Assessment and Evaluation of University Students’ Soft Skills: An Active Learning Alternative

By

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Protocol Title: “Assessment and Evaluation of University Students’ Soft Skills: An Active Learning Alternative.”

Dear Dr. Nabhani,

Thank you for submitting to the CHSR the above named study for review. I have reviewed the above referenced project with other CHSR members. We hereby confirm exempt status of the above research project and have no objection for the student Ms. Fatima Awada to conduct the above referenced study. Kindly use the attached stamped documents.

Documents Submitted:

Protocol Exempt Application
Cover Letter
Active Learning Approach
Final Survey
Focus Group Questions
Informed Consent Form- English
Rubric for LLL
Rubrics for assessing Oral Communication
Rubrics for Assessing Team work Skills
Rubrics for Critical Thinking Assessment
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Sincerely,
Constantine Daher, PhD.
CHSR Chair
Dedication page

To my loving parents, family and friends
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Assessment and Evaluation of University Students’ Soft Skills: An Active Learning Alternative

Fatima Awada

ABSTRACT

Stakeholders and accreditation agencies exert pressure on higher education institutions to provide evidence for students’ learning; employers demand in their employees skills other than those learned in certain specialty fields at academic institutions, namely soft skills. Consequently, assessing students’ attainment of soft skills upon graduation is a necessity. This study explores students’ acquisition of four main soft skills: communication, critical thinking, lifelong learning and teamwork skills upon graduation from a NEASC accredited university in Lebanon. It employs mixed methods of questionnaires, focus group interviews and an active learning session to collect quantitative and qualitative data that would address the study purpose. The sample included senior students in their last semester before graduation and alumni from different majors under the School of Arts and Sciences. Analysis of questionnaire and focus group interviews data indicate that students have mainly acquired the skills, but certain sub-skills require extra emphasis implying that faculty need to modify teaching strategies to develop these skills. The active learning approach results indicate that engaging students in the learning process would contribute to attaining communication skills, critical thinking, lifelong learning and team work skills. Assessment of students’ acquisition of these skills is vital for feedback on institutional and teaching effectiveness and to prepare graduates to excel in a dynamic workforce. The study findings shed light on teaching and assessing soft skills, an area that has not been researched in the region.

Keywords: Assessment, Soft skills, Workforce, Accountability and Accreditation
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Chapter One

Introduction

Workforce in the 21st century experienced remarkable changes due to globalization and technology advances, thus the old way of how things used to be done might still be effective but not efficient (Redmann & Kortlik, 2004). Recent studies (Mitchell, Skinner, & White, 2010) have shown that employers’ expectations have increased, and employees are becoming an asset to the success of a company or an institution. Companies have reached a place where soft skills are seen of value considering them a factor of recruitment and linking them to staffs’ appraisals and salary increases (Klaus, 2007). Soft skills are the needed skills for the 21st century; these skills are foundational and essential for academic and workplace success (Evers, Rush, & Bedrow, 1998). Sutton (2002) states that employers define soft skills as “the number one differentiator” for applicants in all industries (Page 40).

James and James (2004) defined soft skills as a set of talents and outstanding abilities that an individual can bring to a workplace. Soft skills are personal attributes and qualities that distinguish one individual from others having similar experience and qualifications (Perreault, 2004). According to Robles, (2012), soft skills are the combination of interpersonal (people) skills and personal (career) attributes. According to research, interpersonal skills here are seen as the people skills fundamental to one’s success in any job, personal or career attributes are skills such as effective communication skills, team work skills, and ability to interact in difficult situations.
(Evenson, 1999). So, soft skills are a set of career attributes such as working in teams, demonstrating leadership skills, customer service skills, effective communication skills and problem solving skills (James & James, 2004).

Wilhelm (2004) notes that the 21st century employers are seeking employees with soft skills, but unfortunately, the new entry level job applicants lack these skills. Glenn (2003), emphasizes that employees who acquire both technical skills and soft skills and are able to integrate them successfully in the workplace are the competitive individuals who have more opportunities than other individuals in their field. According to Carblis (2008), although the importance of soft skills is acknowledged in the 21st century these skills tend to be neglected and underdeveloped by graduates.

Accountability in higher education has stimulated researchers to tackle the issues of career readiness after graduation. Educational institutions are responding to the demand of stakeholders to reconsider the universities’ functions and the value of education delivered (Evers, Rush, & Berdow, 1998). The changes in the workforce demands and career requirements have triggered the development of different learning methods in higher educational institutions in order to deliver the learning outcomes that the students should achieve by the time of graduation and prepare them for the workforce. As Schulz (2008, p.151) states “Any educator’s dream is that graduates should not only be experts in a certain field but matured personalities with a well-balanced, rounded off education.”

The study was undertaken in an American style university that was accredited by the New England Association of Schools and Colleges (NEASC). NEASC as an
accrediting body and the university as an institution seeking improvement have set standards that require an evidence based environment lead by assessment practices. Although the NEASC requirements for assessment don’t require the university to assess students’ acquisition of these soft skills, however the importance of conducting this study in this particular university lies is that these skills are embedded in the Liberal Arts Curriculum outcomes at the university. Assessment is an integral part of the learning experience. Assessment is continuous, and it aims at improving learning including clear expectations from learners, and gathering evidence on the learning process to determine performance and seek improvement. Soft skills are skills that many educational institutions assume to be automatically taught through any program of study. At the university where the research took place, critical thinking, communication, team work and lifelong learning skills are embedded in the learning outcomes of the Liberal Arts curriculum. All university students are required to take a certain number of credits from the Liberal Arts curriculum, creating the assumption that students are equipped with these skills upon graduation. Assessing the extent to which graduating students have acquired these skills is a necessity as a feedback for the university. As learning is an active and ongoing process, feedback on learning which results from assessment practices, allows us to improve the work done before.

1.1 Statement of the problem:

   Criticisms from employers that graduates are academically proficient but lack the soft skills required for the work force have tuned the educational system to place more emphasis on teaching soft skills. Universities are still doing as little as
companies when it comes to teaching soft skills (Klaus, 2007). Shakir (2009) explains that globalization and the job market demand many more competitive skills from our graduates than in the past century.

Nowadays, an asymmetry exists between education in universities and its application in the work force; “The skills most in demand (skills needed for the future) are the least in supply (competency levels)” (Evers et al., 1998; p. 6). As the job market is more demanding in entry-level job applicants’ acquisition of soft skills, the educational system requires re-evaluation of the skills and characteristics that the future graduates should acquire. The extent to which graduating students have acquired the needed soft skills has not been investigated to date. Graduates’ readiness for the job market is essential to assess, and their capability to find a job and excel in it is the responsibility of the professors in specific and the program in general in all the universities. Moreover, universities and faculty are held responsible for increasing students’ awareness of required soft skills. Students, with the support of the various faculties, should be able to work on developing and improving these skills.

Effective integration of the required soft skills into the undergraduate curriculum might play a role in students’ obtaining and retaining employment in the 21st century (Glenn, 2003; James & James, 2004; Perreault, 2004; Wilhelm, 2004).

1.1.1 Purpose and rationale of the study:

The purpose of this study is to explore the extent to which the Liberal Arts Curriculum outcomes are being achieved by assessing the extent to which graduating students have acquired critical thinking, lifelong learning, communication and team
work skills. The study evaluates the learning that students in an American style university in Lebanon are receiving through the LAC courses and to assess the extent to which students are graduating with the required soft skills to meet the job market demands. Increasing pressure by accreditation agencies and the global market has been laid on higher education in order to create a culture of evidence that guides improvement of teaching and learning which is one main issue tackled in this study. In this American style university accredited by NEASC, assessment of learning outcomes is a requirement for accreditation. Since the four soft skills assessed in this study are integrated in the liberal arts curriculum, a need to provide evidence by assessing these skills is no longer a preference but a priority to meet the university standards for improvement.

The purpose is not to underestimate the education being delivered to students but to pinpoint the challenges in the programs across disciplines for the purpose of improvement. The attributes that employers are demanding are clear, and the duty that educators hold is to prepare their students for those demands, thus underlining the need for an assessment process. Therefore, the study specifically targets the assessment of the required communication skills, critical thinking skills, team work skills, and lifelong learning skills that students’ future careers require. The assumption is that the educational system at this university is expected to prepare students who achieve the learning outcomes of acquiring these soft skills. Driven by intellectual curiosity of what, how, and how well students learn, this assessment process explores the effectiveness of the educational practices.
1.1.2 Significance of the study:

This study is significant for many parties: students, educators, the university, companies and/or institutions and the society in general. This assessment process is vital at the university level; “as assessment is a means of upholding educational quality” (Assessing for learning, 2002, page 9). Successful graduates improve the university’s reputation with the employers’ feedback on their success thus increasing its enrollment.

At the educator’s level, the professors’ confidence will be enhanced while applying various teaching methods as they will see the success of their teaching strategies in the success of their students. This assessment process will also allow faculty to devise new instructional strategies to target the identified skills that students are not acquiring properly.

At the companies level, employers will receive what the market demands, employees worth investing in, and who can guarantee the success of their business.

At the students’ level, this research aims to increase students’ awareness of the importance of acquiring these skills and to encourage university students to undergo continuous self-assessment to improve their skills. As a German proverb states “Self-recognition is the first step towards improvement.”

At the society’s level, graduates will hopefully commit to lifelong learning where they will aim to improve the society they are part of, will strive for its development, will aim for change and take action through constructive decision making.
1.2 Research Question:

Thus this study aims to answer the following research question to address the statement of the problem:

To what extent are graduating students equipped with critical thinking, lifelong learning, teamwork, and communication skills?

The research question was addressed by assessing senior students’ skills upon graduation from different majors under the School of Arts and Sciences in this university. The assessment took place in the form of questionnaires that were developed based on rubrics being used to assess these skills. Furthermore, the research took into account the alumni’s perspective on the extent to which they believe the university has prepared them for these skills in the workforce and the alumni’s perception of the importance of these skills. Moreover, focus group interviews were administered to discuss the issue in depth. Nevertheless, the assessment process was determined by an active learning session where students were engaged in hands-on activities in teams and were assessed using rubrics. The data collected from the three instruments serve to address the research question and determine the extent to which those students have acquired these skills.

1.3 Definition of terms:

Before exploring the research questions and studying the literature definitions of terms used in this study are listed below.
• Soft skills are personal attributes and qualities that distinguish one individual from others having similar experience and qualifications (Perreault, 2004).
• Generic skills are skills, qualities and traits individuals should master to succeed in their studies and career (Hamzah & Abdullah, 2009)
• Critical thinking is “the ability to analyze facts, generate and organize ideas, defend opinions, make comparisons, draw inferences, evaluate arguments and solve problems” (Chance, 1986, p. 6)
• Lifelong
• Learning is “all purposeful learning activity, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence”. An endeavor of higher education is to prepare students to be this type of learner by developing specific dispositions and skills while in school (Commission of the European Communities, 2000).
• Team work is “a cooperative process that allows ordinary people to achieve extraordinary results” (Scarnati, 2001; p.5)
• Assessment: “Assessment is the systematic collection, review and use of information about educational programs undertaken for the purpose of improving student learning and development.” (Palomba & Banta, 1999; p.4)
• Accreditation: Official recognition that an institution meets required standards.
• Employability skills are those basic skills necessary for getting, keeping, and doing well on a job. (Robinson, 2000, p.1)
1.4 Brief Overview of the study:

The following research study consists of five chapters. In the first chapter, the introduction, purpose, rationale, and significance of the study were explained. The research question was defined and the definitions of main terms used in this study were stated. In the proceeding chapter, literature related to this study will be reviewed and further explained. Chapter 3 will discuss the methodology used to conduct this study from the research design to the sample used. This chapter will also discuss the instruments used to conduct this study and the procedure of data collection and data analysis as well as the ethical considerations taken into account. In chapter four, the results and findings of the study will be explained and analyzed as well as discussed and compared to previous research mentioned in chapter two. Finally the last chapter of this paper will conclude the study stating its limitations and implications and suggestions for future research.

1.5 Conclusion:

This chapter describes an overview on why this study is being conducted. The purpose and significance of this research study are clearly stated to provide a brief background on the importance of conducting this research. The following chapter will discuss the literature in details providing research conducted in the field and full insight on the theories, studies and views that exist on the topic.
Chapter Two

Literature review

To further enhance the need and importance of this research study the researcher reviewed a thorough literature of articles, reports, books and journals. Topics included in the literature review are focused on the skills gaps worldwide, in the Arab world and in Lebanon; the 21st century workforce demands; the accreditation agencies standards; assessment of student learning; and soft skills and their assessment.

Soft skills are career attributes required from graduates to meet the standards of the work force such as communication skills, teamwork skills, critical thinking skills, problem solving, lifelong learning and self-directedness skills, time management skills, and appreciation for diversity. Employers have been reporting that graduates have deficiencies in these skills. In fact, Mitchell, Skinner, and White (2010) state that employers rate soft skills as the most important skills required in the work place.

Across the world, educational institutions are required to improve their instruction for students to acquire the knowledge and skills to meet the work force demands. Benjamin, Klein, Steedle, Zahner, Eliot, Patterson (2012) point out that employers are now seeking to hire individuals with high critical and analytical skills who are able to communicate effectively. Kermis and Kermis (2011) covered a wide range of analysis of the importance, assessment and need of soft skills with the rising demands of the 21st century. Criticisms from employers that graduates are academically
proficient but lack the soft skills required for the work force have tuned the educational system to place more emphasis on teaching soft skills. Shakir (2009) explains that globalization and job market require much more competitive skills from our graduates.

2.1 Analyzing the work force demands of soft skills

Salleh, Sulaiman, and Taleb (2010) in their research regarding the workforce need of soft skills point out that employers are examining hiring from a different perspective nowadays due to the demands of the 21st century. Employers emphasize that graduates should have the soft skills needed to be able to maintain their jobs and create a tremendous pathway in their careers.

Research and evidence over the past couple of decades highlighted the value of soft skills. Irrespective of the work sectors, soft skills have become essential for effective communication and team management in the corporate world. For success in this competitive era, it has become a basic need for students and future employees to acquire soft skills. According to Watts and Watts (2008), hard skills contribution to one’s success is 15% while soft skills contribute to 85% of one’s success. Bush (2012) confirms that individuals who have acquired soft skills have better chances of career success. Historically hard skills were the only skills needed for employment but nowadays to keep individuals employed technical skills are no longer enough especially since organizations are cutting positions and right-sizing (James & James, 2004). Evenson (1999) explains that equipping students with the relevant soft skills can make a difference in getting or keeping the job they have been trained for.
Research that involved four hundred hiring executives from different corporations stated that graduates are not really ready for the work force demands (Riley, 1994) The study investigated the skills students lack upon graduation, and the following lacking skills emerged; communication skills, critical thinking and problem solving, professionalism and work ethics, teamwork and collaboration, leadership and project management (Riley, 1994). The University of Phoenix and U.S. Chamber of Commerce (2011) pursued to explore the most important soft skills needed and sought by employers through conducting a survey and interviews with employers. Results show that when it comes to hiring new employees, 84% of the respondents rate the ability and willingness of employees to learn new skills as very important and 82% considered critical thinking and problem solving as important. In a statistical second tier are three additional skills: collaboration / team work (74%), interpersonal communication (72%), and the ability to analyze and synthesize information (69%). (Life in the 21st Century Workforce: National Perspective, 2011)

Salleh et al. (2010, p.211) in their study regarding the workforce demands in the Malaysian context, show that “employers are no longer interested in hiring graduates who have only specific skills, but lack other relevant skills, especially the soft skills”. Casner-Lotto and Barrington (2006) indicate that employers rate the top five desired skills by graduates as very important as follows, oral communication (95.4%), teamwork/ collaboration (94.4%), professionalism/ worth ethic (93.8%), written communication (93.1%) and critical thinking/ problem solving (92.1%). Lifelong learning is rated as the tenth most desirable skill by employers where 78.3% of the employers rated it as very important. Casner Lotto and Barrington ,(2006) study also
assesses the readiness of new entrants to the workforce in terms of acquiring the soft skills needed. The study shows the following results summarized in the table below including the soft skills being assessed in this research where employers rated the percentage of students who acquired the skills as deficient, adequate, or excellent.

