ្លួន ដែលបង្ហាញអំពីកម្រិតនៃភាពខុសគ្នា ដែលអ្នកដឹកនាំម្នាក់មាន និងដែលអាចធ្វើឱ្យអ្នក ដឹកនាំនោះ មានឥទ្ធិពលលើអ្នកដទៃ នៅក្នុងអង្គការ។

Instruction: Please put a tick (✓) in the box to show to what extent you agree with the statements. សូមគូសសញ្ញា (✓) នៅក្នុងប្រអប់ ដែលបង្ហាញពីកម្រិតនៃការយល់ ស្របរបស់អ្នកទៅនឹង ឬប្រយោគទាំងនោះ។

Scoring

1. Strongly Disagree (SD) មិនយល់ស្របទាល់តែសោះ
2. Disagree (D) មិនយល់ស្រប
3. Uncertainty (U) មិនប្រាកដ
4. Agree (A) យល់ស្រប
5. Strongly Agree (SA) យល់ស្របទាំងស្រុង

N°	Leadership Traits of Administrators	Degree of Agreement				
		SD	D	U	A	SA
		1	2	3	4	5
Sub-Element 1: Physical Attributes						
1	Leaders have appropriate height and weight.					
2	Leaders have positive self-image.					
3	Leaders are physically mature.					
4	Leaders are spiritually mature.					
5	Leaders always dress up properly in every situation.					
6	Leaders always maintain good appearance.					
7	Leaders are very active in doing things.					
8	Leaders show a sense of urgency in doing things.					

N°	Leadership Traits of Administrators	Degree of Agreement				
		<u>SD</u> <u>1</u>	<u>D</u> <u>2</u>	<u>U</u> <u>3</u>	<u>A</u> <u>4</u>	<u>SA</u> <u>5</u>
9	Leaders have high energy and are very energetic.					
10	Leaders are physically strong.					
11	Leaders are physically healthy and fit.					
Sub-Element 2: Social Background						
1	Leaders hold high educational background.					
2	Leaders have high social status in society.					
3	Leaders have strong influence on others.					
4	Leaders have authoritative power.					
5	Leaders have high economic status in society.					
6	Leaders are liked and loved.					
7	Leaders look attractive and interesting.					
8	Leaders popularize in the eyes of public.					
9	Leaders are highly charismatic.					
Sub-Element 3: Development Attributes						
1	Leaders are interested in feedbacks.					
2	Leaders are eager to learn new things.					
3	Leaders never stop chasing something new; they are curious and inquisitive about new knowledge.					
4	Leaders never stop learning; they are true life-long learners.					
5	Leaders learn from mistakes and experiences.					
6	Leaders continuously and gradually develop themselves.					
7	Leaders support opinions of others; they always agree and accept constructive feedbacks.					
8	Leaders are receptive to others' ideas and inputs.					
9	Leaders are open-minded to new ideas.					

N°	Leadership Traits of Administrators	Degree of Agreement				
		<u>SD</u> 1	<u>D</u> 2	<u>U</u> 3	<u>A</u> 4	<u>SA</u> 5
Sub-Element 4: Emotional Attributes						
1	Leaders are able to put up with stress.					
2	Leaders are able to well balance their emotions in all situations.					
3	Leaders are able to control themselves when facing undesired situations or getting unsatisfying results.					
4	Leaders can fit themselves in all situations.					
5	Leaders are always calm and have stable feelings.					
6	Leaders can adapt and adjust themselves to the changing environments.					
7	Leaders are flexible to the situations they are in.					
8	Leaders never refuse to change when necessary.					
9	Leaders have high expectation, and always think positively.					
10	Leaders are optimistic about the future; they always feel positive about what they are doing.					
Sub-Element 5: Ethical Attributes						
1	Leaders show high sensitivity to others and understand what other people are feeling.					
2	Leaders take great care of their subordinates.					
3	Leaders never take their subordinates' needs and feelings for granted.					
4	Leaders behave positively, and have strong value.					
5	Gentle manner is one of the best qualities of good leaders.					
6	Leaders respect their subordinates and others; they treat everyone with respect.					
7	Integrity is one of the best qualities of great leaders.					
8	Leaders do something and behave based on the principles of ethics and morality.					

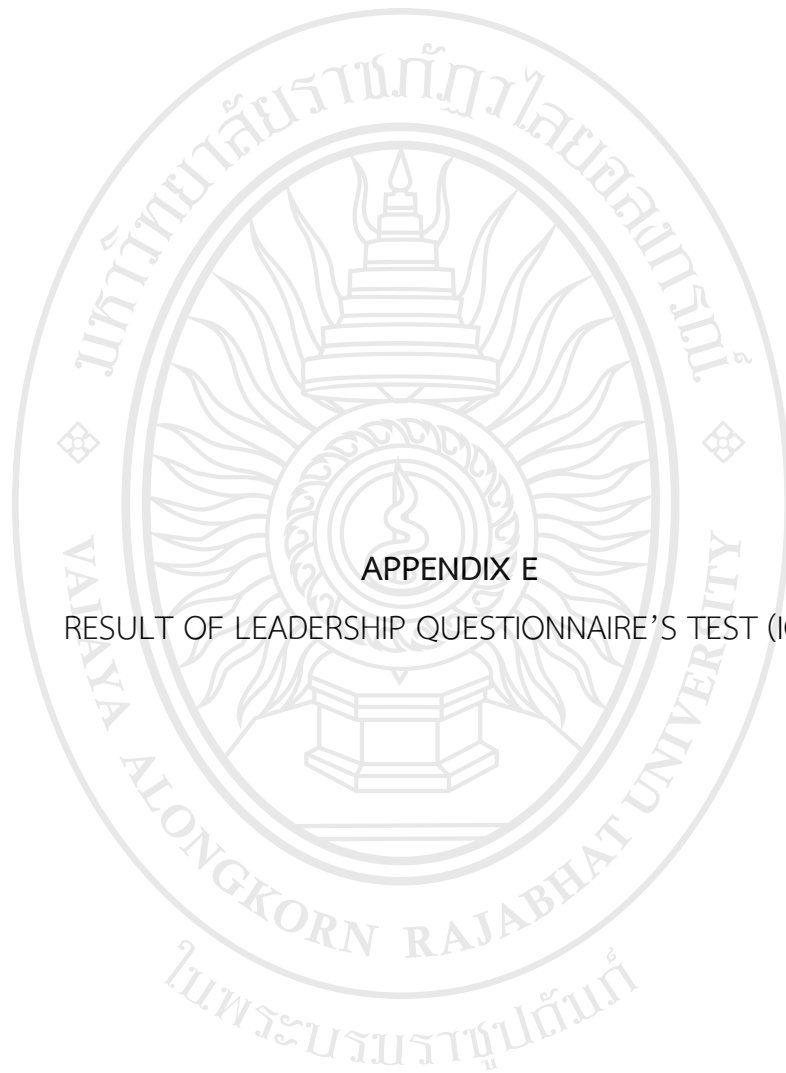
N°	Leadership Traits of Administrators	Degree of Agreement				
		<u>SD</u> 1	<u>D</u> 2	<u>U</u> 3	<u>A</u> 4	<u>SA</u> 5
9	Leaders like sharing with others what they know and have; they are generous.					
10	Being humble is one of the most important characteristics of good leaders.					
11	Leaders are passionate and have strong passion with people they work with.					
12	Leaders are compassionate and sympathetic with their followers.					
13	Leaders are highly disciplined people.					
Sub-Element 6: Intellectual Attributes						
1	Leaders are tactful about leading and managing their organizations.					
2	Leaders have good memory and are mentally strong.					
3	Leaders are smart in leading and managing their organization.					
4	Leaders have high IQ and very intelligent.					
5	Leaders are always proactive and alerted.					
6	Leaders work and lead their organizations carefully.					
7	Leaders are considerate; they judge the situations reasonably.					
8	Leaders have high and strong perceptiveness.					
9	Leaders have broad insight about work and situations.					
10	Leaders keep everything informed.					
11	Leaders are aware of information and situations related to their work and their organizations.					
12	Leaders are highly imaginative, creative and innovative persons.					

N°	Leadership Traits of Administrators	Degree of Agreement				
		<u>SD</u> <u>1</u>	<u>D</u> <u>2</u>	<u>U</u> <u>3</u>	<u>A</u> <u>4</u>	<u>SA</u> <u>5</u>
Sub-Element 7: Behavioral Attributes						
1	Leaders always do what they say and promise.					
2	Leaders generate loyalty and do something straightfully.					
3	Transparency is one of the qualities of good leaders.					
4	Leaders build trust through open and collaborative relationship with their followers and stakeholders.					
5	Leaders promote fairness in their organizations.					
6	Leaders dare to face all situations courageously.					
7	Leaders look for opportunities and take risks for grappling them.					
8	Leaders have high ambitions and are eager to compete aggressively.					
9	Leaders feel proud of themselves.					
10	Leaders believe in themselves; they are confident.					
11	Leaders have senses of humor. They make their followers happy with hope.					
12	Leaders perform their tasks practically based on real situations.					
13	Leaders are responsible for what they have done and admit their mistakes.					
14	Leaders are dependable.					
Sub-Element 8: Interpersonal Attributes						
1	Leaders possess strong interpersonal skills.					
2	Leaders get along well with others.					
3	Leaders are happy to talk to others.					
4	Leaders can be approached easily.					
5	Leaders like attending social events; they like socializing with people.					

N°	Leadership Traits of Administrators	Degree of Agreement				
		<u>SD</u> <u>1</u>	<u>D</u> <u>2</u>	<u>U</u> <u>3</u>	<u>A</u> <u>4</u>	<u>SA</u> <u>5</u>
6	Leaders promote team spirit in their workplaces.					
7	Leaders talk to others in diplomatic manners.					
8	Leaders smile and talk to people in friendly ways.					
Sub-Element 9: Competency Attributes						
1	Leaders look forward to future and prepare for it.					
2	Leaders have broad vision; they are visionary persons.					
3	Leaders share vision with their followers.					
4	Leaders have expertise of their work.					
5	Leaders possess necessary skills and abilities and are capable of the work they manage and lead.					
6	Leaders have broad knowledge and experiences related to their work.					
7	Leaders are advisors and provide consultancy to their subordinates.					
8	Leaders get ready for their everyday tasks and prioritize work productively.					
9	Leaders are always well-prepared and well-organized.					
10	Leaders know how to delegate tasks to their subordinates and encourage them to work independently.					
11	Leaders set an example and act as role-models for their subordinates.					
Sub-Element 10: Achievement-Oriented Attributes						
1	Leaders dedicate and devote their time on organizations.					
2	Leaders have strong willingness and high commitment.					
3	Leaders have strong determination about their job.					

