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Entrepreneurship skills application among ICT Graduates of Muni University, Uganda

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ABSTRACT

The study aimed at investigating the acquisition and application levels of entrepreneurial skills acquired by ICT graduates from Muni University. This study specifically: identifies the entrepreneurial skills acquired by Muni University ICT Graduates; assess the entrepreneurial competency levels of Muni University ICT Graduates; examines the impact of the entrepreneurial skills acquired by Muni University ICT Graduates; evaluates the gaps in the entrepreneurial skills acquired among Muni University ICT Graduates. Questionnaires were administered to a population of 60 former students of Bachelor of Information Systems and Bachelor of Science in Information Technology who graduated from Muni University under the faculty of Technoscience. The graduates that formed the study population were selected, based on their online-availability, from two graduation cohorts of 2017 and 2018. Package for the Social Sciences (SPSS) (v.21) program was used to analyse the data. The research instrument was reliable at Chronbach's alpha 0.960. The results of the study identified that the key entrepreneurship skills acquired by Muni University ICT graduates are: innovativeness; business and economic management; human relations and interpersonal skills; and communication skills. The study assessed the entrepreneurial competency levels of ICT graduates of Muni University rated against the industrial expectations. The results show that the graduates are competent in: computer literacy and information technology (ICT applications); creativity, innovation and opportunity identification; life skills (problem solving, time management, decision making, ability to learn and change management); literacy and numeracy among others. The study examined the impact of the entrepreneurial skills acquired by Muni University ICT Graduates and the results show that the graduates had: advanced in their career; acquired jobs; interest in setting their own business; the required knowledge to start businesses; demonstrated innovativeness and problem-solving ability. The study also evaluated the gaps in entrepreneurship skills acquired by ICT graduates of Muni University and the results indicate that the graduates had challenges in: getting finances or loans for starting a new business venture; communications like returning phone calls and emails; taking lead in a group and risk management. The ICT curriculum designers in Muni University should use the findings of this research to improve the curriculum in the courses that relate to entrepreneurship. There is need for the entrepreneurship learning facilitators to: train learners in numerical problem solving; equip learners with information and knowledge on business proposal writing and securing start-up finances; encourage learners to run and grow new business ventures. Acquisition of innovative skills such as creativity, critical thinking, analytical and problem-solving skills to ICT students for job creation should be upheld. In conclusion, ICT graduates of Muni University obtain the necessary entrepreneurial skills required by the ICT entrepreneurial industry. There is a need to continuously conduct more similar studies with other subsequent graduates in order to track the application of entrepreneurial skills by the ICT graduates of Muni University. The researchers also recommend an establishment of system to track Muni University alumni.

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Introduction

Entrepreneurship is a specialized business course taught to ICT undergraduate of Muni University aimed at providing students the skills needed to effectively organize, develop, create, and manage their own business.

Entrepreneurship education enable people to respond to individual or national needs and desires. According to (Ndikanwu & Aninye, 2014) as cited in (Ejeka & Mgbonyebi, 2016), entrepreneurship is combining creative and innovative ideas together plus management and organizational skills for purposes of joining people, and other resources to identify needs and create wealth. In this study (Ejeka & Mgbonyebi, 2016), entrepreneurship is defined as the readiness of an individual to innovate, establish, invest, run, and bear all risks in order to attain the objectives of the enterprise.

According to Muni University's curriculum for Bachelor of Information Systems (Muni University, 2012), the objectives of entrepreneurship course are aimed at providing learners with skills in : exploring entrepreneurial opportunities at a global level; developing business plans for obtaining funds and other supports; acquaint themselves with standard elements and others factors that financiers look for during assessment of a business plan, analyzing and identifying factors for the success or failure of entrepreneurial ventures; identifying factors that are viable or suitable for a successful entrepreneurship venture; knowing the major steps and requirements for starting up successful entrepreneurship venture; understanding the importance of finance and financial management in the business' success; strategies for handling business risks and factors for successful business. This course is built upon the marketing education framework which includes business, management, and entrepreneurship; communication and interpersonal skills; economics; and professional development foundations. Emphasis is placed on the functions of marketing: distribution, financing, marketing information management, pricing, product/service management, promotion, and selling. Additional topics addressed are; assessment of personal skills, the components of the free enterprise system and its place in our global economy, human relations and interpersonal skills, the importance of business ethics, and the role of quality services in business. Additionally, the Muni university's curriculum for Bachelor of Science in Information Technology (Muni University, 2010), the entrepreneurship and business development skills course provides learners with knowledge and skills in: roles of entrepreneurship and small businesses in the market economy; policies governing entrepreneurship and small business in Uganda; innovativeness; characteristics of entrepreneurs; goals and ambitions business owners; analysis and overcoming business risks; business approaches, get-together resources and beginning new business ventures.