Table 2.1: Reference: Casner-Lotto, and Barrington, (2006)

<table>
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<th>Deficient</th>
<th>Adequate</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teamwork/collaboration</td>
<td>8.1%</td>
<td>67.3%</td>
<td>24.6%</td>
</tr>
<tr>
<td>Critical thinking/problem solving</td>
<td>9%</td>
<td>63.4%</td>
<td>27.6%</td>
</tr>
<tr>
<td>Oral communication</td>
<td>9.8%</td>
<td>65.4%</td>
<td>24.8%</td>
</tr>
<tr>
<td>Written communication</td>
<td>27.8%</td>
<td>56.4%</td>
<td>15.8%</td>
</tr>
<tr>
<td>Lifelong learning</td>
<td>14.3%</td>
<td>59.8%</td>
<td>25.9%</td>
</tr>
</tbody>
</table>

Archer and Davison (2008) conducted a study in the UK examining the most important employability skills according to international organization. It revealed that the most important skills employers seek are communication skills (82%), teamwork skills (91%), Intellectual ability (79%), analysis and decision making (76%).

The literature covering the work force demands lists many soft skills that employers seek when hiring graduates. The literature below discusses the soft skills mostly emphasized in the above literature, communication, lifelong learning, team work and critical thinking skills. It is vital to assess these skills to respond to the demands of the employers and accreditation agencies. American style universities incorporate these
skills in the Liberal Arts curriculum and state them as outcomes of this curriculum. It is important to start considering a process of assessing these skills in these universities especially that most of them are applying for accreditation from different agencies. As these universities seek accreditation they have to ensure to provide evidence of learning of these soft skills.

2.2 Assessment in higher education

Across different academic disciplines, scholars have focused on the concept of assessment to measure students’ learning and the effectiveness of teaching in universities. Assessment in higher education is an ongoing process that serves different purposes in academia. Assessment is used to evaluate a program, curricula, departments and even institutional effectiveness (Gibson & Shaw, 2010). Assessments measure students’ learning towards achieving the learning objectives upon graduation (Banta & Associates, 2002) and offer information to faculty regarding teaching effectiveness (Ramsden 2003; Yorke 2003). Moreover, the assessment process is a vital part of the quality assurance and accreditation process where it provides institutions with higher accountability to its stakeholders (Liu, 2012).

Different accreditation agencies around the globe have set standards for accreditation as guidelines for all universities to follow. All accreditation agencies have focused on assessing students’ learning and placed it as a requirement to attain accreditation. These accrediting agencies request of universities to provide evidence of student learning. Furthermore, the accrediting bodies expect universities in general and faculty in specific to develop learning outcomes, plan assessment techniques to assess
these outcomes, and use assessment findings for curriculum review and program development. On the other hand accreditation agencies don’t mandate what outcomes need to be attained upon graduation nor tools to assess these outcomes.

Increasing pressure on higher education institutions by policy makers and accreditation agencies to create a culture of evidence have increased in the last decade (Shavelson, Schneider, & Shulamn, 2007). In the United States several associations and organizations were developed to tackle the challenges of higher education institutions in the 21st century. The Association of American Colleges and Universitis (AAC&U) has taken the lead in researching and tackling the issues of importance to higher education (Shavelson et al., 2007). The mission of AAC&U is to focus on undergraduate education and quality of student learning. The Commission of the future of Higher Education developed by the Department of Education also pointed that improving accountability by providing evidence of learning is an urgent reform needed in higher education (Liu, 2012).

The Spellings Commission report of the Commission of the Future of Higher Education is best acknowledged to increase institutions accountability. The Spellings Commission report recommended the Collegiate Learning Assessment (CLA) and the National Survey of Student Engagement (NSSE) as the tests institutions should consider. The CLA is a computer administered open-ended test for analytical reasoning, problem solving, critical thinking and written communication (Klein, Benjamin, Shavelson, & Bolus, 2007). The NSSE is a survey that collects information about students’ engagement in programs and activities in the university that promote learning. By using the CLA the institutions (and not the students) are seen as the unit of assessment. The
most distinguished fact about the CLA is that its results report the extent to which students in a specific university are doing better, worse or the same as when they were first admitted to the university (Klein et al., 2007). The Spellings Commission have identified the CLA as one of the “most comprehensive national efforts to measure how much students actually learn” and that the CLA “promotes a culture of evidence based assessment in higher education” (US Department of Education, 2006, p.22).

According to Curtis (2010), educational assessment is a process by which a faculty or institution gather evidence, make judgments of the gathered data, and draw inferences and conclusions about students’ performance. Pellegrino, Chudowsky, and Glaser, (2001) described assessment in the following terms: “An assessment is a tool designed to observe students’ behavior and produce data that can be used to draw reasonable inferences about what students know” (p. 42). Wiggins (1998) asserted, “The aim of assessment is primarily to educate and improve student performance, not merely to audit it” (p. 7). Assessment of learning is mainly evaluating students’ individual performance, which can be assessed at the end of a semester, academic year, or upon graduation. This data can be mainly used to evaluate a program of study and how this program is allowing students to achieve all the program’s learning outcomes and skills needed.

As an effort for institutions to provide an evidence based environment, outcome based assessment is a commonly used process. According to Liu (2012), outcome based assessment is based on two main categories one focusing on specific-discipline outcomes (i.e. English, Physics, Mathematics… ) and the others are general university outcomes (i.e. critical thinking, communication skills…). The underlying need for
outcome based assessment is due to pressure laid by accreditation agencies and accountability calls for institutions to provide evidence of learning and stakeholders (parents and students) demand for data to facilitate decision making in schools’ selection (Liu, 2012). Moreover, Kuh, Jankowski, Ikenberry, and Kinzie (2014) add that external drives such as faculty’s interest in improving learning, national calls for accountability and an institutions internal commitment for improvement; force institutions to gather evidence of students’ learning. According to Banta (2002), the reasons why outcome based assessment is not practical is due to time, resources and understanding of assessment.

Although many studies have discussed the importance and need for the soft skills in our changing and demanding 21st century, and despite research on embedding teaching of soft skills in the universities and schools curriculum, little research was conducted on tools and methods to assess these soft skills. It is also important to mention here that the teaching and assessing of soft skills has not been an easy task for universities as soft skills are seen differently in different countries and employers’ expectations vary thus making it hard to embed these soft skills in the curriculum (Kechagias, 2011).

Soft skills assessment still undergoes a variety of challenges nowadays. According to Kechagias, (2011), teachers didn’t yet specify or have any specific standards for soft skills required for students to meet nor instruments or tools to assess these skills. According to Bennet and Gutomer (2009), the knowledge to assess students’ acquisition of certain soft skills is still in its infancy level and developers of assessment methods to test these skills are yet not knowledgeable enough to create and develop
these assessment strategies. Moreover Kechagias (2011) suggests that the assessment of soft skills require revealing the conceptual strategies applied to solve a problem which is not yet doable in terms of interpreting the behaviors that are leading to students’ responses on any test. Moreover from another standpoint, limiting soft skills acquisition to educational institutions is another challenge as soft skills such as critical thinking, creativity, communication and other soft skills can be highly developed in different contexts outside an institution or even outside any program of study. This challenge thus doesn’t reflect how any teaching strategy can foster the development of these skills (Kechagias, 2011). For example, team work assessment also remains a challenge and a highly debatable issue, as research suggests, since the debate on whether to assess students individually in team work or assess them as a team might cause bias or unfairness in assessment, another issue that needs further investigation. On the other hand, practically speaking feasibility, accessibility, validity and reliability of assessment strategies can also be considered as a challenge for assessment of soft skills.

2.3 Lifelong Learning

Considering the demands of the 21st century, the changes accompanying today’s world, fostering lifelong learning for all has become an international concern and a pressing demand in the global world. The fast pace of development is forcing professionals in various fields to stay up to date. Candy (1991) defined lifelong learning as “equipping people with skills and competencies to continue their own self-education beyond the end of formal schooling”. Findings from the Lisbon European council confirm that “the move toward lifelong learning must accompany a successful transition
to a knowledge base economy and society” (Commission of European Communities Report, 2000, p. 3).

According to the Commission of European Communities Report, A Memorandum on lifelong learning, lifelong learning is seen as the guiding principle across the continuum of learning rather than just one aspect of education and training, where the implementation of this vision should be seen in the coming decades (Commission of European Communities Report, 2000). The report confirms the importance of providing equal opportunities for all citizens living in Europe to cope with the economic and social changes.

Moreover, “Lifelong learning is the common umbrella under which all kinds of teaching and learning should be united” (Commission of European Communities Report, 2000, p. 4). Building a sense of responsibility for lifelong learning demands acknowledging its importance, cooperation between organizations, institutions, societies along the globe in order to provide today’s citizens with the opportunity to develop this skill. Moving towards a knowledge-based society and economy, competition has increased which made it vital to consider the changes affecting employability and the work force adaptability. Employees are expected more than ever to be active contributors to the society, appreciate diversity and strive for development and excellence, whether on a small scale such as their professions, community, and society or a broader scale of their country or even the world.

A starting point of fostering lifelong learning to allow citizens to meet the challenges and demands is in the educational institutions. According to the
memorandum, educational and training systems must adapt to the new realities of the 21st century and that lifelong learning is an essential policy for the development of citizenship, social cohesion and employment. Citizens are the leading actors of the knowledge society, and investing in human capacity to teach them how to create and use knowledge in an innovative manner, is what counts most.

Learning is dynamic, it’s a lifelong journey. Education whether at school level, university level or training does not last forever, it is essential to ensure that at the end of any educational stage students have “learnt to learn” and embed in their personality the willingness and attitude to learn. As Cornford, (2000) states the educational system should shift its emphasis to teach students self-inquiry skills and within teams in an effort to improve students’ attitude towards learning and their critical and creative thinking skills. Students should be led to discover their own interests and attain self-motivation towards their own learning (As cited by Law, Pelgrum, & Plomp, 2008).

A major educational challenge for years has been to promote lifelong learning. Collins (2009) discusses that meeting this challenge requires teachers to change the way they teach and learners change the way they learn. In a global environment that is exponentially growing, leaders need to be lifelong learners to remain effective. Leaders should not only promote their own professional development but should also work on encouraging their followers towards lifelong learning (Boyd, & Williams, 2010). Teachers need to shift to act as facilitators and students have to be taught to be self-directed and take responsibility of their own learning. Less emphasis on passive learning should be applied and more of problem-based and active learning should be implemented.
Learning is an ongoing process that should be viewed by teachers as an infinite thing and viewed as part of life itself. Great emphasis and importance have been put on the fact that students should be taught to develop lifelong learning skills. Felder and Brent (2003) divide lifelong learning into two components the recognition for the need to be a lifelong learner and the ability to engage in lifelong learning. Lifelong learning is defined as a continuously supportive process that empowers individuals to acquire the skills required for life and to apply them with confidence and creativity in their lives (Collins, 2009). Lifelong learning is also seen as the acquisition of knowledge for academic purposes, professional development and workplace demands, and for personal intellectual growth (Law et al., 2009). When comparing lifelong learning to traditional learning, the challenge of lifelong learning is shifting mindsets into new ways of teaching and learning competent with the challenges of the 21st century. Real world problems will enable learners to acquire and apply knowledge through self-directed and authentic problems. Unlike traditional learning, in lifelong learning students have to be motivated and self-regulated to be involved in goal setting where the learning process is more rewarding for the students as they realize they are achieving their goals.

Collins (2009, p. 616) describe self-directed learning as “a process in which learners take the initiative, with the support and collaboration of others; for increasing self- and social awareness; critically analyzing and reflecting on their situations; diagnosing their learning needs with specific reference to competencies they have helped identify; formulating socially and personally relevant learning goals; identifying human and material resources for learning; choosing and implementing appropriate learning strategies; and reflecting on and evaluating their learning.” Common attributes among
lifelong learners is willingness to be self-critical, self-correcting, and flexible in thinking and acting where a learner is open to new ideas, skills, and behaviors.

Lifelong learning can be seen as a decision to seek continuous improvement in one’s life and eager to develop one’s skills. Teaching others how to do something is a way to learn. Always having something to read is a strategy for lifelong learning which will allow the reader to learn more. Joining organizations can also help one learn from other people in this organization. Getting involved in research allows the learner to contribute to his bank of knowledge positively. Moreover getting involved in conferences by participating in discussions is an effective strategy for lifelong learning (Collins, 2009). As learning refers to change and change implies risks, learning requires the courage to take risks.

2.4 Team work skills

The changing nature of work nowadays, the growth of professional organizations and the changes accompanied with hierarchies, the changing scope of organizations from local firm to regional, national or international ones; the emphasis on innovation are all reasons that shifted the culture of work towards team work (Laudon & Laudon, 2013). Teamwork and collaborative work are buzz words in today’s employment sector. As mentioned earlier teamwork skills are seen as essential soft skills required by employers in today’s world. Employers rank “teamwork/collaboration” second only to “professionalism” when asked which skills are currently very important for new entrants in the workforce, and they rank it third when asked which skills they expect to become more important over the next five years (Casner-Lotto and Barrington, 2006). Avery
and Walker (2006) affirm “Becoming skilled at doing more with others may be the single most important thing you can do to increase your value—regardless of your level of authority”.

Stevens and Campion (1994) categorize interpersonal and self-management competencies as the abilities, skills and knowledge required for team work. Moreover, “Internal communication and teamwork are necessary for sustainability and the five elements of strategy, processes, people, structure and rewards have to be closely intertwined to gain competitive advantage” (Singh, 2013, p. 23). Watson (2002) argues that team work is not one skill but a collection of most of the useful generic skills such as communication, planning, managing and using conflict, leadership and decision making, meeting skills, personal management skills, and reflective practice all summed up as cooperative or collaborative learning skills. Scarnati (2001) defines teamwork “as a cooperative process that allows ordinary people to achieve extra ordinary results” (p.5). Teamwork is based on a team that work for a common purpose to achieve team goals which is attained by developing effective relationships among team members (Harris & Harris, 1996). According to Smith (1996), “A team is a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable” (p. 5).