N°	Leadership Traits of Administrators	Degree of Agreement				
		<u>SD</u> 1	<u>D</u> 2	<u>U</u> 3	<u>A</u> 4	<u>SA</u> 5
4	Leaders promote participations and involvement within the organization.					
5	Leaders foster teamwork in their workplaces.					
6	Leaders show high levels of support and concern for their subordinates.					
7	Leaders encourage and persuade their followers to work to achieve the set goals.					
8	Leaders inspire others in their organizations to do their best.					
9	Leaders know how to motivate their followers.					
10	Leaders work hard and strive to achieve goals.					
11	Leaders try their best and persist to work motivationally.					
12	Leaders highly focus on their work and tasks.					
13	Leaders work very hard to achieve their set goals.					
14	Leaders stay focused on achievement; they are achievement-oriented.					
15	Leaders focus on effectiveness and productivity of their work.					
16	Leaders are focused and have high concentration on what they do.					
Sub-Element 11: Management and Leadership Attributes						
1	Leaders manage time effectively.					
2	Leaders strongly emphasize on careful planning and plan their work strategically with clear time line.					
3	Leaders effectively manage human resource in their organization.					
4	Leaders supervise their people in their organization in disciplinary ways.					
5	Leaders provide guidance to their subordinates in productive ways.					
6	Leaders organize and manage tasks productively.					

N°	Leadership Traits of Administrators	Degree of Agreement				
		<u>SD</u> <u>1</u>	<u>D</u> <u>2</u>	<u>U</u> <u>3</u>	<u>A</u> <u>4</u>	<u>SA</u> <u>5</u>
7	Managerial skills are important to leaders.					
8	Leaders use power properly.					
9	Leaders have strong desires to lead.					
10	Ownership is one of the best qualities of good leaders.					
11	Leaders possess leadership qualities.					
Sub-Element 12: Soft-Skill Attributes						
1	Leaders are good at speaking and listening; They talk and listen to people intentionally.					
2	Leaders are fluent of speech; they are well-prepared before speaking or making speeches.					
3	Leaders are good at communications.					
4	Leaders are good at making sound decisions based on facts and situations.					
5	Leaders study causes of the problems through logical analysis and careful thinking.					
6	Leaders know how to solve problems effectively; they approach problems with facts and logic.					
7	Leaders analyze and evaluate work or situations logically.					
8	Analytical skills are important to leaders.					
9	Leaders think clearly and logically.					
10	Leaders possess cognitive ability.					
11	Leaders think critically.					



APPENDIX E

RESULT OF LEADERSHIP QUESTIONNAIRE'S TEST (IOC)

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Testing Validity of Questionnaire

Dissertation Topic

The Development of Leadership Trait Model for University senior Administrators in Cambodia

Instruction: Please put a tick (✓) in the box to show what you think about each statement. សូមគូសសញ្ញា(✓) នៅក្នុងប្រអប់ ដែលបង្ហាញអំពីការយល់ឃើញរបស់លោក/លោកស្រី ចំពោះ ឃ្លា ឬប្រយោគនីមួយៗ។

Meanings

- ⇒ +1 means The statements is important and fit (I)
 ⇒ 0 means You are uncertain about the statements (U)
 ⇒ -1 means The statement is not important and unfit(NI)

Example

N°	Leadership Traits of Administrators	Degree of Importance			Recommendations
		I=1	U=0	NI=-1	
1	Leaders have appropriate height and weight.	✓			

This means that the statement 1 is important and fit to the content.

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Result of Testing Validity of Questionnaire
Dissertation Topic
The Development of Leadership Trait Model for University senior
Administrators in Cambodia

N°	Leadership Traits of Administrators	Experts of IOC					Results	
		1	2	3	4	5	Total	IOC
Sub-Element 1: Physical Attributes								
1	Leaders have appropriate height and weight.	0	1	1	1	1	4	0.8
2	Leaders have positive self-image and good built.	0	1	0	1	1	3	0.6
3	Leaders are physically and spiritually mature.	1	1	1	1	1	5	1
4	Leaders always dress up properly in every situation.	1	1	1	0	1	4	0.8
5	Leaders always maintain good appearance.	1	1	1	1	1	5	1
6	Leaders are very active in doing things.	1	1	1	1	1	5	1
7	Leaders show a sense of urgency in doing things.	1	1	1	1	1	5	1
8	Leaders have high energy and are very energetic.	1	1	1	1	0	4	0.8
9	Leaders are physically powerful and strong.	0	1	0	1	1	3	0.6
10	Leaders are physically healthy and fit.	0	1	1	1	1	4	0.8
Sub-Element 2: Social Background								
1	Leaders hold high educational background.	1	1	1	1	1	5	1
2	Leaders have high social status in society.	1	1	1	1	1	5	1
3	Leaders have strong influence on others.	1	1	1	1	1	5	1
4	Leaders have authoritative power.	1	1	1	1	1	5	1
5	Leaders have high economic status in society.	1	1	0	1	1	4	0.8
6	Leaders are liked and loved.	0	1	1	1	1	4	0.8
7	Leaders look attractive and interesting.	0	1	1	1	1	4	0.8
8	Leaders popularize in the eyes of public.	1	1	1	1	1	5	1
9	Leaders are highly charismatic.	1	1	1	1	1	5	1
Sub-Element 3: Development Attributes								
1	Leaders are interested in feedbacks and eager to learn new things.	0	1	0	1	1	3	0.6
2	Leaders never stop chasing something new; They are curious and inquisitive about the knowledge and about the world.	1	1	1	1	1	5	1
3	Leaders never stop learning; They are true life-long learners.	1	1	1	1	1	5	1
4	Leaders learn from mistakes, learn from experiences and from what they have done.	0	1	0	1	1	3	0.6

N°	Leadership Traits of Administrators	Experts of IOC					Results	
		1	2	3	4	5	Total	IOC
5	Leaders continuously and gradually develop themselves.	1	1	1	1	1	5	1
6	Leaders support opinions of others and always agree and accept constructive new ideas and feedbacks.	0	1	0	1	1	3	0.6
7	Leaders listen well and unusually receptive to others' ideas and inputs.	-1	1	0	1	1	2	0.4
Sub-Element 4: Emotional Attributes								
1	Leaders are able to put up with stress, and unwanted situations.	0	1	1	1	1	4	0.8
2	Leaders are able to well balance their emotions in every situation.	1	1	1	1	1	5	1
3	Leaders are able to control themselves when facing undesired situations or getting unsatisfying results.	1	1	1	1	1	5	1
4	Leaders can fit themselves in all situations.	1	1	1	1	1	5	1
5	Leaders are always calm and have stable feelings.	1	1	0	0	1	3	0.6
6	Leaders can adapt and adjust themselves to the changing environments.	1	1	1	1	1	5	1
7	Leaders are flexible to the situations they are in.	1	1	1	1	1	5	1
8	Leaders never refuse to change when necessary.	1	1	1	1	1	5	1
9	Leaders have high expectation, and always think positively.	0	1	0	1	1	3	0.6
10	Leaders are optimistic about the future; they always feel positive about what they are doing.	1	1	1	1	1	5	1
Sub-Element 5: Ethical Attributes								
1	Leaders show high sensitivity to others and understand what other people are feeling.	1	1	1	1	1	5	1
2	Leaders have a great care and concern for their subordinates and for others' needs and feelings.	1	1	0	1	1	4	0.8
3	Leaders behave positively, and have strong value.	1	1	1	1	1	5	1
4	Gentle manner is one of the best qualities of good leaders.	1	1	1	1	1	5	1
5	Leaders respect their subordinates and others; they treat everyone with respect.	1	1	0	1	1	4	0.8
6	Integrity is one of the best qualities of great leaders.	1	1	1	1	1	5	1
7	Leaders do something and behave based on the principles of ethics and morality.	1	1	1	1	1	5	1
8	Leaders like sharing with others what they have and being generous to others.	1	1	1	1	1	5	1

N°	Leadership Traits of Administrators	Experts of IOC					Results	
		1	2	3	4	5	Total	IOC
9	Being humble is one of the most important characteristics of good leaders.	1	1	1	1	1	5	1
10	Leaders are passionate and have strong passion with people they work with.	1	1	0	0	1	3	0.6
11	Leaders are compassionate and sympathetic with their followers.	0	1	1	1	1	4	0.8
12	Leaders are highly disciplined people.	1	1	1	1	1	5	1
Sub-Element 6: Intellectual Attributes								
1	Leaders are tactful about leading and managing their organizations.	0	1	1	1	1	4	0.8
2	Leaders remember things and are mentally strong.	0	1	1	1	1	4	0.8
3	Leaders are clever and smart in leading and managing their organization.	1	1	1	1	1	5	1
4	Leaders have high IQ and very intelligent.	1	1	1	1	1	5	1
5	Leaders are always proactive and alerted.	1	1	1	1	1	5	1
6	Leaders work and lead their organizations carefully.	1	1	1	1	1	5	1
7	Leaders are considerate and judge the situations reasonably.	1	1	0	0	1	3	0.6
8	Leaders have high and strong perceptiveness.	1	1	1	1	1	5	1
9	Leaders have broad insight about work and situations.	1	1	1	1	1	5	1
10	Leaders keep everything informed.	1	1	1	1	1	5	1
11	Leaders are aware of information and situations related to their work and their organizations.	1	1	0	1	1	4	0.8
12	Leaders are highly imaginative, creative and innovative persons.	1	1	1	1	1	5	1
Sub-Element 7: Behavioral Attributes								
1	Leaders always do what they say and promise.	1	1	1	1	1	5	1
2	Leaders generate loyalty and do something straightfully.	1	1	1	0	1	4	0.8
3	Leaders are always open. Transparency is one of the qualities of good leaders.	0	1	0	1	1	3	0.6
4	Leaders build trust through open and collaborative relationship with their followers and stakeholders.	1	1	1	1	1	5	1
5	Leaders treat subordinates fairly and promote fairness in their organizations.	1	1	0	0	1	3	0.6
6	Leaders are fearless and always dare to face all situations courageously.	0	1	0	1	1	3	0.6

N°	Leadership Traits of Administrators	Experts of IOC					Results	
		1	2	3	4	5	Total	IOC
7	Leaders look for opportunities and take risks for grasping them.	1	1	1	1	1	5	1
8	Leaders have high ambitions and are eager to compete aggressively.	1	1	1	1	1	5	1
9	Leaders feel proud of themselves.	1	1	1	1	1	5	1
10	Leaders believe in themselves and feel confident.	1	1	1	1	1	5	1
11	Leaders have senses of humor. They make their followers happy with hope.	1	1	1	1	1	5	1
12	Leaders perform their tasks practically based on real situations.	1	1	1	1	1	5	1
13	Leaders are responsible for what they have done and admit their mistakes.	1	1	1	1	1	5	1
14	Leaders are dependable.	1	1	0	1	1	4	0.8
Sub-Element 8: Interpersonal Attributes								
1	Leaders possess strong interpersonal skills.	0	1	0	1	1	3	0.6
2	Leaders get along well and are happy to talk to others.	1	1	1	1	1	5	1
3	Leaders can be approached easily.	1	1	1	1	1	5	1
4	Leaders like attending social events and socializing with people.	1	1	0	1	1	4	0.8
5	Leaders promote team spirit in their workplaces.	1	1	1	1	1	5	1
6	Leaders talk and communicate with others in diplomatic manners.	1	1	1	1	1	5	1
7	Leaders smile and talk to people in friendly ways.	1	1	1	1	1	5	1
Sub-Element 9: Competency Attributes								
1	Leaders look forward to and prepare for the future.	1	1	1	1	1	5	1
2	Leaders have broad vision and share it with their followers.	1	0	0	1	1	3	0.6
3	Leaders have expertise of their work.	1	1	1	1	1	5	1
4	Leaders possess necessary skills and abilities and are capable of the work they manage and lead.	1	1	1	1	1	5	1
5	Leaders have broad knowledge and experiences related to their work.	1	0	1	1	1	4	0.8
6	Leaders are advisors and provide consultancy to their subordinates.	1	1	1	1	1	5	1
7	Leaders get ready for their everyday tasks and prioritize work productively.	1	1	1	1	1	5	1

N°	Leadership Traits of Administrators	Experts of IOC					Results	
		1	2	3	4	5	Total	IOC
8	Leaders are always well-prepared and well-organized.	1	1	1	1	1	5	1
9	Leaders know how to delegate tasks to their subordinates and encourage them to work independently.	1	1	1	1	1	5	1
10	Leaders set an example and act as role-models for their subordinates.	1	1	0	1	0	3	0.6
Sub-Element 10: Achievement-Oriented Attributes								
1	Leaders dedicate and devote their time on organizations.	1	1	1	1	1	5	1
2	Leaders have strong willingness and high commitment.	1	1	1	1	1	5	1
3	Leaders have strong determination about their job.	1	1	1	1	1	5	1
4	Leaders promote participation within the organization.	1	1	1	1	1	5	1
5	Leaders foster high levels of participation and involvement as well as promote teamwork in their workplaces.	1	1	0	1	1	4	0.8
6	Leaders show high levels of support and concern for their subordinates.	1	1	1	1	1	5	1
7	Leaders encourage and persuade their followers to work to achieve the set goals.	1	1	1	1	1	5	1
8	Leaders inspire others in their organizations to do their best.	1	1	1	1	1	5	1
9	Leaders know how to motivate their followers.	1	1	1	1	1	5	1
10	Leaders work hard and strive to achieve goals.	1	1	1	1	1	5	1
11	Leaders try their best and persist to work motivationally.	1	1	1	1	1	5	1
12	Leaders highly focus on their work and tasks.	1	1	1	1	1	5	1
13	Leaders work very hard to achieve their set goals.	1	1	1	1	1	5	1
14	Leaders stay focused on achievement. They are achievement-oriented.	1	1	1	1	1	5	1
15	Leaders focus on effectiveness and productivity of their work.	1	1	1	1	1	5	1
16	Leaders are focused and have high concentration on what they do.	1	1	1	1	1	5	1

N°	Leadership Traits of Administrators	Experts of IOC					Results	
		1	2	3	4	5	Total	IOC
Sub-Element 11: Management and Leadership Attributes								
1	Leaders focus on time and manage time effectively.	0	1	0	1	0	2	0.4
2	Leaders strongly emphasize on careful planning and plan their work strategically with clear time line.	1	1	1	1	1	5	1
3	Leaders know how to manage and supervise people in their organization.	0	1	1	1	0	3	0.6
4	Leaders provide guidance and directions to their subordinates in productive way.	0	1	1	1	1	4	0.8
5	Leaders organize and manage tasks productively.	1	1	1	1	1	5	1
6	Managerial skills are important to leaders.	1	1	1	1	1	5	1
7	Leaders know how to use power properly.	1	1	1	1	1	5	1
8	Leaders have strong desires to lead.	1	1	1	1	1	5	1
9	Ownership is one of the best qualities of good leaders.	1	1	0	1	1	4	0.8
10	Leaders possess leadership quality.	1	1	1	1	1	5	1
Sub-Element 12: Soft-Skill Attributes								
1	Leaders are good at speaking and listening; They talk and listen to people intentionally.	0	1	0	0	1	2	0.4
2	Leaders are fluent of speech; they are well-prepared before speaking or making speeches.	1	1	1	1	1	5	1
3	Leaders are good at communications.	-1	1	1	1	1	3	0.6
4	Leaders are good at making sound decisions based on facts and situations.	1	1	1	1	1	5	1
5	Leaders study causes of the problems through logical analysis and careful thinking.	1	1	1	1	1	5	1
6	Leaders know how to solve problems effectively; they approach problems with facts and logic.	1	1	1	1	1	5	1
7	Leaders evaluate and analyze work or situations logically.	1	1	1	1	1	5	1
8	Analytical skills are important to leaders.	1	1	1	1	1	5	1
9	Leaders think clearly and logically.	1	1	1	1	1	5	1
10	Leaders possess cognitive ability.	1	1	1	1	1	5	1
11	Leaders think critically.	1	1	1	1	1	5	1



APPENDIX F
LISREL RESULT PRINTOUTS

GRAD VRU

DATE: 7/28/2018

TIME: 22:48

L I S R E L 8.72

BY

Karl G. Jöreskog & Dag Sörbom

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The following lines were read from file C:\Users\Batman\Desktop\LAY2\path.LPJ:

TI CFA2

IDA NI=12 NO=400 MA=CM

SY='C:\Users\Batman\Desktop\LAY2\new.dsf' NG=1

MO NY=12 NK=1 NE=3 BE=FU GA=FI PS=SY TE=SY

LE

PNT PLT PFT

LK

LT

FR LY(2,1) LY(3,1) LY(5,2) LY(6,2) LY(7,2) LY(8,3) LY(9,3) LY(10,3) LY(11,3)

FR LY(12,3) GA(1,1) GA(2,1) GA(3,1) TE(2,1) TE(4,3) TE(5,4) TE(6,1) TE(6,3)

FR TE(6,4) TE(7,3) TE(8,1) TE(8,2) TE(9,1) TE(10,1) TE(10,2) TE(10,3) TE(10,7)

FR TE(11,1) TE(11,2) TE(11,3) TE(11,5) TE(11,8)

VA 0.31 LY(1,1)

VA 0.35 LY(4,2)

PD

OU AM RS EF FS SS SC LY=path.lys BE=path.bes GA=path.gas PH=path.phs

PS=path.pss C

TE=path.tes

TI CFA2

Number of Input Variables 12

Number of Y - Variables 12

Number of X - Variables 0

Number of ETA - Variables 3

Number of KSI - Variables 1

Number of Observations 400

TI CFA2

Covariance Matrix

	PNT1	PNT2	PNT3	PLT1	PLT2	PLT3
PNT1	0.17					
PNT2	0.14	0.30				
PNT3	0.04	0.06	0.18			
PLT1	0.05	0.07	0.11	0.16		
PLT2	0.06	0.08	0.11	0.11	0.16	
PLT3	0.06	0.09	0.10	0.09	0.11	0.16
PLT4	0.08	0.10	0.09	0.11	0.12	0.13
PFT1	0.05	0.02	0.10	0.09	0.10	0.10
PFT2	0.05	0.08	0.10	0.10	0.11	0.12
PFT3	0.04	0.07	0.11	0.10	0.11	0.12
PFT4	0.06	0.09	0.09	0.10	0.11	0.12
PTF5	0.06	0.08	0.11	0.10	0.11	0.12

Covariance Matrix

	PLT4	PFT1	PFT2	PFT3	PFT4	PTF5
PLT4	0.17					
PFT1	0.11	0.21				
PFT2	0.12	0.10	0.15			
PFT3	0.11	0.11	0.13	0.16		
PFT4	0.12	0.09	0.12	0.13	0.17	
PTF5	0.13	0.11	0.13	0.13	0.13	0.18

TI CFA2

Parameter Specifications

LAMBDA-Y	PNT	PLT	PFT
PNT1	0	0	0
PNT2	1	0	0
PNT3	2	0	0
PLT1	0	0	0
PLT2	0	3	0
PLT3	0	4	0
PLT4	0	5	0
PFT1	0	0	0
PFT2	0	0	6
PFT3	0	0	7
PFT4	0	0	8
PTF5	0	0	9

GAMMA

LT

PNT 10
 PLT 11
 PFT 12

PSI

	PNT	PLT	PFT			
	13	14	15			
THETA-EPS						
	PNT1	PNT2	PNT3	PLT1	PLT2	PLT3
PNT1	16					
PNT2	17	18				
PNT3	0	0	19			
PLT1	0	0	20	21		
PLT2	0	0	0	22	23	
PLT3	24	0	25	26	0	27
PLT4	0	0	28	0	0	0
PFT1	30	31	0	0	0	0
PFT2	33	0	0	0	0	0
PFT3	35	36	37	0	0	0
PFT4	40	41	42	0	43	0
PTF5	0	0	0	0	0	0

THETA-EPS

	PLT4	PFT1	PFT2	PFT3	PFT4	PTF5
PLT4	29					
PFT1	0	32				
PFT2	0	0	34			
PFT3	38	0	0	39		
PFT4	0	44	0	0	45	

PTF5 0 0 0 0 0 46

TI CFA2

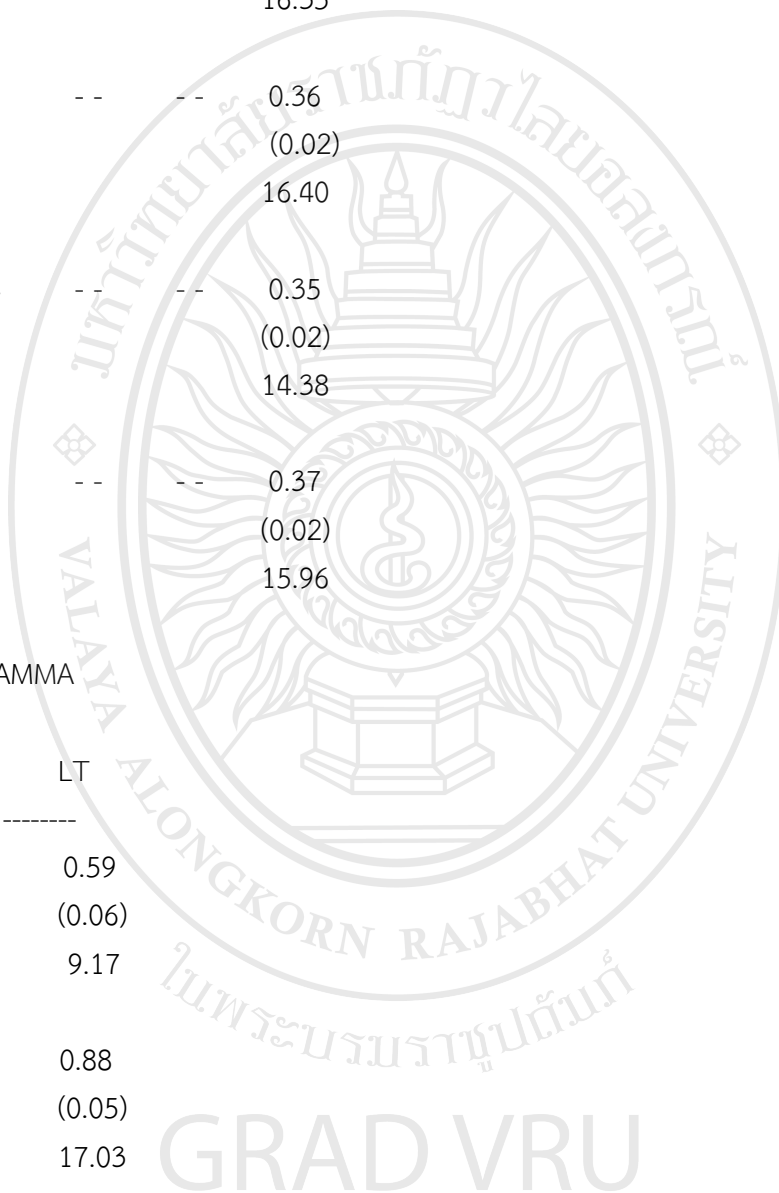
Number of Iterations = 45

LISREL Estimates (Maximum Likelihood)