There is no one terminology for team work and no exact definitions thus no one way for team work to be successful. Yet there are shared characteristics where each team has to define its methodology, work within clear guidelines, and structure to deliver the
assignment outcomes. In university teams it is favored to look at teams as a cohesive social system where team members are committed, share leadership, develop a common purpose, maintain clear communication, respect deadlines, and define tasks to perform (Watson, 2002). “Successful teamwork relies upon synergism existing between all team members creating an environment where they are all willing to contribute and participate in order to promote and nurture a positive, effective team environment” (Tarricone & Luca, 2002, p. 2). Team members according to Luca and Tarricone (2001) should be flexible enough and work cooperatively to achieve goals with collaboration rather than competition.

Marin-Garcia and Lloret (2008) in their research approached teamwork from different perspectives whether introduced in an active learning approach or isolated activities, whether to grade students working in teams individually or give the whole team one mark. The study asserts that teacher’s involvement is necessary as devoting time, motivating, and supervising activities is necessary. The teachers’ role is not only to train the group and explain the activity but also to follow up on the students to ensure their proper way of working in teams. It is also important to explain to students how their work will be assessed. Team work involves both the process and the product. The group work can be assessed by assessing the students’ attendance to meetings, their quality of participation, preparation for the meeting, interpersonal communication among team members, delegation of work, decision making and problem solving, and the team members’ creativity. This will emphasize the importance of the process to students where they realize that they will be assessed on the way they have achieved the product. To assess the process, multiple assessments throughout the process should take
place and more evaluators are recommended such as self-assessment and peer evaluation. Methods that are usually used to assess team work processes are criteria based assessment or students’ written comments on how the team works.

Shuman Besterfield-Sacre and McGourty (2005) suggest that effective training should have two characteristics: fidelity and complexity (Mass Project). Fidelity here represents how the faculty can provide similar learning environments to the one’s that they will encounter at their workplace. To increase the fidelity of any teamwork activity one can match the work conditions as much as possible to the learning experience. Complexity is defined by two sub factors: task interdependence and cognitive effort (Mass Project). The more complex the team work activity the more challenging it is and students will be required more to identify its complexity and work as a team. The team work that is lower in fidelity and complexity are easier to be administered and prepared by faculty but are less educative and challenging for students.

Successful team work enables students to develop the generic skills necessary where they are more exposed to engage in active and interactive learning and allows them to have greater educational autonomy thus understanding cooperative working and the learning process from different dimensions. Team work also allows peer reviewing which enables students to learn more from each other’s experiences and share their knowledge (Watson, 2002). Team work is viewed as an important facet of current university teaching, preventing parasite behavior among team members is a necessity to ensure successful team work (Marin-Garcia, & Lloret, 2008).
2.5 Critical Thinking

Critical thinking is a desirable outcome in educational institutions as it is essential for accessing and analyzing the information needed in the 21st century workforce. Pithers and Soden (2000, p. 239), state that “critical thinking in any area is one being able to pursue one’s question through interrogation of knowledge and self-directed search and being able to support ones’ argument through evidence.” Zhang (2003) states that” the ideal critical thinker is well informed, trustful of reason, open minded, flexible, and fair minded in evaluation, honest in facing personal biases, willing to reconsider, clear about issues, reasonable and focused in inquiry”(p.521). Students referred to critical thinking as an ability to think, analyze, reflect, predicting, of information (Lloyd & Bahr, 2010). Despite disagreement on a common definition of critical thinking, significant agreement on its components exists. Critical thinking is reached when students identify critical issues and assumptions in an argument, recognize relationships, make correct references, deduce conclusion from given data, evaluate evidence of authority, make self-corrections, and solve problems.

“Educators have long been aware of the importance of critical thinking skills as an outcome of student learning” (Lai, 2011, p. 4). Considering critical thinking from an educational approach, the pioneer is Bloom and his associates in developing the Bloom’s Taxonomy which is the most widely used source for teaching and assessing higher order thinking skills. The three highest levels (analysis, synthesis, and evaluation) are frequently said to represent critical thinking (Kennedy, Fisher, & Ennis, 1991). Critical thinking is seen important since it provides students with better grades and greater job
success. The reason why critical thinking is important is much more than that. According to Facione (2000) critical thinking counts because it promotes liberal education that allows students to excel on their own, to go beyond what was learned, and to make their own contributions to their knowledge and society. Liberal education is when students learn to learn and to think for themselves. Regardless of their academic degrees, if one doesn’t acquire the critical thinking skills and the dispositions he/she is not liberally educated. It is a national necessity to educate our students to become critical thinkers as it is essential in maintaining the economic development and the country’s democracy (Facione, 2000).

Transferability of critical thinking skills is also a debate across researchers where Willingham (2008) notes that while some students are able to apply critical thinking in certain contexts they fail to transfer these skills to be used in a different context or domain.

The ability to think critically whether in adults or children has been a concern and an area of investigation tackled by researchers. Halpern (1998), points out in his research in psychology that many adults fail to think critically in many situations. Kennedy Fisher, and Ennis (1991) and Van Gelder (2005) have likewise concluded that many adults lack basic reasoning skills. “Students need to appreciate the underlying structures of problems as they learn to reason about them to be able to transfer their critical thinking skills to other problems that they encounter in their lives” (Stark, 2012, p. 108). Halpern (1998) warns that dramatic improvements in critical thinking should not be expected when teaching these skills over time.
Employers seek to hire students who are more focused on authentic learning outcomes rather than focused on academic qualifications. Critical thinking is sought and seen as the basis upon which all effective decision making is made. Students have shown difficulties in transferring the ability to think critically from one situation to another (Willingham, 2008). Research suggests that without understanding of the skills required for critical thinking students will not be able to develop these skills (French & Tracy, 2010). Through an inquiry based learning and active learning environment students will have the opportunity to apply the critical thinking skills. Creating a real world context to the students allows students to be more challenged and encouraged to think critically. Findings show that students perform better, improve the skills required for the critical case analysis and their understanding of the importance of critical thinking skills in their everyday life when exposed to real-world problems (French et al, 2010). Warren, Memory and Bollinger (2004) discuss that “critical thinking skills are most effectively developed and learned when they are taught in conjunction or embedded with content-not in isolation” (As cited by Savich, 2009 p. 3)

Researchers reflect that all teachers when designing their method of teaching should teach with an eye on critical thinking but the problem lies in the lack of understanding and clarity of what critical thinking is. Embedding critical thinking across the curriculum can be applied by analyzing, synthesizing, and evaluating information gathered through observation, reflection, communication, or experience (Thompson, 2011). Thompson (2011) suggests that to teach critical thinking instructors should consider embedding it in the curriculum, guiding students through questions, engaging students and assessing critical thinking skills.
To embed critical thinking in the curriculum, shifting from what is convenient to what is needed is necessary for the proper instruction of critical thinking as the approach to teaching critical thinking can be within a subject-specific discipline or embedded in other areas. Although critical thinking should be embedded in every course, according to Solon (2001) college students are likely to benefit more from enrolling in a course that teaches critical thinking independently from other disciplines. For developing critical thinking skills in university students it is suggested that embedding critical thinking in reading and writing across the curriculum can allow students to develop these skills. Promoting critical thinking is vital; questioning is one of the most effective ways to be used. Effective questions guide students through their thinking and encourage them to interpret, analyze, critique, and reflect on information. Teachers should guide their students throughout the inquiry process, to help them process their thinking like researchers, and get engaged in hands-on activities. Students are encouraged to be actively involved in the learning process through the use of authentic tasks that foster problem-based learning. Assignments that incorporate real-life examples, projects, paper assignments that allow students to synthesize arguments, and verbal techniques of argument discussion can allow teachers to assess the students’ cognitive and critical thinking skills (Thompson, 2011).

The essential role of critical thinking in the 21st century workforce and knowledge economy caused serious shifts in teaching and learning. According to Benjamin, Klein, Steedle, Zahner, Elliot, and Patterson, (2013); the reform in education can be outlined under three dimensions, the shift from lectures to student centered learning, the change in curricula from its emphasis on content to problem based learning
and change of multiple choice assessment techniques to open ended assessment techniques. Assessment is lagging behind in terms of the three dimensions. Educational institutions are focusing on developing critical thinking skills however assessment tools need to measure what students are learning and whether educational institutions are teaching these skills (Benjamin et al. 2013).

Assessment of critical thinking skills has been applied in the last decade by the use of different multiple choice tests or performance based tools. A performance assessment test allows students to evaluate information and relate it to real-world problems (Benjamin, et al. 2013). Educators promote the use of performance based assessment techniques that relate to real-world problems (Bonk & Smith, 1998; & Rosen, 2011). According to Benjamin et al. (2013), performance assessment tools have advantages over multiple choice tests, in such a way where students must critique a real-world problem and explain how an argument fails rather than just choosing the right answer from a list of possible choices. Moreover, performance based assessment allows to assess written communications as students are asked to write essays. However as Ennis and Weir (1985) explain, when assessing the essay through the Ennis-Weir Critical Thinking Essay Test, one should be aware that the test’s purpose is to assess critical thinking and not writing abilities. Ennis et al. (1985) warn that grading the essay should be based on the ideas and reasonable understanding of the problem rather than assessing the language used to express understanding. The Ennis and Weir Critical Thinking Test is one of the tests used to assess critical thinking. It measures the students’ critical thinking ability in the context of argumentation (Ennis et al, 1985, p. 1). The test requires students to present and respond to an argument by reflecting their
understanding of the purpose, offering good reasoning, seeing assumptions, including other explanations. 

In the United States many universities are exploring new methods to assess critical thinking. Faculty in the Tennessee Technological University has developed a custom made assessment test to assess critical thinking; one that is directly valid in the eyes’ of university faculty. The faculty decided to use a short answer essay test and developed scoring rubrics to grade students’ essays. According to Terry (2012), presenting students with short news from the press presenting different real world context allow the assessment of critical thinking skills through a rubric. Students are presented with news from the press and asked to identify claims, evaluate evidence, and support or argue against claim. This method can be used to assess students’ critical thinking ability and report results.

2.6 Communication skills

Students need to develop communication skills to speak well in their personal lives, future work places, and social interactions (Deepa, 2012). Developing oral communication skills is a lifelong process, and university graduates are required to focus on communication skills and attitudes to climb the ladder of success in their careers. Communication skills are seen important whether in daily life or professional setting usage. These skills represent what information individuals give and receive and how opinions are conveyed and interpreted with people around us (US department of Labor, 2007). Students need to acknowledge the fact that even if they were hired for their technical skills they will only be promoted for the acquisition of certain skills one of
which is effective communication skills (Murphy & Hildebrandt, 1988). University learning has to focus on providing students with the course work that will improve their communication skills and prepare them to be well-rounded professionals able to succeed in their professions. Research studies confirm that communication can affect efficiency and productivity in any work environment. (Singh, 2013)

Research studies in the last decade have reflected the importance of communication skills for employers among the most important skills graduates need to possess upon their entry for a new job. “In study after study, communication skills emerge as one of the most important, if not the most important quality that employers require of graduates. Possessing good communication skills is often seen by employers as an indicator of potential success.” (Harvey, 1999, p.12). As Maes, Weldy, and Icenogle, (1997) assert “Oral communication is consistently identified both as the most important competency in evaluating entry-level job candidates” (Ihmeideh Ahmad, & Al-Dababneh, 2010, pp.2). “Communication skills are ranked FIRST among a job candidate’s “must have” skills and qualities, according to a 2010 survey conducted by the National Association of Colleges and Employers.” (US department of Labor, 2007).

The concern of employers regarding graduates acquisition of these skills and the agreement that students’ oral and written communication skills requires further attention and emphasis in the universities’ curriculum.

“Oral communication can take many forms, ranging from informal conversation that occurs spontaneously and, in most cases, for which the content cannot be planned,
to participation in meetings, which occurs in a structured environment, usually with a set agenda” (Rahman, 2010, p.3).

2.7 Active learning Approach and Teaching and Assessment of Soft Skills

Active learning, through which students become active participants in the learning process, is important means for the development of student skills (Bonwell & Eison, 1991). Educators in higher education are seeking the implementation of active learning (Meyers & Jones, 1993) to take advantage of its benefits in preparing students for their careers (Haywood, 1989; Hegarty, 1986; Russell & Rothschild, 1991; Umbreit, 1992). Active learning is recommended to educators as a means to promote a wider and general knowledge base and interpersonal skills such as communication, problem solving and team work (Bean, 1996, Sutherland & Bonwell, 1996, Silberman, 1996). Marquadt (1999, p. 4) points that “Action learning is both a process and a powerful program that involves a small group of people solving real problems while at the same time focusing on what they are learning and how their learning can benefit each group member and the organization as a whole”. Active learning in a classroom uses different activities and multiple teaching strategies to engage students in learning. Different active learning activities to promote learning such as role play, case studies, debates, watching and commenting on videos, and using simulations are used in today’s classrooms (McKinny, 2008). Active learning keep students engaged in classrooms by relating concepts to real life experiences (Hatcher & Hinton, 1996). Active learning is seen to improve communication and team work skills since it promotes greater self-confidence,
self-reflection, new insights and feedback on one’s own experience with the ability to ask better questions and improve one’s skills (Marquadt, 1999).

Professors teaching nowadays have the choice whether to implement active learning methods to help students enter the world ready or teach with the conventional teacher-centered methods. As Dale (1946) discussed in the pyramid of active and passive learning presented below students tend to learn best by doing. Burner (1961) confirms that learners who engage with material are able to use the information learned in different contexts. The more students are engaged in activities the more they learn Dale,

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Figure 2.1: Cone of Learning(Edgar Dale)
Discussion and group work are two active learning techniques used to enhance learning. Discussion is used to engage students and allow them to understand different concepts in depth (Ellis, Calvo, & Levy, 2004). Discussions also allow students to relate concepts to real-life experiences and link its application to new contexts in the real world (Goldburg & Finkelsin, 2002). Group work, another active learning strategy, refers to engaging students in small groups to work on a specific case, discussion, presentation… Students enjoy group work where they feel more involved in the learning process.

To further discuss active learning, problem based learning is an approach used to introduce real life problems in the learning occurring to simulate the curiosity of the students to learn new things and develop lifelong learning skills (Marta, 2011). In problem based learning approaches students are active participants in the learning process and faculty act like facilitators who guide the learning process. Different research studies suggest that problem based learning is seen to increase students’ motivation and students’ knowledge acquisition as well as positively impacts learners’ attitudes. It is thus considered more effective than traditional teaching strategies. PBL is centered on what students do rather than what instructors do where the problem is set before the knowledge and the students seek to solve the problem to gain the knowledge. Students mainly work in groups to solve a challenging situation given by the instructor, thus developing a range of skills such as problem solving, thinking, teamwork, communication, time management, research, critical thinking, analytical, reasoning, and decision making skills (Marta, 2011). Moreover, preparation for lifelong learning is
directly bound to allowing students to take active roles in small groups in a problem
based learning environment. (Chiang, Chapman, & Elder, 2010)

Nevertheless, a study performed by Boyd and Williams (2010) shows that
engaging students in a personal growth project has a positive impact on them. The
personal growth project asked students to brainstorm five things they would like to learn
if they had time, to reflect on their list, choose one project from the five and prepare a
one page proposal detailing the project and the reason they chose it. The student should
explain the challenge of the project as a new idea and the resources they plan to use to
implement their ideas where the focus of the project is to document their personal
growth through a daily log or dairy that reflect the learning process. Students should also
mention in their projects the barriers they faced and how they plan to overcome them.
The results show that students have realized that leaders should allocate time for self-
 improvement, they must incorporate much of the course content in their personal growth
project, how to prioritize their activities, and use their strengths in their projects. The
study discusses how personal growth projects can help students develop self-direction,
new skills and a habit of lifelong learning. These projects help leaders develop strategies
that stretch their boundaries. Reflection on behaviors, values and desires is also
necessary to develop these skills.

In conclusion, soft skills assessment is a new concern and an underdeveloped
domain of study. Several considerations are of concern whether the agreement on a
definition of soft skills among institutions and countries and expected soft skills required
for the work force, discrepancies among teaching environments, standards required, and
external factors that affect the development or un-development of these skills. Several
challenges need to be addresses further. The following chapter will discuss the methodology used to introduce a method to assess soft skills as outcomes of the liberal arts curriculum applied in the university.
Chapter III

Methodology and Procedure

3.1 Introduction:

This chapter presents the research design, sample and the instruments that are used to collect data to address the research question: questionnaires (current senior students and alumni), focus group interviews, and an active learning session. The last section presents data analysis, the ethical considerations and discussion of reliability and validity issues.

3.2 Research design:

Since the major purpose of this study was to investigate and assess the extent to which graduating students are equipped with the soft skills needed in the 21st century workforce, the study is exploratory in nature. Exploratory research is seen to be the best method to use for this particular study. Frankel, Hyun, and Wallen (2012) explain “the rationale underlying the exploratory design is to explore a phenomenon or to identify important themes” (p.560).

The study adopts a mixed method research design where the research question is addressed using both qualitative and quantitative data to meet the target of this research study (Creswell & Plano Clark, 2007). The purpose for using a mixed method approach is “to provide a wider understanding of the data collected, to develop a holistic image and to allow us to explore the relationships in depth” (Frankel et al., 2009, p. 558). When quantitative and qualitative data are combined, results are triangulated and more
usable thus making it possible to generalize the outcomes of the research (Frankel & Wallen, 2008). However in this study the researcher’s aim is not to generalize but to explore the extent to which students are acquiring the soft skills needed in the workforce; therefore shedding light on this issue in this particular university will provide other institutions with information that is relevant to their context.

3.3 Target Population and Sample:

Since the number of students at the university where the study took place was large and for accessibility purposes, the researcher identified the seniors of the School of Arts and Sciences as the sample for this study. From the students’ database list, senior students from all majors under the School of Arts and Sciences were identified; they received a survey through Survey Monkey to participate in the study. The students’ survey was administered to 391 students with a senior university status graduating in spring 2013; 139 students responded so the return ratio was 35.8 %. Alumni lists of students who graduated from different majors under the School of Arts and Sciences were also requested from the Alumni Office. The Alumni survey was administered to 3191 of which 349 alumni responded for a return ratio of 10.93%. If we assume a ±7 precision level with a confidence level of 93% and a maximum variability (p=0.5) then the sample size represents the population desired. In the students’ survey, students were asked if they are interested to participate in a focus group session or an active learning session. Students were randomly chosen from the list of those who accepted and contacted to participate. The researcher kept contacting random students and asking
them to participate until a consensus on the time and place was reached with an adequate number of students (8 students for each focus group session and 20 for each active learning session).

3.4 Instruments:

The three forms of data collection that the researcher used to conduct this study were questionnaires (students and alumni), focus group interviews and an active learning session (engaging students in a discussion and assessing their soft skills using rubrics).

3.4.1 Questionnaires:

The first instrument that the researcher used is a questionnaire. The use of the questionnaire was to provide the researcher with considerable data and information about the students. Using a questionnaire in this study was convenient because “a questionnaire can be mailed to a large number of people at the same time” (Frankel et al., 2008, p.123). However according to Frankel et al. (2008), the disadvantages are that “unclear questions couldn’t be clarified to respondents and respondents have no choice to express more to a question of specific interest” (p. 123). To overcome the disadvantages, the focus group interviews allowed students to express their thoughts and ideas deeply.

The survey questions in the students’ survey were developed after a review of the relevant literature and the instruments that are used to assess soft skills. Since meager literature exists on best ways to assess soft skills; the researcher decided to develop a
questionnaire based on the rubrics being used to assess soft skills. The questionnaire construction passed through different phases. The researcher first focused on choosing the rubrics that best suit this study from among a huge data base of rubrics, the researcher then identified the sub skills that need to be assessed within the four soft skills being assessed in this study. The questionnaire items were also based on the research question and used clear and easy language by presenting the three multiple answer choices as the three levels of any rubric milestone, benchmark and capstone. Drever (1995) suggests that a good questionnaire that leads to significant results is the one that asks questions relating to the research objective and research question. For example, question number 2 “When you are asked to evaluate a case study you: ……..” is indirectly assessing the students evaluation ability which is a sub skill in critical thinking assessment and is thus relevant to the research question. Moreover, the students’ questionnaire included 16 questions divided as follows: 5 to assess critical thinking skills, 4 to assess team work skills, 3 to assess communication skills and 4 to assess lifelong learning skills (See appendix A).

After developing the questionnaire, the second phase was conducting a pilot study. According to Leung, (2001), it is vital to pilot a questionnaire before the last version is administered since a pilot study allows the researcher to refine the questionnaire. The pilot study was conducted at the beginning of Spring semester, 2013 to a small sample of students who were not eventually included in the study. The purpose of piloting the questionnaire was to determine the deficiencies and tackle points that should be modified if needed.
The last phase was applying the changes recommended by students and passing the questionnaire to experts in the field for final modifications. The last version of the questionnaire (see appendix A) was deployed through Survey Monkey to senior students who are graduating in Spring 2013 from different majors under the School of Arts and Sciences in order to assess the extent to which graduating students are equipped with these four soft skills.

Another questionnaire was designed and administered to alumni students who have pursued a BA or BS from the School of Arts and Sciences (see appendix B). The alumni questionnaire was designed in a clear and direct way to ask alumni students about their perceptions of whether this particular university has equipped them with the necessary soft skills for the workforce and graduate school. Moreover the questionnaire asked the students about how important they perceive these four skills at their workplace and in their graduate studies.

3.4.2 Focus Group Interviews:

The focus group interview questions addressed the research question. They included three questions to assess lifelong learning, four questions to assess critical thinking, four questions to assess communication skills and three questions to assess team work skills (See Appendix C).

The researcher conducted two focus group interviews with 16 senior level students from different majors under the School of Arts and Sciences. Each focus group session included 8 students. After the students were asked if the interview can be recorded and after signing the consent forms, the interviews were audio recorded. Recording of the two sessions was essential for the researcher to keep track of all discussions, and to capture what was said by the students to reduce uncertainty or confusion (Frankel & Wallen, 2006). The focus group interviews took place in a conference room that was
booked at the university prior to the sessions. The sessions were planned to take around 90 minutes to allow time for a thorough reflection on the questions on one hand and for not causing students to feel fatigue on another hand.

The researcher explained the rules of the focus group discussions at the beginning of each session, and asked the students to express their opinions freely and build on each other’s’ comments. Moreover, the researcher made sure not to intervene in such a way to judge or evaluate the students’ information but rather acted as the facilitator for guiding the discussion (Burns, 2000).

The advantage for using focus group interviews is that they allow discussion and exchange of ideas between participants (Cohen et al. 2007, Frankel et al. 2006); and interaction with the researcher (Stewart, Shamdasani, & Rook, 2007). Focus groups “offer depth and insight into the research question and help contextualize quantitative data” (Billson, 2006, p.4). The aim of the focus group interviews is to collect more information from students and allow them to elaborate on their ideas. Another advantage was cost effectiveness in terms of collecting data. The group of 8 students discussing the questions together also allowed the researcher to receive feedback and collectively gather more valuable data (Frankel & Wallen, 2008). However one obstacle that the researcher faced was that students were losing focus and deviating from the main question. The researcher had to interfere to put the students back on track and re-state the questions and clarify them.

3.4.3 Active learning tool kit:

The third instrument the researcher used was an active learning approach to assess the students’ acquisition of the soft skills. The literature emphasizes the use of active learning in
teaching and allowing students to take part of their learning experience as well as using it to derive information about students’ performance and acquisition of certain skills.

The aim of this active learning session was to assess the skills targeted in this study after integrating the students in an active learning experience. In this session the researcher aims to assess critical thinking, communication, lifelong learning and teamwork skills using a problem based group work activity. According to Reed, Kinzie, and Ross (2001), problem based learning allows students to have a sense of ownership over their learning, empowers them with problem solving skills and makes them self-directed learners. The advantage of using a problem based learning activity to assess these skills is that “It may be preferable, and more rigorous, for assessments to follow the PBL philosophy and to require the individual to analyze a problem, search for and then apply relevant information” (Reynolds, 1997, p. 272).

The active learning session was designed to start by discussing with the students ethical decision making at the workplace. The researcher brainstormed with the students different examples of ethical and unethical behaviors and steps of decision making by asking them various questions. (See appendix D). The researcher asked the students questions like: “How do you make decisions?”... “Is decision-making a skill that was taught to you?”..... “What are ethics?”... After brainstorming the students were randomly selected to sit in groups of five resulting in 4 groups. The researcher conducted two active learning sessions with 20 students in each session. Each group of students was then presented with a different case were the students were asked to analyze the case from an ethical point of view and write an essay to present their analysis. The students were then asked to present their analysis as a group and explain
the case to the rest of the participants. The researcher was rotating around the groups while they were working in teams to assess their team work skills by using rubrics (see Appendix E). Critical thinking (see Appendix F), written communication and lifelong learning skills (see Appendix G) were assessed using the rubrics through their essays. Oral communication skills (see Appendix H) were assessed through the oral presentation of the group at the end of their tasks.

Table 3.1: Instruments used to answer research questions

<table>
<thead>
<tr>
<th>Research Question and Sub-questions</th>
<th>Instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent are university students’ graduating with critical thinking, lifelong learning, teamwork, and communication skills?</td>
<td>ALL</td>
</tr>
<tr>
<td>As graduates and graduates to be, determine the program needs regarding the teaching of soft skills</td>
<td>Survey Question 16 Focus Group questions 16, 17 Alumni Survey</td>
</tr>
<tr>
<td>As graduates to be, evaluate the extent to which your program is preparing you for the work force</td>
<td>Focus Group questions 16, 17 All questions</td>
</tr>
<tr>
<td>As graduates to be, evaluate the emphasis being put on the importance of teaching critical thinking in your program</td>
<td>Survey Questions 1,2,3,4,5 Focus Group questions 4,5,6,7,8 Critical thinking rubric</td>
</tr>
<tr>
<td>As graduate to be, determine the importance of team work skills, and the extent to which you have been asked to work in teams as part of your assignments</td>
<td>Survey Questions 6, 7, 8, 9 Focus group questions 13, 14, 15 Team work rubric</td>
</tr>
<tr>
<td>As graduates to be, determine how much your professors in specific and the university in general are preparing you to be a lifelong learner</td>
<td>Survey Questions 13, 14, 15, 17 Focus Group questions 1,2,3 Life Long learning rubric</td>
</tr>
<tr>
<td>As graduates to be, rate yourself in terms of being able to communicate effectively whether orally or written</td>
<td>Survey Questions 10, 11, 12 Focus group questions 9, 10, 11, 12 Communication skills rubric</td>
</tr>
</tbody>
</table>
3.5 Triangulation, Validity and Reliability:

The use of different instruments is necessary for triangulation as the latter can lead to increased confidence in research data, creating innovative ways of understanding a phenomenon, revealing unique findings, challenging or integrating theories, and providing a clearer understanding of the problem (Thurmond, 2001). Generally, triangulation is useful to minimize bias and increase validity (Frankel & Wallen, 2008). The instruments are said to be valid if they measure what they are supposed to measure. After designing the instruments the researcher piloted the instruments and consulted with experts to ensure that all the questions are aligned with the research question and the purpose of the study. The use of the three instruments was vital to link the results and find common relationship among data from the 3 sources. This improves the validity and reliability of the study.

3.6 Ethical Considerations

Several ethical considerations were noted while conducting this research study. Ethical issues were addressed in compliance with the regulations of the Institutional Review Board (IRB) where the permission for conducting this research was obtained. The researcher was sure to respect the participants’ privacy, confidentiality, and anonymity. The participants were asked to sign a consent form to participate in this study and were given the choice to drop out from the study at any point. In this study, no psychological or physical harm was incurred on any of the participants.
The researcher was sure to carry out the research with respect and concern for the dignity and welfare of the people who participated (Fraenkel & Wallen, 2012).

3.7 Procedure and data collection:

The data collected for this investigation used the students’ input from three sources, surveys, focus groups and an active learning approach and was divided into three phases.

The students’ and alumni survey were sent to students using Survey Monkey at the beginning of the Spring semester, 2013. Several reminders were sent to students to increase the number of respondents to the surveys. In the surveys students were asked if they are interested to participate in focus group interviews or an active learning session. After randomly choosing the participants two focus group sessions were scheduled to collect further qualitative data in the middle of the Spring semester, 2013. After completing the interviews, students were randomly selected to participate in to two different active learning sessions. The active learning sessions were scheduled towards the end of the Spring semester, 2013, one week before the students started their final exams. The researcher was pressured with the data collection as all the data needed to be collected before the end of the semester and the seniors graduate. At all three levels, the topic of the study was discussed and its purpose and significance were shared with the participants.
3.8 Data Analysis

To ensure that conclusions derived from the data are valid, the data was consistently and precisely scored (Frankel & Wallen, 2006). The collected data from the instruments resulted in quantitative data (questionnaires and rubrics in the active learning session) and qualitative data (focus group interviews).

Descriptive statistics were run into SPSS to organize the data collected through surveys, to analyze the data and to provide an indication of the relationships that exist between variables. The students’ survey was developed in way that the choices represent the three different levels of any rubric; capstone, milestone, and benchmark. For example, to assess the first aspect of critical thinking, comprehension, the first question in the student’s survey was “When given a case study as an assignment:” and the students were presented with three multiple choice answers derived from the rubrics used to assess critical thinking. The three choices were “1. Attempt to understand the assignment’s purpose before you start working on it, 2. Start working on the assignment irrespective of the purpose, 3. You always think you are capable to start working on the assignment with general rather than specific understanding of its purpose” the first representing the students capability to comprehend at the capstone level, the second choice represents the benchmark level and the third choice representing the milestone level.

Quantitative data collected from the surveys (students and alumni) and from the rubrics of the active learning session were analyzed using SPSS. Each question in the
students’ questionnaire represented a sub skill of one of the three main skills being assessed in this study. Each answer in the multiple choice questions represented a level of the rubric benchmark, milestone, or capstone. The researcher scored the answers as 1 for benchmark, 2 for milestone and 3 for capstone. The scores were then coded into SPSS and the frequency bar graphs were used to present the findings. The findings were presented in a graph for each skill including all the sub skills assessed in this study and the percentage of the students who are at the benchmark, milestone and capstone level according to the rubrics.