LAMBDA-Y

	PNT	PLT	PFT
PNT1	0.31	--	--
PNT2	0.43 (0.04) 10.09	--	--
PNT3	0.54 (0.06) 8.58	--	--
PLT1	--	0.35	--
PLT2	--	0.38 (0.02) 18.15	--
PLT3	--	0.42 (0.02) 16.94	--
PLT4	--	0.44 (0.02) 17.61	--

PFT1	--	--	0.31
PFT2	--	--	0.35 (0.02) 16.35
PFT3	--	--	0.36 (0.02) 16.40
PFT4	--	--	0.35 (0.02) 14.38
PTF5	--	--	0.37 (0.02) 15.96
GAMMA			
LT			
PNT	0.59 (0.06)		9.17
PLT	0.88 (0.05)		17.03
PFT	0.89 (0.06)		13.77



Covariance Matrix of ETA and KSI

	PNT	PLT	PFT	LT
PNT	0.30			
PLT	0.52	0.70		
PFT	0.53	0.79	1.00	
LT	0.59	0.88	0.89	1.00

PHI

LT

1.00

PSI

Note: This matrix is diagonal.

PNT	PLT	PFT
-0.05 (0.03)	-0.09 (0.03)	0.20 (0.04)
-1.70	-3.02	5.13

Squared Multiple Correlations for Structural Equations

PNT	PLT	PFT
0.64	0.78	0.80

Squared Multiple Correlations for Reduced Form

PNT	PLT	PFT

0.64 0.78 0.80

THETA-EPS

	PNT1	PNT2	PNT3	PLT1	PLT2	PLT3
PNT1	0.14 (0.01) 13.93					
PNT2	0.09 (0.01) 8.84	0.24 (0.02) 13.91				
PNT3	--	--	0.09 (0.01) 8.83			
PLT1	--	--	0.01 (0.00) 2.13	0.07 (0.01) 12.79		
PLT2	--	--	--	0.02 (0.00) 4.49	0.07 (0.01) 13.06	
PLT3	-0.01 (0.00) -1.59	--	-0.02 (0.00) -4.08	-0.01 (0.00) -2.33	--	0.04 (0.00) 10.73
PLT4	--	--	-0.03 (0.01) -6.11	--	--	--
PFT1	-0.01 (0.01)	-0.05 (0.01)	--	--	--	--

	-0.84	-5.50				
PFT2	0.00	--	--	--	--	--
	(0.00)					
	-0.88					
PFT3	-0.01	-0.01	0.01	--	--	--
	(0.00)	(0.00)	(0.00)			
	-3.67	-2.50	2.69			
PFT4	0.00	0.01	-0.01	--	0.00	--
	(0.00)	(0.01)	(0.00)		(0.00)	
	0.98	1.24	-3.42		-0.82	
PTF5	--	--	--	--	--	--
THETA-EPS						
	PLT4	PFT1	PFT2	PFT3	PFT4	PTF5
PLT4	0.04					
	(0.00)					
	11.06					
PFT1	--	0.11				
		(0.01)				
		13.55				
PFT2	--	--	0.03			
			(0.00)			
			11.16			
PFT3	-0.01	--	--	0.02		
	(0.00)			(0.00)		
	-3.90			10.58		

GRAD VRU

Goodness of Fit Statistics

Degrees of Freedom = 32

Minimum Fit Function Chi-Square = 44.81 (P = 0.066)

Normal Theory Weighted Least Squares Chi-Square = 44.33 (P = 0.072)

Estimated Non-centrality Parameter (NCP) = 12.33

90 Percent Confidence Interval for NCP = (0.0 ; 33.96)

Minimum Fit Function Value = 0.11

Population Discrepancy Function Value (F0) = 0.031

90 Percent Confidence Interval for F0 = (0.0 ; 0.085)

Root Mean Square Error of Approximation (RMSEA) = 0.031

90 Percent Confidence Interval for RMSEA = (0.0 ; 0.052)

P-Value for Test of Close Fit (RMSEA < 0.05) = 0.93

Expected Cross-Validation Index (ECVI) = 0.34

90 Percent Confidence Interval for ECVI = (0.31 ; 0.40)

ECVI for Saturated Model = 0.39

ECVI for Independence Model = 22.62

Chi-Square for Independence Model with 66 Degrees of Freedom = 9002.53

Independence AIC = 9026.53

Model AIC = 136.33

Saturated AIC = 156.00

Independence CAIC = 9086.43

Model CAIC = 365.94

Saturated CAIC = 545.33

Normed Fit Index (NFI) = 1.00

Non-Normed Fit Index (NNFI) = 1.00

Parsimony Normed Fit Index (PNFI) = 0.48

Comparative Fit Index (CFI) = 1.00

Incremental Fit Index (IFI) = 1.00

Relative Fit Index (RFI) = 0.99

Critical N (CN) = 477.29

Root Mean Square Residual (RMR) = 0.0033

Standardized RMR = 0.018

Goodness of Fit Index (GFI) = 0.98

Adjusted Goodness of Fit Index (AGFI) = 0.96

Parsimony Goodness of Fit Index (PGFI) = 0.40

TI CFA2

Fitted Covariance Matrix

	PNT1	PNT2	PNT3	PLT1	PLT2	PLT3
PNT1	0.17					
PNT2	0.13	0.30				
PNT3	0.05	0.07	0.18			
PLT1	0.06	0.08	0.11	0.16		
PLT2	0.06	0.09	0.11	0.11	0.17	
PLT3	0.06	0.09	0.10	0.09	0.11	0.16
PLT4	0.07	0.10	0.09	0.11	0.11	0.13
PFT1	0.04	0.02	0.09	0.08	0.09	0.10
PFT2	0.06	0.08	0.10	0.10	0.11	0.12
PFT3	0.05	0.07	0.11	0.10	0.11	0.12
PFT4	0.06	0.09	0.09	0.10	0.10	0.12
PTF5	0.06	0.08	0.11	0.10	0.11	0.12

Fitted Covariance Matrix

	PLT4	PFT1	PFT2	PFT3	PFT4	PTF5
PLT4	0.17					
PFT1	0.11	0.21				
PFT2	0.12	0.11	0.15			
PFT3	0.12	0.11	0.13	0.16		
PFT4	0.12	0.09	0.13	0.13	0.17	

PTF5 0.13 0.11 0.13 0.13 0.13 0.18

Fitted Residuals

	PNT1	PNT2	PNT3	PLT1	PLT2	PLT3
PNT1	0.00					
PNT2	0.00	0.00				
PNT3	-0.01	-0.01	0.00			
PLT1	0.00	-0.01	0.00	0.00		
PLT2	-0.01	-0.01	0.00	0.00	0.00	
PLT3	0.00	0.00	0.00	0.00	0.00	0.00
PLT4	0.01	0.01	0.00	0.00	0.00	0.00
PFT1	0.00	0.00	0.01	0.01	0.01	0.00
PFT2	0.00	0.00	0.00	0.00	0.00	0.00
PFT3	0.00	-0.01	-0.00	0.00	0.00	0.00
PFT4	0.00	0.00	0.00	0.01	0.00	0.00
PTF5	0.00	0.00	0.00	0.00	0.00	0.00

Fitted Residuals

	PLT4	PFT1	PFT2	PFT3	PFT4	PTF5
PLT4	0.00					
PFT1	0.00	0.00				
PFT2	-0.01	0.00	0.00			
PFT3	0.00	0.00	0.00	0.00		
PFT4	0.00	0.00	0.00	0.00	0.00	
PTF5	0.00	0.00	0.00	0.00	0.00	0.00

Summary Statistics for Fitted Residuals

Smallest Fitted Residual = -0.01
 Median Fitted Residual = 0.00
 Largest Fitted Residual = 0.01

Stemleaf Plot

- 8|4
 - 6|798
 - 4|6318
 - 2|952192110
 - 0|66633321096665543221111000
 0|111344445567901122578
 2|377991
 4|787
 6|2969
 8|7

Standardized Residuals

	PNT1	PNT2	PNT3	PLT1	PLT2	PLT3
PNT1	2.63					
PNT2	0.91	-0.33				
PNT3	-1.79	-1.71	-1.27			
PLT1	-0.66	-1.16	-1.59	0.65		
PLT2	-1.39	-1.51	-1.37	-0.36	-2.79	
PLT3	0.23	-0.32	-1.37	-0.38	-0.67	-0.76
PLT4	2.67	1.55	-0.03	0.46	1.28	0.38
PFT1	0.71	0.15	1.55	1.58	2.11	-0.45
PFT2	-1.61	-0.98	1.32	-0.19	-0.27	1.72
PFT3	-1.51	-1.65	0.99	-0.41	0.40	-1.35
PFT4	0.54	0.13	1.82	1.89	1.71	2.17
PTF5	0.07	-0.18	-0.02	0.05	-0.05	-0.64

Standardized Residuals

	PLT4	PFT1	PFT2	PFT3	PFT4	PTF5
PLT4	0.85					
PFT1	1.27	0.72				

PFT2	-3.09	-1.49	-0.06			
PFT3	-3.89	0.51	3.37	1.79		
PFT4	-0.89	-0.61	-1.23	-0.45	-0.23	
PTF5	-0.52	-0.17	0.50	0.08	0.32	--

Summary Statistics for Standardized Residuals

Smallest Standardized Residual = -3.89
 Median Standardized Residual = -0.06
 Largest Standardized Residual = 3.37

Stemleaf Plot

```

- 3|91
- 2|8
- 1|8766655544433220
- 0|98776655444333222210000
  0|111112344555567789
  1|033366677889
  2|1267
  3|4
    
```

Largest Negative Standardized Residuals

Residual for PLT2 and PLT2 -2.79
 Residual for PFT2 and PLT4 -3.09
 Residual for PFT3 and PLT4 -3.89