The quantitative data collected from the active learning session were the scores of the students on each sub skill using the rubrics. Team work and oral communication skills were assessed during the active learning session where the rubrics were filled in by the researcher during the session. However written communication, critical thinking and lifelong learning were assessed using the essays. Experts in the field were asked to read the essays and fill in the rubrics accordingly. The results were then inserted in the SPSS and tables were used to present the scores of the groups on each sub skill of the skills being assessed. Moreover, the total score of sub skills of each team on a certain skill was calculated (Total Critical thinking= Comprehension+ Synthesis+ evaluation+ assumption+ interpretation) and the average scores of each sub skill of the nine teams (Comprehension T1+T2+T3+T4+T5+T6+T7+T8+T9= Average Comprehension score) was also determined. Moreover the data was displayed to analyze the percentage of groups who scored above the threshold (3 out of 4) to be considered as the skill being acquired.
The qualitative data obtained from the focus group interviews were transcribed. Since the researcher has audio recorded the interviews, the researcher played the recordings and wrote every single word mentioned in the interview and didn’t skip any important data. After that the researcher started summarizing and highlighting relevant concepts under each sub-question. The concepts were then organized into themes to be compared with the quantitative data. The summarized data was then presented.

3.9 Conclusion

In this chapter the methodology was discussed including choice of sample, the three instruments used to collect data, their validity and reliability, and the triangulation of the data. The ethical considerations as well as the procedure of data collection and its analysis were further explained. The next chapter presents in details the results of the data collected from the three instruments to answer the research question: To what extent did graduating students acquire critical thinking, communication, teamwork, and lifelong learning skills upon graduation?
Chapter Four
Results and Discussion

4.1 Introduction and Restatement of the Problem

This research study was designed to investigate university students’ acquisition of the necessary soft skills required for the workforce. The study aimed at examining the Alumni’s perception of acquiring these soft skills and their importance in the workforce according to their experience. Furthermore, the study aimed to use an active learning approach with senior students and investigate their attainment of the soft skills required. The reviewed Literature in Chapter II also emphasized the importance of integrating these soft skills in all majors at the university level to ensure students develop these skills upon graduation. The literature emphasized that employers in the 21st century highly consider the candidates acquisition of these skills in order to develop in the highly demanding market. This chapter presents the data collected from students (seniors and alumni) through surveys and focus group interviews and data collected from implementing an active learning approach.

4.2 Descriptive Data Analysis and Results

The results of the data were used to answer the research question:

To what extent are university students’ graduating with critical thinking, lifelong learning, teamwork, and communication skills?
Data from each instrument will be presented under each research question. Quantitative data collected from the questionnaires and active learning approaches were collected and qualitative data from focus group interviews. The questionnaires used a three type Likert scale from (1) Exemplary, (2) satisfactory, and (3) unsatisfactory representing the three different levels of any rubric; capstone, milestone, and benchmark.

4.2.1 Critical thinking Results

Students’ questionnaire results:

The survey questions were designed to tackle the five areas of rubrics assessing critical thinking: comprehension, synthesis, evaluation, assumptions, and inference. Figure 4.1 below represents the percent of students’ acquiring the critical thinking skills required from their program of study.

Figure 4.1 Critical Thinking
In the questionnaire respondents were asked in the first question how they comprehend an issue when given a case study. The results in figure 4.1 indicate that the majority, 78.57%, of the students attempt to understand the assignment’s purpose before initiating the work on the assignment thus considering critically the problem being stated (comprehension). In the second question, the second aspect of the critical thinking rubrics (synthesis) was questioned in how students would evaluate a case study. The results in figure 2 indicate that 68.57% of the respondents tend to define the problem and its core issues. Figure 4.1 indicates that 59.29% of the students are able to formulate an argument in a case study by examining different points of views and keeping an open mind until evidence is found (evaluation). Figure 4.1 also shows that only 41.43% of the respondents can always accurately identify assumptions while the majority of respondents, 47.86%, of students usually have difficulty in explaining assumptions. Moreover, the questionnaire revealed that 77.86% of students follow evidence and reasoning to obtain logical conclusion in a case study (inference- interpretations).

Alumni’s questionnaire results:

From the Alumni’s point of view when students were directly asked whether this university has equipped them with the critical thinking skills needed in their jobs 62% of the students considered they were prepared in a good way, 32.1% in a fair way, and 5.9% in a poor way. The survey also aimed to question the alumni’s perception of the importance of acquiring critical thinking skills in their professions. The questionnaire revealed that 88.2% of the students rated critical thinking as very important, 10.7% as important, 1.1% as slightly important and 0% as not important.
Focus Group questions results

Critical thinking skills were also assessed through focus group interviews with students. Four questions were asked to students regarding their reaction when facing problems, how they overcome problems, how they collect information when faced with a problem, and the extent to which they take other people’s opinion into consideration.

The first question asked the students to describe what they do when they face a problem; Do they jump into conclusions or rather gather evidence. Students mentioned that when they face problems they start by gathering evidence to evaluate the situation and look at the problem from all angles before they start taking any decisions on how they are willing to face this problem. They also mentioned that they stay calm and face their problems with patience and try to dissociate their emotions. The researcher asked them where they have attained these skills from and some students answered that their major like journalism helped, other mentioned clubs like Red Cross, and other mentioned difficulties in life like being an orphan or being in a divorced family. The second question asked the students to describe a problem they faced that was almost overwhelming and how they got through it. Students replied back by stating situations such as the medical school interview, moving from one country to another, domestic abuse, losing a family member, failing a course, conflict with professors…. Students mentioned that to overcome these problems that first seemed overwhelming they had to focus on the problem and on what they really want at the end in order to be in a win-win situation, to adapt to daily problems and tracing the reasons causing them to find ways to overcome them, and confront their problems and deal with them. The third question asked students to describe a situation where they faced a problem and didn’t have
enough information about it and what they did to solve it. Students mentioned in their answers situations where they have been in a responsible position and mistakes occurred without following the usual procedure and they were surprised at the negative reactions and problems that they had to solve on the spot without having any idea of the background in these conflicts. Students also mentioned conflicts with faculty where they were asked to re-do assignments because the professors weren’t sure that they have done their assignments without any help. Students stated that they had to face the situations on the spot by trying to have a general understanding of the cases, and reacted in a reasonable way and what they have considered right or what would lead to their benefit and the benefit of all at the end. The fourth question asked students of the extent to which they consult with others and take people’s opinion into consideration. Some students mentioned that they tend to ask for advice from friends, family or professors but eventually tend to do what they believe is right or what they had in mind from the beginning disregarding all the advice. Other students mentioned that they try to analyze what other people tell them and try to look at the situation from a different perspective according to the advice they receive.

Table 4.1: Critical Thinking Active learning approach results

<table>
<thead>
<tr>
<th></th>
<th>Team 1</th>
<th>Team 2</th>
<th>Team 3</th>
<th>Team 4</th>
<th>Team 5</th>
<th>Team 6</th>
<th>Team 7</th>
<th>Team 8</th>
<th>Team 9</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehension</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3.44</td>
</tr>
<tr>
<td>Synthesis</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Evaluation</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3.11</td>
</tr>
<tr>
<td>Assumption</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3.22</td>
</tr>
<tr>
<td>Interpretation</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>19</td>
<td>16</td>
<td>20</td>
<td>12</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>19</td>
<td>15.88</td>
</tr>
</tbody>
</table>
The active learning approach session assessing critical thinking skills had shown the following results in table 4.1. Critical thinking was basically assessed through the students’ essays and the scores are based on the rubrics used. On comprehension, the average score of the nine groups was 3.44 out of 4. On synthesis and interpretation the average score was 3. On evaluation the groups scored an average of 3.11 and on assumption a score of 3.22 out of 4.

![Critical Thinking - Active Learning results](image)

**Figure 4.2: Critical Thinking - Active Learning results**

The results above indicate the number of groups who scored 1, 2, 3, or 4 out of 4 on each sub skill being assessed under critical thinking skill when using the active learning approach. The results above in figure 4.2 indicate that 100% of the groups scored above the threshold (3 out of 4) on comprehension. On synthesis, 77.7% of the groups scored above and 33.3% of the groups scored below the threshold. Moreover, when assessing
evaluation, 77.7% of the groups scored above the threshold and 33.3% of the groups scored below. On assumption 88.8% of the students scored above the threshold and 22.2% of the students scored below. The results indicate when assessing interpretation that 77.7% of the students scored above the threshold and 33.3% of the students scored below.

### 4.2.2 Team work skills Results

*Students’ questionnaire results:*

The survey questions were designed in such a way to tackle the four areas of rubrics assessing team work skills needed by students: planning and task coordination, communication and receiving feedback, collaborative problem solving and participation. Figure 4.3 below represents the percent of student’s acquiring the team work skills required from their program of study.

![Bar chart showing team work skills results](image)

**Figure 4.3: Team work**
In the students’ questionnaires, the first question aimed to assess the students’ skills in planning and task coordination when working in teams. Students were asked whether when working on a group project they usually elect a team leader and reach an agreement on how the group operates or whether they allow the group leader to determine the tasks or assign tasks later on. Only 18.57% of the students responded that they usually elect a team leader and plan and coordinate the tasks, whereas the majority of the respondents 76.43% answered that they usually start working on the project as a group and assign tasks based on needs. The following survey question was to assess whether students take the group meetings seriously by attending to the meetings punctually which aimed to tackle the second domain of team work, participation. The results indicate that 77.86% of the students show up to meeting punctually. The third question aimed to assess the students’ communication during team work by receiving feedback from their team members and how they act during team work. The majority of the respondents (85%) answered that they listen to their team member’s feedback and that they discuss it with them. Moreover, the last question asked students on how they participate in discussions assessing students’ collaborative problem solving in teams. The majority of the students, 71.43% answered that they provide good ideas during team work meetings and they communicate their ideas, needs and feelings.

*Alumni’s questionnaire results*

Team work skills were also assessed through an alumni questionnaire. The alumni were asked about the extent to which this particular university has provided them with the required team work skills for their profession. 54.6% of the respondents considered that the university has helped them acquire the necessary team work skills in
a good way, 37.8% in a fair way and 7.6% in a poor way. Nevertheless the questionnaire aimed to check to what extent students considered the acquisition of team work skills necessary for their careers. 77.5% of the respondents rated team work skills as very important, 20.38% rated them as important and 2.1% as slightly important.

Focus Group questions results

Team work skills were also assessed through focus group interviews with students. Three questions were asked to students regarding the type of teams they have worked with, the collaboration between team members, and appointing a team leader to ensure high productivity.

The first question asked the students to describe the types of teams they have worked in and discuss the reasons of success or failure of team work. Students mentioned that within their courses they have worked in pairs or in teams between three and five students. Students replied by stating that a team’s success was mainly based on benefiting from each other’s personal experience and skills and collaborating to reach the assignment’s objective. However, the negative points that lead to failure or problems within groups were mainly because some team members depend on each other, do not attend team meetings, lack responsibility and motivation, and show miscommunication between team members. The second question highlighted the main problems that occur when working in teams and asked the students how they acted in teams where members cannot work together or do not like each other. Most of the students answered that they would interfere to decrease the conflict occurring in the group, confront the members and ask each to express their feelings, and try to fix the situation. Some students
answered that they rather inform faculty members of the situation or just take control of the project and finish it with whoever is willing to collaborate. The third question asked students about situations where they were leading a team and how they were able to create high morale and productivity. The students answered back by stating situations where they were able to allow team members to express themselves freely, to overcome obstacles such as fear and confidence, to allow team members to take initiatives by delegating work and empowering them as well as taking responsibility in reminding team members of their responsibilities and following up on this matter.

*Team work Active learning approach results*

Table 4.2: Team work Active learning approach results

<table>
<thead>
<tr>
<th></th>
<th>Team 1</th>
<th>Team 2</th>
<th>Team 3</th>
<th>Team 4</th>
<th>Team 5</th>
<th>Team 6</th>
<th>Team 7</th>
<th>Team 8</th>
<th>Team 9</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>3.11</td>
</tr>
<tr>
<td>Collaborative Problem Solving</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3.55</td>
</tr>
<tr>
<td>Communication &amp; receiving feedback</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3.55</td>
</tr>
<tr>
<td>Planning &amp; task coordination</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2.66</td>
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<tr>
<td>Total</td>
<td>13</td>
<td>13</td>
<td>12</td>
<td>14</td>
<td>13</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>12</td>
<td>12.88</td>
</tr>
</tbody>
</table>

The active learning sessions to assess team work skills revealed the following results above in table 4. On participation the average score according to the rubric was 3.11/4. In terms of the team’s collaborative problem solving while working in teams the average score was 3.55/4. During team work, students were also assessed on their communication and receiving feedback from each other where the average score was
also 3.55/4. On how the team managed their team’s work by planning and coordinating tasks, the average score was 2.66/4. The table above also represents the scores of each team on all the four sub skills assessed. The average score of all the 9 teams was 12.88/16. It is also important to mention that the lowest score achieved by teams was 12 and the highest was 14 out of 16.

![Bar chart showing team work- Active learning results](chart.png)

**Figure 4.4: Team work- Active learning results**

In figure 4.4 above the results are presented showing how many team scored 1, 2, 3, or 4 out of 4 on each item in the scoring rubrics of team work skills. The figure above shows that 77.7% of the groups scored above the threshold (3 out of 4) on participation while 33.3% of the groups scored below the threshold. On each the second and the third sub skill assessed, collaborative problem solving and communication and receiving feedback, 100% of the groups scored above the threshold. However on planning and task
coordination the assessment results show that 66.6% of the students have scored above the threshold while 44.4% scored below.

4.2.3 Life Long Learning Results

Students’ questionnaire results:

The survey questions were designed in such a way to tackle the three areas of rubrics assessing lifelong learning: reflection and curiosity, initiative and transfer. Figure 6 below represents the percentage of students acquiring the lifelong learning skills from their program at this particular university.

![Bar chart showing distribution of students' skills](image)

**Figure 4.5: Lifelong learning**

The questionnaire included three questions that aimed to assess the lifelong learning skills that students have acquired upon graduation. The first question targeted
the students’ development of initiative when working on any assignment. Only 20.71% of the students answered that when working on an assignment they complete the required work and take the initiative to generate and pursue opportunities to expand their knowledge and skills. The majority of the respondents (45.71%) only completed the required work as requested. The second question aimed to assess the students’ acquisition of the skills to transfer knowledge. The majority of the students (54.29%) answered that when they are completing an assignment they make explicit reference to previous knowledge and apply it in an innovative way. The third question aimed to assess the students’ ability to reflect on situations and be curious about them. The students, (42.14%) answered that when completing an assignment they are able to review prior knowledge in depth to reveal significantly changed perspectives about educational and life experiences which provide foundation for expanded knowledge, growth and maturity overtime.

Alumni’s questionnaire results

Lifelong learning skills were also assessed through an alumni questionnaire. The alumni were asked about the extent to which this particular university has provided them with the required skills to be lifelong learners. The majority of the respondents (63.83%) considered that the university has helped them acquire the necessary lifelong learning skills in a good way, 31.91% in a fair way and 4.26% in a poor way. Nevertheless the questionnaire aimed to check to what extent students considered the acquisition of lifelong learning skills necessary for their careers. Moreover, 81.91% of the respondents rated lifelong learning skills 15.96% rated them as important and 2.13% as slightly important.
The majority of the students considered that their program of study has prepared them in acquiring the necessary lifelong learning skills reflecting the university’s consideration and teaching of these skills. A high percentage also reflected its importance in their careers and graduate studies.

*Focus Group questions results*

Focus groups were also conducted with students to assess their acquisition of lifelong learning skills and how the university and their program helped in acquiring these skills. The questions were designed in an indirect way. Three questions were used to assess students’ acquisition of lifelong learning skills discussing students’ plans after graduation, where they see themselves in 5-10 years and their viewpoint of attending conferences and workshops to expand their knowledge.

Through the interviews students discussed their opinions, attitudes and expressed their thoughts clearly. Answering the first question, students mentioned that upon graduation they plan to complete their graduate studies, apply to medical school, start their career and create new opportunities, participate in community development and help needy children, continue and do another bachelor degree. Students also mentioned that beside their courses, some of their professors, attending clubs, and financial aid work have always promoted during their university years planning and considering future life decisions. In the second question students were asked to state where they see themselves in five to ten years from now. Students expressed their thoughts hesitantly by stating that they would be successful managers, directors, doctors, mothers, social workers, and helping the community. This question aimed to assess the students’ skills
in reflection and curiosity and their ability to foresee their 10 years plan after graduation. The third question aimed to assess the students’ acquisition of the third area assessed in this research, which is initiative. Students were asked about their views on attending conferences and workshops to increase their knowledge. The respondents stated that they aim at looking at opportunities for professional development and are interested to expand their knowledge by attending such events, however there were three factors that were mentioned that might have affected their ability to do so which were money, time, and lack of supervision and promotion of these opportunities by the university. On the other hand, the students assured that in the upcoming years where money won’t be a problem they will aim to seek many opportunities to attend such conferences.

*Lifelong Learning Active learning approach results*

Table 4.3: Lifelong learning Active learning approach results

<table>
<thead>
<tr>
<th></th>
<th>Team 1</th>
<th>Team 2</th>
<th>Team 3</th>
<th>Team 4</th>
<th>Team 5</th>
<th>Team 6</th>
<th>Team 7</th>
<th>Team 8</th>
<th>Team 9</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiative</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2.77</td>
</tr>
<tr>
<td>Reflection &amp; Curiosity</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>2.88</td>
</tr>
<tr>
<td>Transfer</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3.11</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>6</td>
<td>9</td>
<td>10</td>
<td>8</td>
<td>10</td>
<td>6</td>
<td>11</td>
<td>9</td>
<td>8.77</td>
</tr>
</tbody>
</table>

The active learning approach to assess lifelong learning skills indicated the above results in table 4.3. Expert faculty were asked to fill out the rubrics according to the written essays that the students presented at the end of the session looking at the three sub skills of lifelong learning being assessed in this study, initiative, reflection and curiosity and transfer. On initiative, the average score of all the nine groups was 2.77/4.
When assessing students’ acquisition of reflection and curiosity the average score was 2.88/4. On transfer the average score for the nine groups was 3.11/4. It is also indicative to state that the total score for the three sub skills for each group ranged from 6 to 11 out of 12.

Figure 4.6: Lifelong learning- Active Learning results

Figure 4.6 above represents the detailed results of the group scores on the rubrics assessing lifelong learning skills through the active learning activity to indicate how many students scored 1, 2, 3, or 4 out of 4. The results above indicate that 66.6% of the groups scored above the threshold (3 out of 4) and 44.4% of the groups scored below the threshold on attaining the sub skill, initiative. Assessment of students’ acquisition of reflection and curiosity also indicate that 66.6% of the groups scored above and 44.4% of the groups scored below the threshold. In assessing students’ ability of transfer, the
results reveal that 77.7% of the groups scored above and 33.3% of the groups scored below the threshold.

4.2.4 Communication Skills Results

Students’ questionnaire results:

The survey questions were designed in such a way to tackle the three areas of rubrics assessing communication skills: delivery, language, and central message. Figure 4.7 below represents the percentage of students’ acquiring the communication skills from their program at this particular university.

![Bar Chart](image)

Figure 4.7: Communication skills

The questionnaire included three questions that aimed to assess the communication skills that students have acquired upon graduation. The first question addressed the students’ development of delivery when presenting orally or written by
using proper language and presenting the assignment’s purpose. The majority of the respondents (65.71%) responded that they are capable of using effective language and determining the appropriate word choice to present their purpose to the audience. The second question aimed to assess the students’ language, of being able to submit work with a minimum of errors in spelling, punctuation, grammar, and usage. The majority of the students 59.29% replied that they can submit an error free paper when it comes to spelling and grammar usage. The third question aimed to assess the students’ ability to identify their audience and assess their knowledge and organize information to meet the needs of the audience and present the central message. The respondents (65%) considered they are capable to identify the audience background and plan their presentation accordingly.

Alumni’s questionnaire results

The alumni questionnaire was also used to assess alumni students’ acquisition of communication skills. The alumni were asked about the extent to which this particular university has provided them with the required skills to communicate effectively, orally and written. 78.61% of the respondents considered that the university has helped them acquire the necessary oral communication skills in a good way, 19.79% in a fair way and 1.60% in a poor way. 77.66% of the respondents considered that the university has helped them acquire the necessary written communication skills in a good way, 20.74% in a fair way and 1.60% in a poor way. Nevertheless the questionnaire aimed to check to what extent students considered the acquisition of oral and written communication skills necessary for their careers. 84.49% of the respondents rated oral communication skills as very important, 14.44% rated them as important and 0.53% as slightly important and
0.53% as not important. 82.80% of the respondents rated written communication skills as very important, 13.98% rated them as important and 2.69% as slightly important and 0.54% as not important.

Whether considering the written or oral communication skills the Alumni reflected that the university puts a lot of importance on teaching these skills and the majority of alumni considered that the university has prepared them for these necessary skills in a good way. The alumni also reflected on the importance of acquiring these skills upon graduation.

*Focus Group questions results*

Communication skills were also assessed through focus group interviews with senior students where four questions were asked to assess students’ acquisition of the oral and written communication skills in the three sub skills of communication, delivery, central message and language.

The first question asked the students if they feel shy or socially uncomfortable when they communicate orally. The students described situations such as when they have problems with language due to coming from a French education system, if they didn’t understand material being explained, when they think their classmates know better or when they are asked to re-explain something they have not understood in the first place. However students noted that when presenting, they are capable to communicate their ideas with the audience as they come well prepared and are capable to deliver the material they are asked for. The second question inquired the students to state a situation where they think their communication skills made a difference. Students
explained situations where conflict erupted in their classes and they were able to interfere spontaneously on the spot and break the ice on critical issues and when they worked in teams and were able to negotiate a point that group members disagreed on and mentioned situations where their communication skills affected someone positively and motivated them to take a step in a certain situation. Students also added that with power and authority their communication skills are more reflected in their conversations and they noted that whenever one respects both points of view communication is always easier. The third question asked students to describe situations where they were able to influence others on important issues by stating the approaches used. Students stated that some of the communication strategies used were facial expressions and body language, being on the opponent’s side and supporting them, understanding their points of view and respecting their opinions on the matter, and not judging people or at least not showing them that they are being judgmental. Students emphasized that whenever one needs to influence others the most important factor is to respect them as a person in that situation disregarding the background and help them reach the target needed. The fourth question asked the students if they can write or express themselves in a written way and why they think they can write. Students’ answers varied where some students were more confident about their written skills and considered that the time given for any writing task is very essential since the students with difficulties in writing tend to concentrate on their written communication skills when they have more time.
Communication skills Active learning approach results

Table 4.4: Communication skills Active learning approach results

<table>
<thead>
<tr>
<th></th>
<th>Team 1</th>
<th>Team 2</th>
<th>Team 3</th>
<th>Team 4</th>
<th>Team 5</th>
<th>Team 6</th>
<th>Team 7</th>
<th>Team 8</th>
<th>Team 9</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
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<td>3.11</td>
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<tr>
<td>Language</td>
<td>3</td>
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<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
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</tr>
<tr>
<td>Central Message</td>
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<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
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<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
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<td>9</td>
<td>9</td>
<td>11</td>
<td>9</td>
<td>9.77</td>
</tr>
</tbody>
</table>

Oral and written communication skills were also assessed using the active learning approach where students were assessed on their oral communication skills during the active learning session by scoring rubrics, and their written communication skills by grading their written essays with the help of experts in the field scoring rubrics. On delivery, the average score of the nine groups was 3.11/4. On language the average score of the groups was 3.33/4. When assessing the students’ ability to deliver their central message during presentations and in their essays, the average score was 3/4. It is also evident that the total scores of the groups on the three sub skills ranged between 9 and 11 out of 12.
Figure 4.8: Communication skills- Active learning results

Figure 4.8 above represents the results of the groups scoring on the rubrics assessing the communication skills acquisition through the active learning session to indicate how many students scored 1, 2, 3, or 4 out of 4 on the rubrics used. The results above indicate that 100% of the groups scored above the threshold on both delivery and language. Moreover, 88.8% of the groups have scored above the threshold on central message and 22.2% scored below the threshold.

4.3 Discussion

The next section presents the discussion of the results of the findings obtained using the three instruments, questionnaires, focus group and active learning approaches and used to address the research question about the students’ attainment of soft skills
(critical thinking, team work, communication and lifelong learning skills) upon graduation.

All participants in this study were senior students who are graduating with different majors under the school of arts and sciences in this particular university; however all have completed 45 credits of the Liberal Arts education that aims in its learning outcomes to teach students these skills.

4.3.1 To what extent are university students’ graduating with critical thinking skills?

To assess students’ acquisition of critical thinking skills questionnaires were sent to senior students and alumni, focus group interviews were used and an active learning approach was applied. The results indicate that the majority of the students have acquired the cognitive skills dimensions to think critically; however, at the assumption level and the evaluation level, extra effort should be exerted in emphasizing these two dimensions when teaching critical thinking to allow students to attain them. The alumni questionnaire results also confirm the students’ survey since only (62%) of the students considered that the university has prepared them to acquire critical thinking skills required in the work force. The results align with the survey conducted by Casner-Lotto and Barrington (2006) where only 27.6% (a low percentage) of new work entrants are equipped with critical thinking skills. Although the majority of the students 62% considered that they were well equipped with the critical thinking skills this is not indicative considering the threshold to be 70%. It is also evident from the survey results that the alumni, whether graduates who are in the working field or pursuing their
graduate studies, are aware of and consider that acquiring these critical thinking skills is very important, as confirmed by 88.2% of the respondents.

However in the focus group interviews, the sample represented contradicts the above. The first question aimed to assess the students’ skills in synthesis of an issue or problem. It was found that students have acquired this skill as they have mentioned that they define the issue or the problem and appreciate its depth and try to have a fair-minded approach by examining the problem from different points of view. The second question assessed two sub-skills under critical thinking skills, comprehension and assumptions. Most of the answers reflected through the focus groups pointed out that students have acquired the skills since they mentioned that they basically tend to understand the problem clearly and try to make valid and reasonable assumptions according to their analysis. Assessing the fourth skill, interpretation, was the aim of the third question. It was found that students have acquired this skill since it was evident from the students’ answers that they follow evidence and reason to come up with logical conclusions. The fourth question aimed to assess evaluation where some students reflected that they have attained the skill. This was shown in some of the answers where students stated that they take other people’s opinions and advice into consideration and look at the situation by being fair in examining all the points of view. The results above reflect that students are critical thinkers as Zhang (2003) states that ideal critical thinkers are open minded and fair minded individuals capable to face personal bias.

Moreover, the active learning session revealed that the students have acquired through an active learning approach the necessary critical thinking skills needed in all its cognitive levels. The results above indicate that the average of each sub skill of all the
groups is above the threshold (3 out of 4) on the scoring rubrics, thus partially indicative. In a further analysis to confirm the earlier stated analysis, the percentage of the groups that scored above the threshold on each sub skill was also stated. The above results thus indicate the students’ attainment of the skills when introduced through active learning since all the percentages lie between 77.7% and 100% (above the threshold).

4.3.2 To what extent are university students’ graduating with team work skills?

In assessing team work skills the earlier mentioned instruments were used. The students’ questionnaire results above indicate that students have mainly acquired the skills needed to work in teams except one element, the importance of electing a team leader who would be able to coordinate the team work and keep track on tasks. All the other sub skills assessed, participation, communication and receiving feedback and collaborative problem solving were attained according to the students’ survey as the percentage were all above the threshold (70%) ranging between 71.4% and 77.8%. Alumni students have reflected through the survey that the university has barely helped them acquire the team work skills, a 54.6% percentage that cannot be considered indicative. A higher percentage, 77.5%, confirmed the importance of acquiring team work skills in their careers or graduate studies thus emphasizing their importance.

On the other hand, the focus group results confirm the students’ survey as they highly reflect that the students have acquired all the sub skills under team work. In the focus group questions, the first question aimed to assess the students’ skills in participating in teams and in receiving feedback from team members. It was found that students have acquired this skill as they have pinpointed the factors that lead to any team
work success or failure and emphasized the factor of communicating and discussing the work. The second question assessed the second sub-skill in team work skills needed, collaborative problem solving and participation. Most of the answers reflected through the focus groups pointed out that students have acquired the skill of collaborative work in teams like mentioning the initiative of solving conflicts and expressing feelings and the need of confrontation in some cases. However some of the answers reflected that students lack this skill as they rather work on their own or seek the faculty’s advice which can be directly linked to the lack of maturity or guidance during team work. The third question assessed the students’ acquisition of the skill to plan and coordinate tasks. The question was written in a way so that students will be held responsible as team leaders and how they would act in such situations. The students have reflected a high sense of responsibility by mentioning the delegation of work, support and empowering team members. The question in the students’ survey and students lacking the skill of planning and task coordination could not be reflected in the focus group interviews as the question reflecting this skill was asked in a way putting the student in a position of being a team leader. However, the skill of planning and task coordination was positively reflected in the way students looked at their responsibility as leaders being supportive rather than seeking power and imposing work to be done, thus implying attaining the skill.

Through the active learning approach, however the students reflected the acquisition of all sub skills of team work except for planning and task coordination where all the average scores were above 3 except for that sub skill (2.66). This indicates that students are still facing difficulties while working in teams to coordinate, at the
beginning of a task, key steps and in creating a work plan while holding someone responsible to keep track. When analyzing this score further it was indicative that only 66.6% of the students were able to score above the threshold on the scoring rubrics reflecting the non-acquisition of the skill.

The results above reflect that further emphasis should be laid on teaching students how to plan and coordinate tasks during teamwork which can be achieved by guiding them throughout the team work. As mentioned by Marian-Garcia and Lloret (2008), teacher’s involvement is necessary to motivate students during team work, supervising the activities and following-up to ensure proper teamwork.