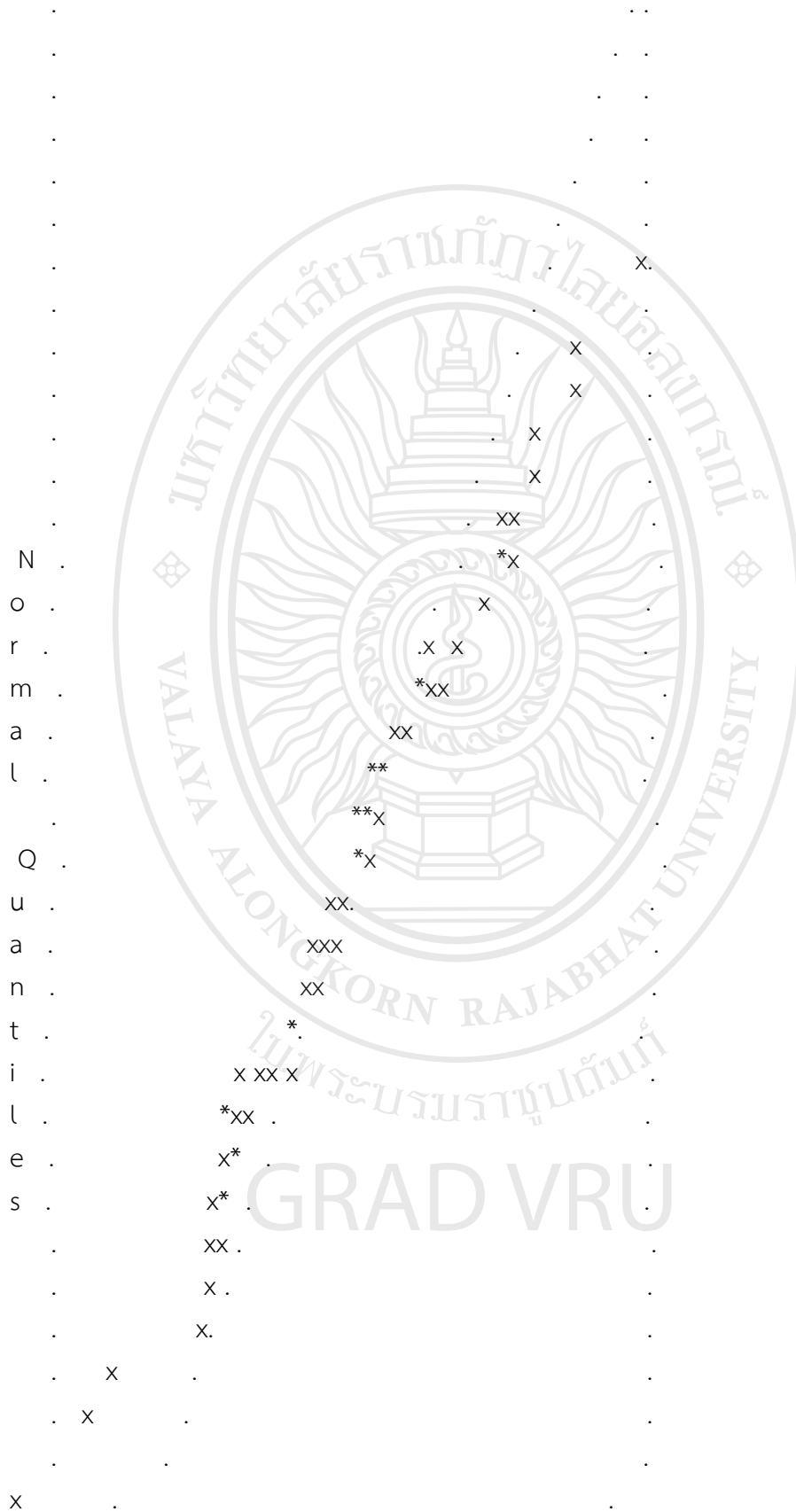
Largest Positive Standardized Residuals

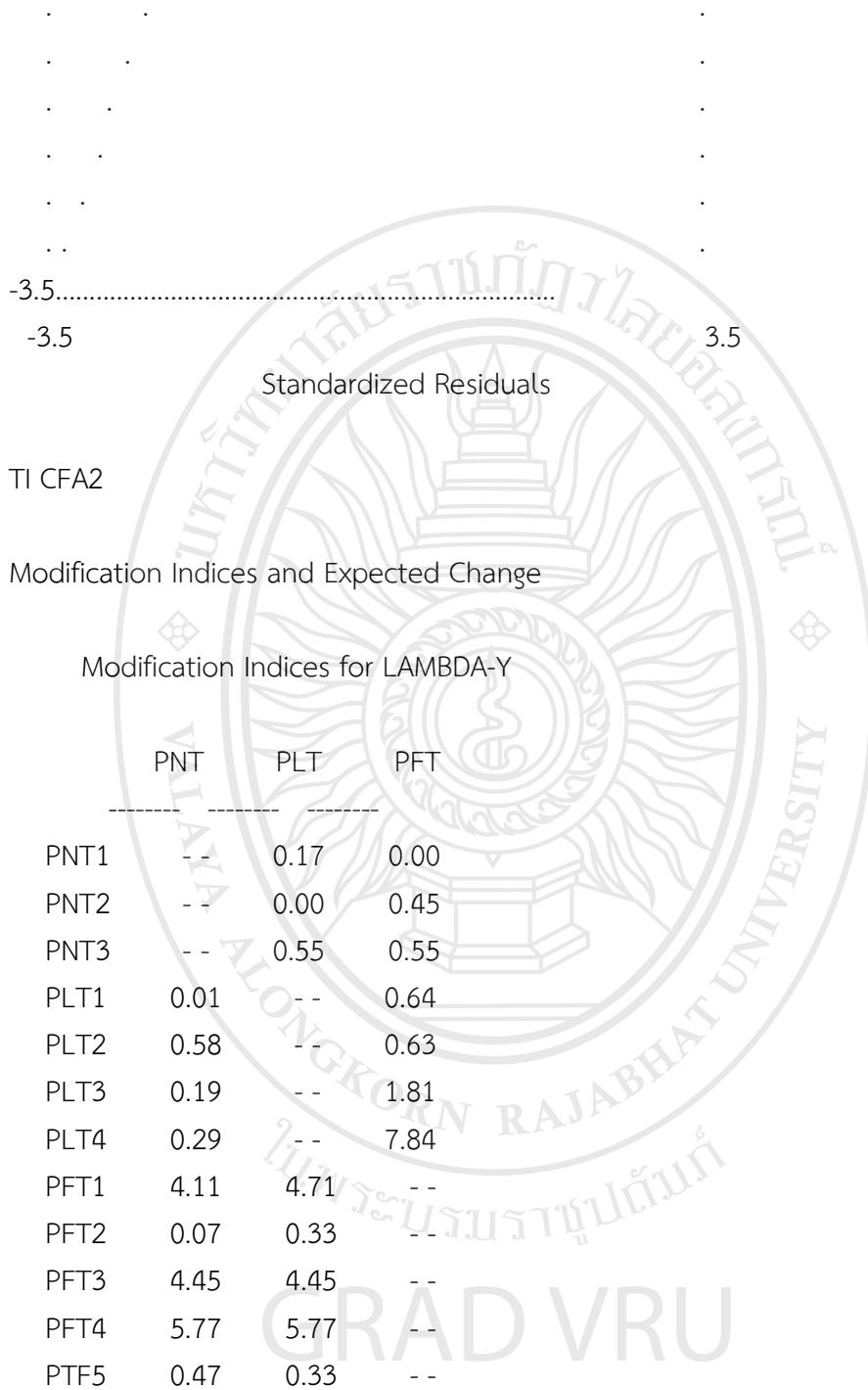
Residual for PNT1 and PNT1 2.63
 Residual for PLT4 and PNT1 2.67
 Residual for PFT3 and PFT2 3.37

TI CFA2

Qplot of Standardized Residuals

3.5.....





Expected Change for LAMBDA-Y

	PNT	PLT	PFT
PNT1	--	-0.03	0.00

PNT2	--	0.00	-0.04
PNT3	--	0.17	0.07
PLT1	0.01	--	0.06
PLT2	0.07	--	0.05
PLT3	-0.05	--	0.10
PLT4	-0.06	--	-0.22
PFT1	0.15	0.16	--
PFT2	-0.01	-0.03	--
PFT3	-0.09	-0.14	--
PFT4	0.12	0.18	--
PTF5	-0.03	-0.03	--

Standardized Expected Change for LAMBDA-Y

	PNT	PLT	PFT
PNT1	--	-0.02	0.00
PNT2	--	0.00	-0.04
PNT3	--	0.14	0.07
PLT1	0.01	--	0.06
PLT2	0.04	--	0.05
PLT3	-0.03	--	0.10
PLT4	-0.04	--	-0.22
PFT1	0.08	0.13	--
PFT2	-0.01	-0.02	--
PFT3	-0.05	-0.11	--
PFT4	0.07	0.15	--
PTF5	-0.02	-0.03	--

Completely Standardized Expected Change for LAMBDA-Y

	PNT	PLT	PFT
PNT1	--	-0.06	0.01
PNT2	--	0.00	-0.08
PNT3	--	0.34	0.17

PLT1	0.02	--	0.16
PLT2	0.09	--	0.12
PLT3	-0.07	--	0.25
PLT4	-0.08	--	-0.52
PFT1	0.18	0.30	--
PFT2	-0.01	-0.06	--
PFT3	-0.13	-0.29	--
PFT4	0.16	0.37	--
PTF5	-0.04	-0.06	--

No Non-Zero Modification Indices for BETA

No Non-Zero Modification Indices for GAMMA

No Non-Zero Modification Indices for PHI

No Non-Zero Modification Indices for PSI

Modification Indices for THETA-EPS

	PNT1	PNT2	PNT3	PLT1	PLT2	PLT3
PNT1	--					
PNT2	--	--				
PNT3	0.39	0.39	--			
PLT1	0.03	0.27	--	--		
PLT2	0.68	0.01	0.55	--	--	
PLT3	--	0.53	--	--	0.71	--
PLT4	1.00	2.39	--	0.06	1.21	0.01
PFT1	--	--	0.96	0.24	1.49	1.32
PFT2	--	1.23	0.00	0.01	0.58	5.41
PFT3	--	--	--	1.55	0.47	4.02
PFT4	--	--	--	4.67	--	4.49
PTF5	0.11	0.02	0.09	0.02	0.06	0.85

Modification Indices for THETA-EPS

	PLT4	PFT1	PFT2	PFT3	PFT4	PTF5
PLT4	--					
PFT1	3.81	--				
PFT2	4.35	5.40	--			
PFT3	--	0.09	5.88	--		
PFT4	0.92	--	2.60	0.74	--	
PTF5	0.25	0.04	0.27	0.00	0.07	--

Expected Change for THETA-EPS

	PNT1	PNT2	PNT3	PLT1	PLT2	PLT3
PNT1	--					
PNT2	--	--				
PNT3	0.00	0.00	--			
PLT1	0.00	0.00	--	--		
PLT2	0.00	0.00	-0.01	--	--	
PLT3	--	0.00	--	--	0.00	--
PLT4	0.00	0.01	--	0.00	0.00	0.00
PFT1	--	--	0.00	0.00	0.01	0.00
PFT2	--	-0.01	0.00	0.00	0.00	0.00
PFT3	--	--	--	0.00	0.00	0.00
PFT4	--	--	--	0.01	--	0.01
PTF5	0.00	0.00	0.00	0.00	0.00	0.00