4.3.3 To what extent are university students’ graduating with lifelong learning skills?

Lifelong learning was assessed as well using the instruments presented in this study. The survey results indicate clearly that students haven’t acquired the lifelong learning skills required upon graduation. Whether in terms of taking initiative for learning, reflection and curiosity to expand knowledge or transfer of acquired knowledge to be used in an innovative way in new situations. The survey showed that the students have failed to attain these skills during their program of study and university life since the percentage of students attaining the exemplary level was below the threshold in all three sub skills. The alumni questionnaire as well indicates that the alumni considered that their program of study has not prepared them in a good way to be lifelong learners as the percentage fell below the threshold. However it is highly important to mention that the majority of alumni students rated the acquisition of
lifelong learning skills as very important. The questionnaires reflect that the university in general and the faculty in specific should work on teaching methods to raise students’ awareness and emphasize the importance of attaining these skills. As Collins (2009) states faculty should guide and inform students of techniques and ways to acquire lifelong learning skills and explain their importance such as motivating them to read and learn on their own, participate in organizations and clubs, getting involved in research and attending conferences and workshops to add to their bank of knowledge and become self-directed learners.

Through focus group interviews, the first question aimed to assess the students’ ability to foresee and plan their near future, the skill to transfer the acquired knowledge and use it wisely in planning their future. The skill acquisition was evident since students have planned ambitious and thoughtful plans for their future. Through their answers students reflected pre-arrangements of their after-graduation plans as their answers were direct and specific. In assessing the second sub-skill, curiosity and reflection, students took time to reflect their thoughts since they hesitated in their answers, and when they answered they presented high positions in terms of their careers. In the third question and when assessing students’ initiative, students reflected direct interest in pursuing opportunities to expand their knowledge in the future and bluntly expressed the obstacles they have faced that might have prevented such opportunities, aiming to overcome them. The three sub-skills assessed through focus groups reflect that students have acquired the lifelong learning skills; transfer, initiative, and reflection and curiosity; throughout their program of study at this university. It was also indicative that in terms of transfer and initiative the students have acquired the skill at an exemplary
level or at a higher level than the acquisition of curiosity and reflection which can be considered to become exemplary with mature over time.

After applying an active learning approach with the senior students the results in terms of the averages show that students have acquired the sub skill of transferring previous knowledge and using it in an innovative way with an average above the threshold while having an average below the threshold in terms of taking initiative and reflection on previous knowledge and curiosity of further learning. To analyze these results further, the results of the percentage of students who scored above the threshold is also only represented in transfer however in initiative and reflection and curiosity students fall slightly below the threshold with a percentage of 66.6%.

4.3.4 To what extent are university students’ graduating with communication skills?

Communication skills were also assessed using the three instruments questionnaires, focus group interviews and an active learning approach. The results mentioned in the previous chapter indicate that the students have not attained the required level of attaining the three sub skills assessed in this study: delivery of the message when presenting, language used in written communication and reflecting the central message of the assignment. The percentage of students attaining these skills at the exemplary level lies below the threshold. From the alumni’s point of view, alumni reflect that they believe that the university have prepared them in a good way to use communication skills whether in their careers or in their graduate studies, with a percentage assuring the above falling above the threshold. Moreover the alumni’s
perception of the importance of acquiring both the written and oral communication skills was reflected.

The focus group interviews reflect that students have acquired the communication skills assessed in this research, language, delivery and central message. Students are graduating with the communication skills necessary upon graduation. The first two questions aimed to assess the students’ skills in the sub skill of communication, delivery. The question targeted the students’ confidence in delivering their ideas and it was evident that students have acquired these skills since despite the situations stated where they feel shy about communicating they mentioned that when presenting they are capable to communicate easily as they have prepare the material required. This was also reflected in the second question where student directly showed examples of situations where they were able to communicate spontaneously to solve conflicts. The third question assessed the students’ skills in delivering the central message. It was also apparent that student have acquired the second sub skill, central message delivery since they stated different communication strategies used to deliver an idea to an audience and also took into consideration the aspect of respecting and appreciating people’s points of view. The third sub skill language was assessed in the third question. The students have bluntly stated that some still face difficulties in written communication and noted that they rather have more time to write in order to be up to the level. This is a skill that develops with time and it is important to mention here that students are aware of their problems and with practice they will be able to achieve better in written communication.

Through the active learning sessions, the results above indicate that the average score of all the nine groups lies above the threshold 3 out of 4, thus reflecting that
students have attained the communication skills required after the session. When analyzing the results further on the percentage of the groups scoring above the threshold on each sub skill the results reflected that on all sub skills the percentages were above the threshold.

### 4.4 Discussion of findings

The workforce globally is facing shortage of employees possessing effective soft skills needed in this emerging global economy (Mitchel et al, 2010; Benjamin et al, 2012; Kermis & Kermis, 2011; Shakir, 2009). Some fingers blame the educational systems that are failing to prepare the students for the job market (Riley, 2010) and equip them with problem solving and critical thinking skills, communication and team work skills, ability to learn new skills, and ethical decision making skills (Casner-lotto & Barington, 2006; Archer & Davidson, 2008; Life in the 21st century). Employers argue that students equipped with soft skills have higher hiring chance, are capable to retain and succeed in their jobs (Salleh et al, 2010; Watts & Watts, 2008; Bush, 2012; Evenson, 1999).

The results of this study suggest that there is awareness in educational institutions such as the university where this study took place of the importance of soft skills especially that soft skills are embedded in the Liberal Arts Curriculum as outcomes. Thus teaching of these soft skills is taking place to achieve the learning outcomes of the LAC curriculum. This study suggests that the assessment of these outcomes is necessary to create a culture of evidence as Shavelson et al. (2007) suggests responding to the pressure of accreditation agencies. This study, through the outcomes
assessments, measured students’ learning for achieving these learning outcomes upon graduation (Banta, 2002). It evaluated the curriculum (Gibson & Shaw, 2010), offered information to faculty regarding their teaching effectiveness (Ramsden, 2003; Yorke, 2003), and aimed to improve students’ performance not audit it (Wiggins, 1998). Since tools to assess soft skills are rare (Kechagias, 2011), this study presented an alternative method to assess students’ soft skills that present data on what students know upon graduation (Pellegrino et al, 2001).

The review of literature discusses the importance of teaching lifelong learning skills to equip students with competencies to continue their own self education (Candy, 1991), to recognize the need to be a lifelong learner (Felder, 2003), to get involved in conferences and become a lifelong learner (Collins, 2009) and acknowledge the importance of being a lifelong learner in academic, professional and personal settings (Law, 2009). The results of this study confirm the above as alumni students are well aware of the importance of lifelong learning in the workplace and in graduate studies. The focus group interview results also reflect that students have acquired lifelong learning skills as they are interested in attending conferences, continue their graduate education and are aware to the importance of continuous education.

Research has also emphasized the importance of teamwork skills in the professional settings as the nature of work has shifted towards teamwork. Researchers agreed that team work is a collaborative process where a group of people are committed to a common purpose requiring clear communication among members to achieve extraordinary results (Laudon & Laudon, 2013; Avery & Walker, 2006; Singh, 2013; Watson, 2002). Students’ survey results and focus group interviews reflected that
students are well informed that teamwork requires collaboration, participation, clear communication and clear feedback among members which confirms the above literature. Alumni survey results have also reflected that alumni acknowledge the importance of teamwork in the workplace settings.

Moreover, critical thinking results confirm the literature presented by Zhang (2003). Students in focus group interviews mentioned that they are well informed, flexible, open minded and reasonable in considering others’ opinions. As in many other institutions, the study reflects that educators are well aware of the importance of critical thinking as an outcome of student learning as emphasized in the study performed by Lai (2011). The focus group interviews and active learning session confirm the literature (Stark, 2012; Llyod & Bahr, 2010; Kennedey et al., 1991) as students reflected they are capable to identify problems, reason, analyze and synthesize a solution. However the results contradict Halpern (1998) and Willingham’s (2008) findings. Students have defined and discussed cases in the focus group interviews that reflect that they are capable of applying their critical thinking skills in situations outside the classroom context. Nevertheless, the active learning session results indicate that students have acquired critical thinking skills which confirms findings by French and Tracy (2010), Wareen et al. (2004), Thompson (2011), Terry (2012), Bonk and Smith (1998), Rosen (2011), and Benjamin et al, (2013) who argue that exposing students to real life examples is essential in teaching and assessing soft skills.

The literature discussing communication skills stresses the need for communication skills in life interactions and workplace success (Deepa, 2012; Murphy & Hildebrand, 1998; Harvey, 1999) which is confirmed by the alumni’s perception that
both oral and written communication are very important for graduate studies and workplace success. Students’ active learning results and focus group interviews reflect that students are able to communicate effectively with confidence which confirms with Rahman’s (2010) findings.

For soft skills assessment and development, the literature discussed the importance of active learning in today’s classrooms (Bonweel & Eison, 1991; Mckinny, 2008; Meyers & Jones, 1993) and active learning as a method to prepare students for their careers (Haywood, 1989; Hegarty, 1986; Russel & Rothschatl 1991; Umbreit, 1992). The active learning session used in this study showed that students after having been introduced to a problem based learning have presented better results in soft skills acquisition which aligns with the literature (Marquadt, 1999; Hatcher et al., 1996; Bean 1996; Sutherland & Bonwell 1996 and Silberman, 1996). The problem based learning session show that students have acquired the four soft skills presented in this study thus affirming findings by Marta (2011). Lifelong learning skills, which according to the student survey were minimally developed by graduates, were enhanced through the problem based learning session that resulted in students’ acquisition of these skills, thus confirming the literature presented by Marta (2011) and Chiang, Chapman, and Elder (2010). Critical thinking was also developed in the active learning session which agrees with French et al. (2010). The study affirms findings by Pare and Maistre (2006) and Dale (1946) that students acquired the soft skills when they were learning by doing and introduced with real life examples through discussions.

The development of soft skills and assessing them through an active learning approach by presenting students with real world problems was recognized as a success
in this study. This study provides evidence that an active learning approach is a stepping stone in curricula to teach and assess these soft skills.

The next and last chapter concludes this study, states its limitations and implications and also offers recommendations for future study in the field of assessment of soft skills.
Chapter V

Conclusion and Recommendations

5.1 Conclusion

This study aimed to assess students’ acquisition of four major soft skills that are of high demand in the workforce of the 21st century. Based on the research above it is evident that the university in general and the programs of study still have a major challenge of teaching students in ways that will foster the acquisition of critical thinking, communication, team work and lifelong learning skills. It is a long journey that requires collaboration, planning, patience and reduced resistance of an assessment process.

In terms of critical thinking, team work, and communication the task might be less demanding. However, an environment fostering lifelong learning skills is necessary, its importance should be well-acknowledged and its application is a must in a world that is developing much further than expected. The study aims at adding to the research of assessing the four skills showing the current situation of the university where the study was conducted and encouraging further emphasis on students’ attainment of these skills.

5.2 Limitations of the study:

The results of the study were highly indicative; however a first limitation that could be mentioned was the response rate of the students whether the seniors or the alumni; consequently the results might not represent the population. Another limitation was the time constraint where the researcher was not able to undergo the assessment on
participants from all majors in this specific university due to the large sample. The major limitation that the researcher faced is the meager research on assessing student’s acquisition of soft skills through outcome based assessment.

5.3 Recommendations for future research:

This study will serve as a stepping stone for a whole new body of research that can be accomplished at this university. As mentioned in the literature review, one of the challenges of assessing soft skills is that they can be developed outside the institutions setting. For further research, I recommend that the university undergoes an assessment of the skills at the sophomore level once students enter the university and repeat it upon the same sample’s graduation. This will reflect more the contribution of the university to students’ development of these skills. Another recommendation would be applying this assessment according to majors in order to identify whether the students are acquiring these skills due to major specific courses or through the liberal arts education curriculum that aims at developing these skills.

5.4 Implications for practice

This study adds to the literature in that assessment of soft skills is seen from a different perspective which is using rubrics mainly to assess these skills rather than using standardized exams. On one hand, this study should be seen educative for the faculty in terms of considering the results and aiming to improve them. On the other hand, the study should also be seen essential for students to acknowledge what skills they have acquired upon graduation and highlight the expectations of future employers.
References


students know and can do: The current state of student learning outcomes assessment in US colleges and universities. Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment (NILOA).


Appendix A: Student’s Survey

1. When given a case study as an assignment, you:
   - Attempt to understand the assignment’s purpose before you start working on it
   - Start working on the assignment irrespective of the purpose
   - Always think you are able to start working on the assignment with general rather than specific understanding of its purpose

2. When you are asked to evaluate a case study, you:
   - Define clearly the problem and its core issues
   - Maintain an open-minded approach towards the problem, yet not defining it
   - Explore the depth of the problem superficially

3. When you are asked to formulate an argument in a case study, you:
   - Evaluate and examine different points of view and keep an open mind until you have enough evidence
   - Identify other people’s points of view and gather some credible information
   - Evaluate others’ point of view based on your intuition and feelings

4. When you are reading a case study, you:
   - Make some assumptions that at times turn out to be invalid
   - Always accurately identify assumptions
   - Usually have difficulty in explaining assumptions

5. When you are asked to draw conclusions according to a case study that you have just read, you:
   - Follow evidence and reasoning to obtain logical conclusions
   - Reach conclusions according to self-interest views
   - Refer at times to evidence to reach conclusions

6. When working on a group project, you first:
   - Elect a project leader and reach an agreement on how the group operates
   - Elect a leader who will later be in charge of assigning tasks
   - Start working on the project as a group, and assign tasks based on needs

7. When meeting for a group project, you:
   - Show up to meeting punctually
   - Show up late but ensure that you complete your task
   - Show up late sometimes if you have other obligations
8. When discussing the defined tasks in the project, you:
   - Provide good ideas and communicate your needs and feelings
   - Attend meetings to listen and know what you’re supposed to do
   - Mainly listen and provide suggestions occasionally

9. When presenting your task to other members, you:
   - Listen to your team members’ feedback and discuss it with them
   - Listen to feedback but work the way you desire at the end
   - Accept feedback gracefully

10. When you are asked to present an assignment/project you are:
    - Able to use effective language and determine the appropriate word choice for audience to present your purpose
    - Able to communicate your ideas and purpose of presentation with minimum tools and vocabulary appropriate for your audience
    - Able to communicate your ideas and purpose of presentation using the language you prefer irrespective of the audience

11. When you are asked to present a written assignment, you are able to:
    - Present an error free paper when it comes to spelling and grammar usage
    - Present a paper with some errors in punctuation and grammar
    - Present a paper to reach its objectives without worrying about spelling and grammar mistakes

12. When working on an oral presentation you are able to:
    - Identify the audience’s background knowledge and information needs and plan your presentation accordingly
    - Identify the audience’s background but still plan your presentation according to your skills irrespective of the audience
    - Plan your presentation irrespective of the audience’s background and needs and focus on the assignment’s purpose

13. When working on an assignment, you:
    - Complete the required work as requested
    - Complete the required work and identify opportunities to expand knowledge, skills, and abilities
    - Complete required work, generate and pursue opportunities to expand knowledge, skills, and abilities
14. When completing an assignment, you are able to:

- Make explicit references to previous knowledge and apply it in an innovative (new and creative) way
- Make references to previous knowledge and attempt to apply that knowledge and those skills
- Make vague references to previous knowledge but do not apply them

15. When completing an assignment, you are able to Review prior learning (past experiences inside and outside of the classroom):

- Without indicating a broader perspective educational or life events
- With some depth, revealing slightly clarified meanings or indicating a somewhat broader perspectives about educational or life events
- In depth to reveal significantly changed perspectives about educational and life experiences, which provide foundation for expanded knowledge, growth, and maturity over time

16. How would you evaluate your entire educational experience at this institution?

- Excellent
- Good
- Poor

17. If you are willing to participate in a focus group interview session or an active learning approach session, please add your email or phone number below.
Appendix B: Alumni Survey

1. To what extent did LAU prepare you for the following?

<table>
<thead>
<tr>
<th></th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment to lifelong learning and Professional development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team work skills</td>
<td></td>
<td></td>
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<tr>
<td>Good oral communication skills</td>
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<tr>
<td>Good written communication skills</td>
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<tr>
<td>Critical Thinking skills</td>
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</tr>
</tbody>
</table>

2. To what extent would you rate the following as important in your profession?

<table>
<thead>
<tr>
<th></th>
<th>Very Important</th>
<th>Important</th>
<th>Slightly Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment to lifelong learning and Professional development</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team work skills</td>
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<tr>
<td>Good oral communication skills</td>
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<tr>
<td>Good written communication skills</td>
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<tr>
<td>Critical Thinking skills</td>
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</tbody>
</table>
Appendix C: Focus Group Questions

✓ What are your future plans after graduation? Why?
✓ Where do you see yourself in 5-10 years? Why?
✓ What is your stand regarding attending national and international conferences?
✓ When you face problems, what are the steps you take? Do you gather evidence or jump into conclusions?