Expected Change for THETA-EPS

	PLT4	PFT1	PFT2	PFT3	PFT4	PTF5
PLT4	--					
PFT1	0.01	--				
PFT2	0.00	-0.01	--			
PFT3	--	0.00	0.00	--		
PFT4	0.00	--	0.00	0.00	--	

PTF5 0.00 0.00 0.00 0.00 0.00 --

Completely Standardized Expected Change for THETA-EPS

	PNT1	PNT2	PNT3	PLT1	PLT2	PLT3
PNT1	--					
PNT2	--	--				
PNT3	-0.02	0.02	--			
PLT1	0.00	-0.01	--	--		
PLT2	-0.02	0.00	-0.03	--	--	
PLT3	--	-0.02	--	--	-0.02	--
PLT4	0.03	0.03	--	-0.01	0.02	0.00
PFT1	--	--	0.02	0.01	0.03	-0.02
PFT2	--	-0.03	0.00	0.00	-0.01	0.03
PFT3	--	--	--	-0.02	0.01	-0.03
PFT4	--	--	--	0.04	--	0.03
PTF5	0.01	0.00	-0.01	0.00	0.00	-0.01

Completely Standardized Expected Change for THETA-EPS

	PLT4	PFT1	PFT2	PFT3	PFT4	PTF5
PLT4	--					
PFT1	0.04	--				
PFT2	-0.03	-0.04	--			
PFT3	--	0.01	0.03	--		
PFT4	-0.02	--	-0.02	-0.01	--	
PTF5	0.01	0.00	0.01	0.00	0.00	--

Maximum Modification Index is 7.84 for Element (7, 3) of LAMBDA-Y

TI CFA2

Factor Scores Regressions

ETA

	PNT1	PNT2	PNT3	PLT1	PLT2	PLT3
PNT	-0.02	-0.10	-0.03	0.28	0.25	0.70
PLT	0.10	0.08	0.66	-0.05	0.04	0.40
PFT	0.05	0.02	0.10	0.02	0.05	0.14

ETA

	PLT4	PFT1	PFT2	PFT3	PFT4	PTF5
PNT	0.59	-0.06	-0.05	0.10	-0.02	-0.03
PLT	0.56	0.09	0.10	0.17	0.24	0.07
PFT	0.28	0.17	0.54	0.66	0.38	0.38

TI CFA2

Standardized Solution

LAMBDA-Y

	PNT	PLT	PFT
PNT1	0.17	--	--
PNT2	0.24	--	--
PNT3	0.30	--	--
PLT1	--	0.29	--
PLT2	--	0.32	--
PLT3	--	0.35	--
PLT4	--	0.36	--
PFT1	--	--	0.31
PFT2	--	--	0.35
PFT3	--	--	0.36
PFT4	--	--	0.35
PTF5	--	--	0.37

GAMMA

LT

PNT	0.73
PLT	0.79
PFT	0.81

Correlation Matrix of ETA and KSI

	PNT	PLT	PFT	LT
PNT	1.00			
PLT	1.14	1.00		
PFT	0.96	0.95	1.00	
LT	1.08	1.06	0.89	1.00

PSI

Note: This matrix is diagonal.

	PNT	PLT	PFT
	-0.16	-0.13	0.20

TI CFA2

Completely Standardized Solution

LAMBDA-Y

	PNT	PLT	PFT
PNT1	0.41	--	--
PNT2	0.44	--	--
PNT3	0.71	--	--
PLT1	--	0.73	--

GRAD VRU

PLT2	--	0.78	--
PLT3	--	0.88	--
PLT4	--	0.87	--
PFT1	--	--	0.67
PFT2	--	--	0.91
PFT3	--	--	0.92
PFT4	--	--	0.86
PTF5	--	--	0.89

GAMMA

LT

PNT	1.08
PLT	1.06
PFT	0.89

Correlation Matrix of ETA and KSI

	PNT	PLT	PFT	LT
PNT	1.00			
PLT	1.14	1.00		
PFT	0.96	0.95	1.00	
LT	1.08	1.06	0.89	1.00

PSI

Note: This matrix is diagonal.

	PNT	PLT	PFT
	-----	-----	-----
	-0.16	-0.13	0.20

THETA-EPS

PNT1	PNT2	PNT3	PLT1	PLT2	PLT3
------	------	------	------	------	------

PNT1	0.83				
PNT2	0.42	0.81			
PNT3	--	--	0.50		
PLT1	--	--	0.06	0.46	
PLT2	--	--	--	0.11	0.40
PLT3	-0.04	--	-0.12	-0.04	0.23
PLT4	--	--	-0.18	--	--
PFT1	-0.03	-0.19	--	--	--
PFT2	-0.02	--	--	--	--
PFT3	-0.09	-0.05	0.05	--	--
PFT4	0.03	0.03	-0.07	--	-0.01
PTF5	--	--	--	--	--

THETA-EPS

PLT4 PFT1 PFT2 PFT3 PFT4 PTF5

PLT4	0.24				
PFT1	--	0.55			
PFT2	--	--	0.17		
PFT3	-0.05	--	--	0.16	
PFT4	--	-0.08	--	--	0.26
PTF5	--	--	--	--	0.22

TI CFA2

Total and Indirect Effects

Total Effects of X on ETA

LT

PNT	0.59
	(0.06)
	9.17

PLT 0.88
(0.05)
17.03

PFT 0.89
(0.06)
13.77

BETA*BETA' is not Pos. Def., Stability Index cannot be Computed

Total Effects of ETA on Y

	PNT	PLT	PFT
PNT1	0.31	--	--
PNT2	0.43 (0.04) 10.09	--	--
PNT3	0.54 (0.06) 8.58	--	--
PLT1	--	0.35	--
PLT2	--	0.38 (0.02) 18.15	--
PLT3	--	0.42 (0.02) 16.94	--
PLT4	--	0.44 (0.02)	--

17.61

PFT1 -- -- 0.31

PFT2 -- -- 0.35
(0.02)

16.35

PFT3 -- -- 0.36
(0.02)

16.40

PFT4 -- -- 0.35
(0.02)

14.38

PTF5 -- -- 0.37
(0.02)

15.96

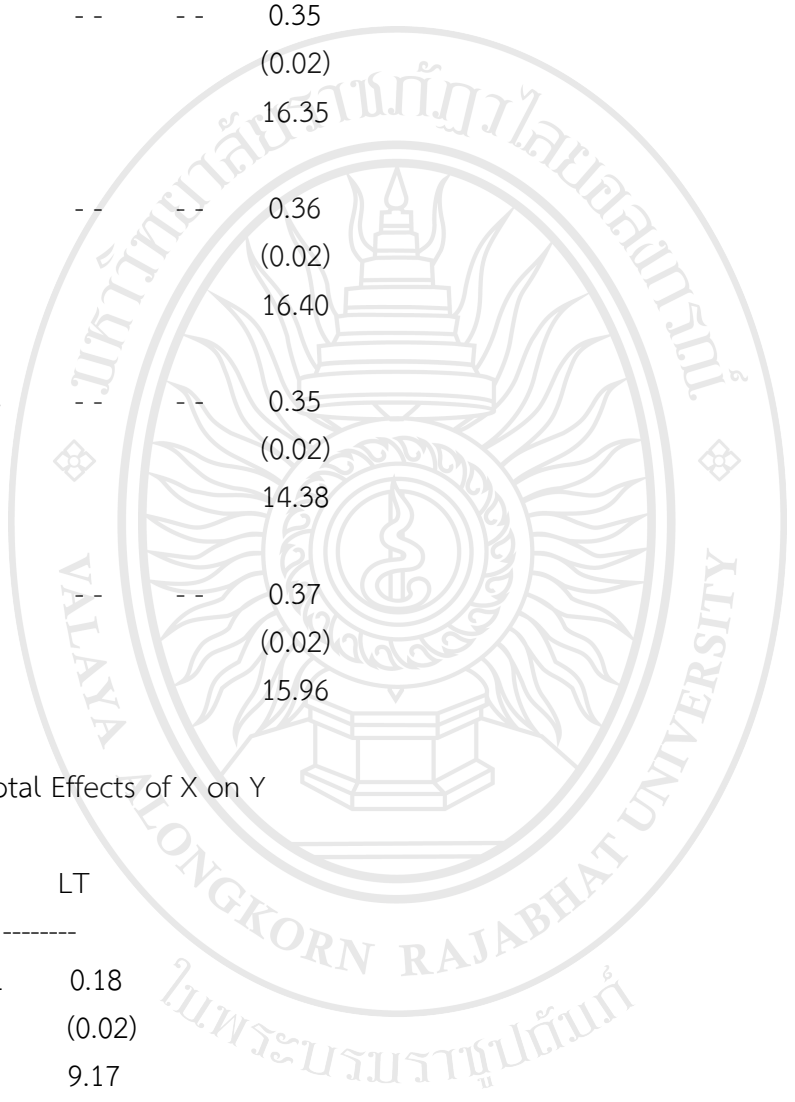
Total Effects of X on Y

LT

PNT1 0.18
(0.02)
9.17

PNT2 0.26
(0.03)
9.87

PNT3 0.32
(0.02)
16.90



GRAD VRU

PLT1 0.31
(0.02)
17.03

PLT2 0.33
(0.02)
19.01

PLT3 0.37
(0.02)
21.89

PLT4 0.39
(0.02)
21.45

PFT1 0.27
(0.02)
13.77

PFT2 0.32
(0.02)
19.21

PFT3 0.32
(0.02)
19.33

PFT4 0.32
(0.02)
17.96

PTF5 0.33
(0.02)
18.57



GRAD VRU

TI CFA2

Standardized Total and Indirect Effects

Standardized Total Effects of X on ETA

	LT
PNT	1.08
PLT	1.06
PFT	0.89

Standardized Total Effects of ETA on Y

	PNT	PLT	PFT
PNT1	0.17	--	--
PNT2	0.24	--	--
PNT3	0.30	--	--
PLT1	--	0.29	--
PLT2	--	0.32	--
PLT3	--	0.35	--
PLT4	--	0.36	--
PFT1	--	--	0.31
PFT2	--	--	0.35
PFT3	--	--	0.36
PFT4	--	--	0.35
PTF5	--	--	0.37

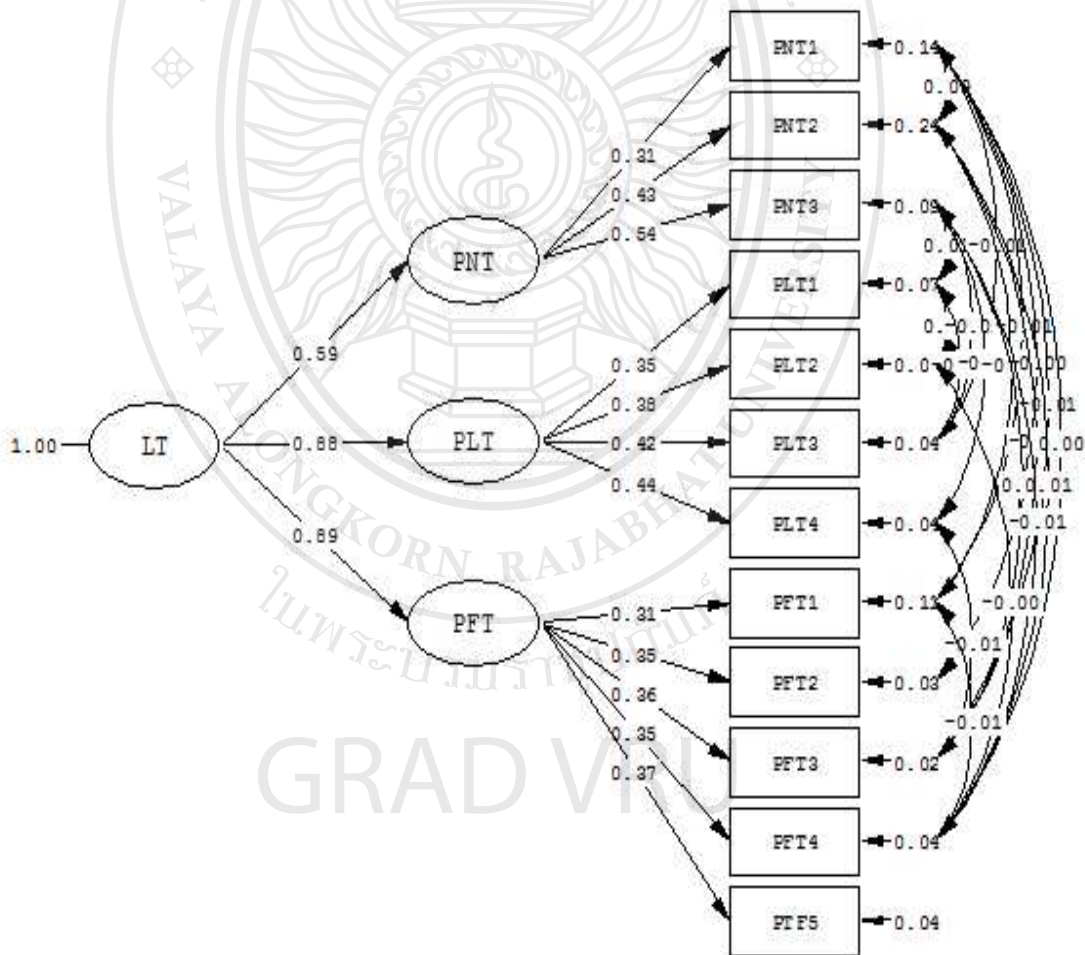
Completely Standardized Total Effects of ETA on Y

	PNT	PLT	PFT
PNT1	0.41	--	--
PNT2	0.44	--	--
PNT3	0.71	--	--
PLT1	--	0.73	--

PLT2	--	0.78	--
PLT3	--	0.88	--
PLT4	--	0.87	--
PFT1	--	--	0.67
PFT2	--	--	0.91
PFT3	--	--	0.92
PFT4	--	--	0.86
PTF5	--	--	0.89

Standardized Total Effects of X on Y

LT	-----
PNT1	0.18



Chi-Square=44.33, df=32, P-value=0.07222, RMSEA=0.031

PFT1	0.60
------	------

PFT2 0.81
PFT3 0.82
PFT4 0.77
PTF5 0.79

Time used: 0.062 Seconds



GRAD VRU



APPENDIX G
OFFICIAL LETTERS

GRAD VRU



Graduate School
 School of Valaya Alongkorn Rajabhat University
 under the Royal Patronage,
 1 Moo 20, Klong-Loung District,
 Pathumthani Province, 13180, Thailand.

23 January, 2018

Subject: Request for assistance to test research instrument

Dear Assisociate Professor Dr.Orasa Charoontham

By the request of Mr. CHUM Lay, ID: 55B74650102, a doctoral student in Educational Administration at Valaya Alongkorn Rajabhat University under the Royal Patronage, Pathumthani, Thailand, I would like to ask for your assistance to test his research instrument, questionnaire, for his doctoral dissertation entitled "**The Development of Leadership Trait Model for University Senior Administrators in Cambodia**". This dissertation is under the supervision of Assistance Professor Dr. Suwanna Chotisukarn.

Mr. CHUM Lay has already conducted data collection in a number of steps such as interviewing experienced people, conducting focus groups. Next, in the near future, he is going to collect data from 400 respondents who are the university senior administrators and stakeholders working in 37 higher education institutions both public and private.

In order to make sure that the questionnaire is valid and accurate, and that the collected data is reliable, he really needs your assistance to examine his self-developed questionnaire.

I do hope that you will kindly help him so that he can proceed with his research project. Your kind assistance is greatly appreciated.

Sincerely Yours,

T. Siriworn

(Assistant Professor Dr. Theathanick Siriworn)

Dean of Graduate School



Graduate School
 School of Valaya Alongkorn Rajabhat University
 under the Royal Patronage,
 1 Moo 20, Klong Loung District,
 Pathumthani Province, 13180, Thailand.

23 January, 2018

Subject: Request for assistance to test research instrument

Dear Assistant Professor Dr.Chanchai Wongsirasawat

By the request of Mr. CHUM Lay, ID: 55B74650102, a doctoral student in Educational Administration at Valaya Alongkorn Rajabhat University under the Royal Patronage, Pathumthani, Thailand, I would like to ask for your assistance to test his research instrument, questionnaire, for his doctoral dissertation entitled "The Development of Leadership Trait Model for University Senior Administrators in Cambodia". This dissertation is under the supervision of Assistance Professor Dr. Suwanna Chotisukarn.

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Sincerely Yours,

T. Siriworn

(Assistant Professor Dr. Theathanick Siriworn)

Dean of Graduate School



Graduate School
Valaya Alongkorn Rajabhat University
under the Royal Patronage,
1 Moo 20, Klong Loung District, Pathumthani
province, 13180, Thailand

31 October, 2017

Subject: Request for assistance to test research instrument

Dear H.E. Dr. BUTH Kimsean, Deputy Governor, Battambang province

By the request of Mr. CHUM Lay, ID: 5587465102, a doctoral student in Educational Administration at Valaya Alongkorn Rajabhat University under the Royal Patronage, Pathumthani, Thailand, we would like to ask for your assistance to test his research instrument, questionnaire, for his doctoral dissertation entitled "The Development of Leadership Trait Model for University Senior Administrators in Cambodia". This dissertation is under the supervision of Assistance Professor Dr. Suwanna Chotisukarn.

Mr. CHUM Lay has already conducted data collection in a number of steps such as interviewing experienced people, conducting focus groups. Next, in the near future, he is going to collect data from 400 respondents who are the university senior administrators and stakeholders working in 37 higher education institutions both public and private.

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Sincerely Yours,

T. Siriwoharn

(Assistant Professor Dr. Theathanick Siriwoharn)

Dean of Graduate School

GRAD VRU



Graduate School
Valaya Alongkorn Rajabhat University
under the Royal Patronage,
1 Moo 20, Klong Loung District, Pathumthan
province, 13180, Thailand

31 October, 2017

Subject: Request for assistance to test research instrument

Dear Dr. SAM Ranny, Vice president, University of Battambang

By the request of Mr. CHUM Lay, ID: 55B7465102, a doctoral student in Educational Administration at Valaya Alongkorn Rajabhat University under the Royal Patronage, Pathumthani, Thailand, I would like to ask for your assistance to test his research instrument, questionnaire, for his doctoral dissertation entitled "The Development of Leadership Trait Model for University Senior Administrators in Cambodia". This dissertation is under the supervision of Assistant Professor Dr. Suwanna Chotisukarn.

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Dean of Graduate School

GRAD VRU



Graduate School
Valaya Alongkorn Rajabhat University
under the Royal Patronage,
1 Moo 20, Klong Loung District, Pathumthani
province, 13180, Thailand

31 October, 2017

Subject: Request for assistance to test research instrument

Dear H.E. Dr. TEP Khunna, Board of Director, University of Management and Economics

By the request of Mr. CHUM Lay, ID: 55B7465102, a doctoral student in Educational Administration at Valaya Alongkorn Rajabhat University under the Royal Patronage, Pathumthani, Thailand, we would like to ask for your assistance to test his research instrument, questionnaire, for his doctoral dissertation entitled "The Development of Leadership Trait Model for University Senior Administrators in Cambodia". This dissertation is under the supervision of Assistant Professor Dr. Suwanna Chotisukarn.

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Sincerely Yours,

T. Siriwoharn

(Assistant Professor Dr. Theathanick Siriwoharn)

Dean of Graduate School

ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ

ខ្ញុំបាទឈ្មោះ **ខ៊ុំ ឡាយ** ជានិស្សិតដែលកំពុងសិក្សាថ្នាក់បណ្ឌិត ឯកទេស Educational Administration នៅសាកលវិទ្យាល័យ Valaya Alongkorn Rajabhat University under the Royal Patronage ប្រទេសថៃ លេខទូរស័ព្ទទំនាក់ទំនង ០៦១ ៥៥៥៥ ៦៩។

សូមគោរពជូន

ឯកឧត្តម **ហង់ ជួន ណារ៉ុន** រដ្ឋមន្ត្រី ក្រសួងអប់រំ យុវជន និងកីឡា

អម្មវត្ថុ: សំណើសុំអនុញ្ញាត ចុះប្រមូលទិន្នន័យនៅក្នុងគ្រឹះស្ថានឧត្តមសិក្សាមួយចំនួន ដែលស្ថិតនៅ ក្រោមការគ្រប់គ្រង របស់ក្រសួងអប់រំ យុវជន និងកីឡា។