✓ Describe a problem you faced that was almost overwhelming and how you got through it and kept from being completely overwhelmed.
✓ Describe a situation in which you had to solve a problem without having all the information you needed - what did you do and what happened?
✓ To what extent do you consult with others for other opinions?
✓ All of us feel shy or socially uncomfortable at times - when have you felt this way about communicating?
✓ Tell us about a situation where your communication skills made a difference?
✓ Describe a situation where you were able to influence others on an important issue. What approaches or strategies did you use?
✓ Can you write? What makes you think that you are good at it?
✓ Describe the types of teams you have worked in and tell me what worked well and what did not.
✓ Have you ever had to work with a team of people who did not work well together or did not like each other? Tell me what happened and how you reacted.
✓ Give me an example of a situation in which you managed or led a team and were able to create a high morale, high productivity work group.
Appendix D: Active Learning Discussion session

Workplace Ethics- Active Learning Approach

JUST THE FACTS: We all have our own set of values or standards of behavior that we operate by on a daily basis. However, we may not always feel we can apply these same principles or standards while at work. The purpose of this lesson is to help participants learn some of the steps necessary to make ethical decisions on the job.

Time
3 hours

Materials
One copy for each (or group and the setting will be in a computer center where students will have access to the internet for research. These materials were adapted from Lesson Planet: Tools for Success: A Study in Employer/Personnel Issues, Ethics, and Professional Behavior (Alabama Learning Exchange)

Directions
Ask participants the following questions – and discuss answers with the group: How do you make decisions? Is decision-making a skill that was taught to you? Do you have personal rules for decision-making? If you have rules, do these rules change if you are making decisions at home, at school, with friends, or at work? Now, let’s discuss ethics. What are ethics? [Possible answer to be discussed: a set of (often unspoken – and generally understood) moral principles relating to a specified group, field, or form of conduct; a group of moral principles, standards of behavior, or set of values regarding proper conduct in the workplace]. Ethics on the job often deal with a code of conduct or a set of principles for BOTH the employer and the employee. Ask for and offer some examples of workplace ethics from both the EMPLOYER and the EMPLOYEE. For example:

A list of work ethics for an employer or a company might be:

• To provide a safe work environment for staff and employees

• To treat employees with dignity and respect

• To provide a fair wage for the services rendered

• To handle all business transactions with integrity and honesty
A list of work ethics for an employee might include:

- To show up on time
- To tend to company business for the whole time while at work
- To treat the company’s resources, equipment, and products with care
- To give respect to the company; that means honesty and integrity

**Activity:** Divide the group into five smaller groups (and have each group choose one of the scenarios). Each group should take no more than 25 minutes to read, discuss, and have a plan in place for discussion. Each group will be required to analyze the case study to prepare a presentation and an essay to explain their argument regarding the case they read using resources to provide evidence.
Appendix E: Team work Skills rubric


<table>
<thead>
<tr>
<th>Criteria</th>
<th>Distinguished</th>
<th>Proficient</th>
<th>Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participation in Discussions</strong></td>
<td>Provided many good ideas for the unit development; inspired others; clearly communicated desires, ideas, personal needs, and feelings.</td>
<td>Participated in discussions; shared feelings and thoughts.</td>
<td>Seemed bored with conversations about the unit; rarely spoke up, and ideas were off the mark.</td>
</tr>
<tr>
<td><strong>Meeting Deadlines</strong></td>
<td>Completed assigned work ahead of time.</td>
<td>Completed assigned work on time.</td>
<td>Needed much reminding; work was late and it did impact quality of work or grade.</td>
</tr>
<tr>
<td><strong>Showing up for Meetings Score</strong></td>
<td>Showed up for meetings punctually, sometimes ahead of time.</td>
<td>Showed up for meetings on time.</td>
<td>No show or extremely late; feeble or no excuse offered.</td>
</tr>
<tr>
<td><strong>Providing Feedback Score</strong></td>
<td>Habitually provides dignified, clear, and respectful feedback.</td>
<td>Gave feedback that did not offend.</td>
<td>Was openly rude when giving feedback.</td>
</tr>
<tr>
<td><strong>Receiving Feedback Score</strong></td>
<td>Graciously accepted feedback.</td>
<td>Accepted feedback.</td>
<td>Refused to listen to feedback.</td>
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</tbody>
</table>
## Appendix F: Critical thinking rubric

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<tbody>
<tr>
<td><strong>COMPREHENSION</strong></td>
<td><strong>SYNTHESIS</strong></td>
<td><strong>ANALYSIS</strong></td>
<td><strong>EVALUATION</strong></td>
<td><strong>INFERRECE</strong></td>
<td><strong>INFERRECE</strong></td>
<td><strong>INFERRECE</strong></td>
</tr>
<tr>
<td>Demonstrates a clear understanding of the assignment's purpose</td>
<td>Clearly defines the issue or problem, accurately identifies the core issues, Analyzes depth and breadth of problem</td>
<td>Masterfully and accurately explains the relevant key concepts</td>
<td>Identifies and evaluates relevant significant points of view</td>
<td>Identifies assumptions (things taken for granted)</td>
<td>Identifies assumptions, makes invalid assumptions</td>
<td>Identifies the most significant implications and consequences of the reasoning (whether positive or negative)</td>
</tr>
<tr>
<td>- Does not clearly understand the purpose of the assignment</td>
<td>- Does not clearly define the issue or problem, does not recognize the core issues</td>
<td>- Identifies one or more of the key concepts, but not with the breadth and precision of a &quot;4&quot;</td>
<td>- Identifies assumptions, makes invalid assumptions</td>
<td>- Identifies assumptions, makes invalid assumptions</td>
<td>- Identifies assumptions, makes invalid assumptions</td>
<td>- Identifies assumptions, makes invalid assumptions</td>
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<tr>
<td><strong>SATISFACTORY</strong></td>
<td><strong>BELOW SATISFACTORY</strong></td>
<td><strong>UNSATISFACTORY</strong></td>
<td><strong>SATISFACTORY</strong></td>
<td><strong>INFERRECE</strong></td>
<td><strong>INFERRECE</strong></td>
<td><strong>INFERRECE</strong></td>
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<tr>
<td>Demonstrates an understanding of the assignment's purpose</td>
<td>Does not clearly define the issue or problem, does not recognize the core issues, Has trouble maintaining a fair, mindless approach toward the problem</td>
<td>Identifies one or more of the key concepts, but not with the breadth and precision of a &quot;4&quot;</td>
<td>Identifies assumptions, makes invalid assumptions</td>
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<tr>
<td>Does not clearly understand the purpose of the assignment</td>
<td>Fails to clearly define the issue or problem, does not recognize the core issues, Fails to maintain a fair, mindless approach toward the problem</td>
<td>Identifies one or more of the key concepts, but not with the breadth and precision of a &quot;4&quot;</td>
<td>Identifies assumptions, makes invalid assumptions</td>
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### Critical Thinking Grid

- **4** - Thinking is exemplary, skilled, marked by excellence in clarity, accuracy, precision, relevance, depth, breadth, logicacy, and fairness
- **3** - Thinking is competent, effective, accurate and clear, but lacks the exemplary depth, precision, and insight of a 4
- **2** - Thinking is inconsistent, ineffective; shows a lack of concern, competence in other areas, inaccuracy, and superficiality
- **1** - Thinking is undefined and insufficient, marked by inattention, lack of clarity, superficiality, illogicacy, and inaccuracy, and superficiality
## Appendix G: Lifelong Learning Rubric

### Foundations and Skills for Lifelong Learning VALUE Rubric

[Logo]

**Definitions**

Lifelong learning is "all purposeful learning activity, undertaken on an ongoing basis with the aim of improving knowledge, skills and competencies." An educator of higher education is to prepare students to be this type of learner by developing specific dispositions and skills (described in this rubric) while in school. ([The European Commission](https://www.euractiv.com/section/higher-education/news/commission-staff-working-paper-a-manual-on-lifelong-learning/))

**Limitations:** An unweighted mean grade to any work sample or collection of work that does not meet benchmarks (and only list performance).

<table>
<thead>
<tr>
<th>Competency</th>
<th>Capstone</th>
<th>Milestones</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Initiative</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Independence</td>
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<td></td>
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<tr>
<td>Transfer</td>
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<td></td>
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<tr>
<td>Reflection</td>
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</tbody>
</table>

**Capacity:**
- Explores a topic in-depth, yielding a rich understanding of the subject.
- Requires a topic in-depth, yielding insight into the subject.
- Requires a topic with some evidence of depth, providing occasional insight and/or information indicating skill in the subject.
- Explores a topic at a surface level, providing little insight and/or information beyond the very basic from indicating your interest in the subject.

**Initiative:**
- Completes required work, generating new opportunities to expand knowledge, skills, and abilities.
- Completes required work, identifying and pursuing opportunities to expand knowledge, skills, and abilities.
- Completes required work and identifies opportunities to expand knowledge, skills, and abilities.
- Completes required work.

**Independence:**
- Educational intent and purpose clariy and thoughtfulness in action.
- Educational intent and purpose clariy and thoughtfulness in action.
- Educational intent and purpose clariy and thoughtfulness in action.
- Educational intent and purpose clariy and thoughtfulness in action.

**Transfer:**
- Makes explicit reference to previous learning and applies it in a transformative (new & creative) way that knowledge and these skills to demonstrate comprehension and performance in novel situations.
- Makes explicit reference to previous learning and applies it in a transformative (new & creative) way that knowledge and these skills to demonstrate comprehension and performance in novel situations.
- Makes explicit reference to previous learning and applies it in a transformative (new & creative) way that knowledge and these skills to demonstrate comprehension and performance in novel situations.
- Makes explicit reference to previous learning and applies it in a transformative (new & creative) way that knowledge and these skills to demonstrate comprehension and performance in novel situations.

**Reflection:**
- Reflects on prior learning (past experiences inside and outside of the classroom) and to novel situations, broadening horizons (including broader perspectives) about educational or life events.
- Reflects on prior learning (past experiences inside and outside of the classroom) and to novel situations, broadening horizons (including broader perspectives) about educational or life events.
- Reflects on prior learning (past experiences inside and outside of the classroom) and to novel situations, broadening horizons (including broader perspectives) about educational or life events.
- Reflects on prior learning (past experiences inside and outside of the classroom) and to novel situations, broadening horizons (including broader perspectives) about educational or life events.
### Appendix H: Communication Skills rubric

<table>
<thead>
<tr>
<th>Category</th>
<th>Capstone I</th>
<th>Capstone II</th>
<th>Milestone I</th>
<th>Milestone II</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization</td>
<td>Organizational structure and transitions are clearly and consistently observable and are skillfully used to convey the content of the presentation.</td>
<td>Organizational structure and transitions are clearly and consistently observable and are skillfully used to convey the content of the presentation.</td>
<td>Organizational structure and transitions are clearly and consistently observable and are skillfully used to convey the content of the presentation.</td>
<td>Organizational structure and transitions are clearly and consistently observable and are skillfully used to convey the content of the presentation.</td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>Language choices are imaginative, adventurous, and compelling, and enhance the effectiveness of the presentation. Language organization is appropriate to audience.</td>
<td>Language choices are imaginative, adventurous, and compelling, and enhance the effectiveness of the presentation. Language organization is appropriate to audience.</td>
<td>Language choices are imaginative, adventurous, and compelling, and enhance the effectiveness of the presentation. Language organization is appropriate to audience.</td>
<td>Language choices are imaginative, adventurous, and compelling, and enhance the effectiveness of the presentation. Language organization is appropriate to audience.</td>
<td></td>
</tr>
<tr>
<td>Delivery</td>
<td>Delivery techniques (posture, gesture, eye contact, and vocal expression) make the presentation compelling, and speaker appears polished and confident.</td>
<td>Delivery techniques (posture, gesture, eye contact, and vocal expression) make the presentation compelling, and speaker appears polished and confident.</td>
<td>Delivery techniques (posture, gesture, eye contact, and vocal expression) make the presentation compelling, and speaker appears polished and confident.</td>
<td>Delivery techniques (posture, gesture, eye contact, and vocal expression) make the presentation compelling, and speaker appears polished and confident.</td>
<td></td>
</tr>
<tr>
<td>Supporting Material</td>
<td>A variety of types of supporting materials (examples, illustrations, anecdotes, statistics, analogies, quotations, etc.) are used appropriately to enhance the presentation's credibility.</td>
<td>A variety of types of supporting materials (examples, illustrations, anecdotes, statistics, analogies, quotations, etc.) are used appropriately to enhance the presentation's credibility.</td>
<td>A variety of types of supporting materials (examples, illustrations, anecdotes, statistics, analogies, quotations, etc.) are used appropriately to enhance the presentation's credibility.</td>
<td>A variety of types of supporting materials (examples, illustrations, anecdotes, statistics, analogies, quotations, etc.) are used appropriately to enhance the presentation's credibility.</td>
<td></td>
</tr>
<tr>
<td>Central Message</td>
<td>Central message is compelling (source stated), appropriately supported, memorable, and message is reinforced.</td>
<td>Central message is compelling (source stated), appropriately supported, memorable, and message is reinforced.</td>
<td>Central message is compelling (source stated), appropriately supported, memorable, and message is reinforced.</td>
<td>Central message is compelling (source stated), appropriately supported, memorable, and message is reinforced.</td>
<td></td>
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</tbody>
</table>

**Definition:**
Oral communication is a prepared, purposeful presentation designed to increase knowledge, foster understanding, or to promote change in the listener’s attitudes, values, beliefs, or behaviors.