តបតាមកម្មវត្ថុខាងលើ ខ្ញុំបាទសូមគោរពជម្រាបឯកឧត្តមរដ្ឋមន្ត្រីមេត្តាជ្រាបថា៖ ខ្ញុំបាទជានិស្សិត ដែលកំពុងសិក្សាថ្នាក់បណ្ឌិត និងកំពុងធ្វើការសិក្សាស្រាវជ្រាវ ដើម្បីសរសេរនិក្ខេបទ បញ្ចប់ការសិក្សា លើប្រធានបទជាភាសាខ្មែរ " ការអភិវឌ្ឍផ្លូវដៃនៃ លក្ខណៈសម្បត្តិភាពជាអ្នកដឹកនាំ សម្រាប់អ្នកគ្រប់គ្រងលំដាប់ខ្ពស់ នៃសាកលវិទ្យាល័យ ក្នុងប្រទេសកម្ពុជា " និងជាភាសាអង់គ្លេស " The Development of Leadership Trait Model for University Senior Administrators in Cambodia"។ នៅក្នុងកំឡុងពេលសិក្សាស្រាវជ្រាវនេះ ខ្ញុំបាទត្រូវការទិន្នន័យដែលចាំបាច់មួយចំនួន ពីឯកឧត្តម លោកជំទាវ លោក និងលោកស្រី ដែលជាអ្នកមានបទពិសោធន៍ក្នុងការងារដឹកនាំ និងគ្រប់គ្រង លើវិស័យ អប់រំឧត្តមសិក្សា និងវិស័យដែលពាក់ព័ន្ធតាមរយៈការប្រើប្រាស់បញ្ជី សំនួរ ដោយផ្ដោតទៅលើ លក្ខណៈសម្បត្តិភាពជាអ្នកដឹកនាំ។ ការចុះប្រមូលទិន្នន័យនេះ នឹងប្រព្រឹត្តទៅមាន រយៈពេល ៣ ខែ ចាប់ពីខែកុម្ភៈ រហូតដល់ខែ មេសា ឆ្នាំ ២០១៨។ ទិន្នន័យដែលទទួលបាន នឹងត្រូវយកទៅវិភាគ និងអភិវឌ្ឍជាម៉ូដែល សម្រាប់ថ្នាក់ដឹកនាំនៅក្នុងសាកលវិទ្យាល័យ យកទៅប្រើប្រាស់ជាប្រយោជន៍ ដល់ការងារដឹកនាំនិងគ្រប់គ្រង ប្រកបដោយប្រសិទ្ធភាព។ មិនតែប៉ុណ្ណោះ ការសិក្សាស្រាវជ្រាវរបស់ខ្ញុំបាទ ថែមទាំងមានប្រយោជន៍យ៉ាងច្រើន ដល់អ្នកសិក្សាជំនាន់ក្រោយផងដែរ។

អាស្រ័យដូចបានគោរព ជម្រាបជូនខាងលើ សូមឯកឧត្តមរដ្ឋមន្ត្រី មេត្តាអនុញ្ញាតឲ្យខ្ញុំបាទ បានចុះប្រមូលទិន្នន័យនៅតាមគ្រឹះស្ថានឧត្តមសិក្សា ដូចមានបញ្ជីជូនភ្ជាប់ ដោយក្តីអនុគ្រោះ។

សូមឯកឧត្តមរដ្ឋមន្ត្រី មេត្តាទទួលនូវការគោរព ដ៏ខ្ពង់ខ្ពស់អំពីខ្ញុំបាទ។

សូមជូនភ្ជាប់មកជាមួយនូវ៖

- លិខិតផ្តល់អាហារូបករណ៍ របស់សាកលវិទ្យាល័យ ១ ច្បាប់
- លិខិតស្នើសុំ ដែលចេញដោយសាកលវិទ្យាល័យ ១ ច្បាប់
- លិខិតបញ្ជាក់ អំពីការប្រឡងជាប់ Qualifying Exam ដោយជោគជ័យ ១ ច្បាប់
- លិខិតបញ្ជាក់ ការការពារគម្រោងស្រាវជ្រាវដោយជោគជ័យ ១ ច្បាប់
- បញ្ជីឈ្មោះគ្រឹះស្ថាន ដែលត្រូវចុះប្រមូលទិន្នន័យ ១ ច្បាប់
- បញ្ជីសំណួរ សម្រាប់ប្រមូលទិន្នន័យ ១ ច្បាប់

ថ្ងៃព្រហស្បតិ៍ ៩កើត ខែមាឃ ឆ្នាំរកា នព្វស័ក ព.ស២៥៦១
បាត់ដំបង ថ្ងៃទី ២៥ ខែ មករា ឆ្នាំ ២០១៨
ហត្ថលេខាអ្នកស្នើសុំ

Signature
ខ៊ុំ ឡាយ



Graduate School
 School of Valaya Alongkorn Rajabhat
 University under the Royal Patronage,
 1 Moo 20, Klong Loung District,
 Pathumthani Province, 13180, Thailand

๒๖ September, 2017

Directorate General of Higher Education
 Ministry of Education, Youth and Sport
 Kingdom of Cambodia

Subject: Request for permission to collect data from higher education institutions

Dear H.E. KAK Ngoy, Director General

Attachment: Questionnaire and list of universities

By the request of Mr. CHUM Lay, ID: 55B7465102, a doctoral student in Educational Administration at Valaya Alongkorn Rajabhat University under the Royal Patronage, Pathumthani, Thailand, I would like you to facilitate him in data collection process for his doctoral dissertation entitled "The Development of Leadership Trait Model for University Senior Administrators in Cambodia". This dissertation is under the supervision of Assistant Professor Dr.Suwanna Chotisukarn.

Mr. CHUM Lay has already conducted data collection in a number of steps such as interviewing experienced people as well as conducting focus group discussions. Next, by using questionnaire, he is going to collect more data from 400 respondents who are the university senior administrators, staff, and lecturers working in 37 higher education institutions, both public and private, which are under the control of Ministry of Education, Youth and Sport. The data collection process will start from February to April.....2018.

In this regard, I would like you to kindly permit Mr. CHUM Lay to collect data from the target universities as listed in the attachment.

I do hope that you will kindly permit and help to facilitate this data collection process so that he can get necessary data for his research project. Your kind permission and facilitation is highly appreciated.

Faithfully Yours,

T. Siriwoharn

(Assistant Professor Dr. Theathanick Siriwoharn)

Dean of Graduate School



Graduate School
 School of Valaya Alongkorn Rajabhat
 University under the Royal Patronage,
 1 Moo 20, Klong Loung District,
 Pathumthani Province, 13180, Thailand

๒๕๖๑ September, 2017

Ministry of Education, Youth and Sport
 Kingdom of Cambodia

Subject: Request for permission to collect data from higher education institutions

Dear H.E. HANG Chounaron, Minister

Attachment: Questionnaire and list of target universities

By the request of Mr. CHUM Lay, ID: 55B7465102, a doctoral student in Educational Administration at Valaya Alongkorn Rajabhat University under the Royal Patronage, Pathumthani, Thailand, I would like you to permit him to collect data from the target universities for his doctoral dissertation entitled "The Development of Leadership Trait Model for University Senior Administrators in Cambodia". This dissertation is under the supervision of Assistant Professor Dr. Suwanna Chotisukarn.

So far, Mr. CHUM Lay has already collected necessary data in a number of steps such as interviewing experienced people as well as conducting focus group discussions. Next, by using questionnaire, he is going to collect more data from 400 respondents who are the university senior administrators, staff, and lecturers working in 37 higher education institutions, both public and private, which are under the control of Ministry of Education, Youth and Sport. The data collection process will start from.....February.....to....April.....2018.

In this regard, I would like you to kindly permit Mr. CHUM Lay to collect data from the target universities as listed in the attachment.

I do hope that you will kindly permit and help to facilitate this data collection process so that he can get necessary data for his research project. Your kind permission is highly appreciated.

Faithfully Yours,

T. Siachoen

(Assistant Professor Dr. Theathanick Siriwoharn)

Dean of Graduate School



ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ

ក្រសួងអប់រំ យុវជន និងកីឡា

លេខ: ១៣៦៣ អយក. ១៤៤

ថ្ងៃ: ១៧ ខែ កញ្ញា ឆ្នាំ ២០១៤

រាជធានីភ្នំពេញ ថ្ងៃទី ១៧ ខែ កញ្ញា ឆ្នាំ ២០១៤

ជម្រាបជូន

ឯកឧត្តម លោកជំទាវ លោក លោកស្រី សាកលវិទ្យាធិការ នាយក គ្រប់គ្រឹះស្ថានឧត្តមសិក្សាក្រោមឱវាទក្រសួងអប់រំ យុវជន និងកីឡា

កម្មវត្ថុ: សំណើអនុញ្ញាតឱ្យ លោក ជំ ឡាយ ចុះប្រមូលទិន្នន័យចំនួន៤០គ្រឹះស្ថានឧត្តមសិក្សាដែលស្ថិតនៅ ក្រោមការគ្រប់គ្រងរបស់ក្រសួងអប់រំ យុវជន និងកីឡា ។

យោង: លិខិតរបស់ លោក ជំ ឡាយ ចុះថ្ងៃព្រហស្បតិ៍ ៩កើត ខែមាយ ឆ្នាំរកា នព្វស័ក ព.ស២៥៦១ ។

តបតាមកម្មវត្ថុ និងយោងខាងលើ ខ្ញុំសូមជម្រាបជូនឯកឧត្តម លោកជំទាវ លោក លោកស្រីជ្រាបថា: ក្រសួងអប់រំ យុវជន និងកីឡាបានអនុញ្ញាតឱ្យ លោក ជំ ឡាយ ចុះប្រមូលទិន្នន័យចំនួន៤០គ្រឹះស្ថានឧត្តមសិក្សា ក្រោមឱវាទក្រសួងអប់រំ យុវជន និងកីឡា ដើម្បីធ្វើការស្រាវជ្រាវសម្រាប់សរសេរនិក្ខេបទស្តីពី "ការអភិវឌ្ឍ- ម៉ូដែលនៃលក្ខណៈសម្បត្តិកាតព្វកិច្ចដឹកនាំ សម្រាប់គ្រប់គ្រងលំដាប់ខ្ពស់នៃសាកលវិទ្យាល័យក្នុងប្រទេសកម្ពុជា" ក្នុងការបញ្ចប់ការសិក្សាថ្នាក់បណ្ឌិតនៅប្រទេសថៃ។ ការចុះប្រមូលទិន្នន័យនេះនឹងប្រព្រឹត្តទៅមានរយៈពេល៣ខែ ចាប់ពីខែកុម្ភៈ រហូតដល់ខែមេសា ឆ្នាំ២០១៤ ។

អាស្រ័យដូចបានជម្រាបជូនខាងលើ ខ្ញុំសូមឯកឧត្តម លោកជំទាវ លោក លោកស្រី សាកលវិទ្យាធិការ នាយក គ្រប់គ្រឹះស្ថានឧត្តមសិក្សាដែលពាក់ព័ន្ធជួយសហការ និងផ្តល់ព័ត៌មានតាមការគួរ។

សូមឯកឧត្តម លោកជំទាវ លោក លោកស្រី សាកលវិទ្យាធិការ នាយក ទទួលនូវការរាប់អានអំពីខ្ញុំ។

ជំរឿន ក្រសួងអប់រំ យុវជន និងកីឡា
រដ្ឋមន្ត្រី


គឹម សេដ្ឋានី

- ចម្លងជូន:**
- អគ.ខស
 - អគ.រហ
 - ដើម្បីជូនជ្រាបព័ត៌មាន
 - គ្រប់គ្រឹះស្ថានឧត្តមសិក្សាពាក់ព័ន្ធ
 - ដើម្បីសហការ
 - កាលប្បវត្តិ
 - ឯកសារ ន.ខស

VITAE

Name	Chum Lay
Date of Birth	October 15, 1969
Place of Birth	Cambodia
current address	Group 5,Watroka village, Omal Commune, Battambangtown, Battambang province, Cambodia
Educational Background	
2012	Master of Business Administration in General Management,
2009	Bachelor of Business Administration in Human Resource
2009	Bachelor of Arts in English for Education, University of Management and Economics
Current job position	Vice-president of University of Management and Economics, Cambodia

GRAD VRU