Purpose of the Study

The purpose of the study was to investigate the acquisition and application levels of entrepreneurial skills acquired by ICT graduates from Muni University.

Objectives of the Study

The purpose of the study was achieved by:

- Identifying the entrepreneurial skills acquired by Muni University ICT Graduates
- Assessing the entrepreneurial competency levels of Muni University ICT Graduates
- Examining the impact of the entrepreneurial skills acquired by Muni University ICT Graduates
- Evaluating the gaps in the entrepreneurial skills acquisition among Muni University ICT Graduates

Literature Review

Entrepreneurship is viewed as part of the approaches to boost county economy because entrepreneurs produce new business opportunities in form of new goods and services: resulting in new employment;

generation of new wealth to increase national income; social changes like improved quality of life, greater morals and economic freedom; community development through investment in community projects and financial support to local charities (Kapur, 2018). Similarly, In a study by (Doran, McCarthy, & O'Connor, 2018) indicated that entrepreneurial assertiveness stimulated the Gross Domestic Product (GDP) per capita in developed and developing countries. Other examples on study which shows how entrepreneurship has transformed economies are found in (McMillan & Woodruff, 2002).

In the study done by (Heinonen, Poikkijoki, & Vento-Vierikko, 2007) as cited in (Cooney, 2012), shows how entrepreneurship education and training opportunities are important to nurture the future of entrepreneurs, develop their abilities in order to grow their business enterprises to higher levels. According to (Cooney, 2012), the major purpose of entrepreneurship education and training is to build the entrepreneurs abilities and mindset towards creativity, innovation and self-employment. Similarly, it is strongly argued that the characteristics of a successful entrepreneur as an individual with technical competence, risk taking, high initiative, good judgment, intelligence to analyze and solve problem areas, leadership qualities, confidence, positive attitude, high level of energy, creativeness, honesty, integrity, emotional stability and fairness (Oduma, 2012), (Nwabufo, 2013) and (Ejeka & Mgbonyebi, 2016).

A study by Kelel and Affiliations showed that entrepreneurs have the ability to develop business concepts and a business plan, environmental scanning, opportunity recognition, advisory board and networking, new resource skills, calculated risk or risk propensity, change orientation, visionary leadership, inner control, creativity persistence and innovation (Kele1 & Affiliations, 2013). The capability to innovate is the ability to constantly transform knowledge and ideas into systems, processes to come up with new products to benefit the stake holders (Popa & Lalac Preda, 2015).

In the research by Khosa and Gupta, it is highlighted some of the key entrepreneurial skills expected in the industry. These were: innovativeness, such as creativity, critical thinking, risk taking, problem solving, analysis, technical, computational; business and economics management for example setting and achieving business goals, sales, marketing, commercial knowledge, accounting, business (pressure, research, plan, laws); personality traits like leadership, good relationships, optimism, strong willpower, awareness, idea sharing, listening, flexibility, discipline, hardworking, assertiveness, smartness, politeness; and communication skills such as reading, writing, presentations, speaking with a friendly tone, dialoguing and understanding person's point of views, keeping eye contact when a person speaks to you, providing communications (Khosla & Gupta, 2017). The results of this study were supported by (M. Sousa, 2018) who mentioned that entrepreneurs have skills as innovativeness, creative, willingness to take risk, project management to achieve project goals within the business context, readiness to organize resources to respond to opportunities, diversifying in different business areas, and creating national and international marketing networks.

Entrepreneurial competencies are excellent characteristics such as specific knowledge, skills, motives, personality traits, self-images and social roles from birth, survival and/or growth. (Nassiuma, 2018). Studies have shown that there are substantial connection between entrepreneurial competencies and success of a firm, the theorists of Resource Based View (RBV) states that the entrepreneur's competencies are a key factor for the success of a firm (Tehseen & Ramayah, 2015).

According to the study by (Career Space, 2001), entrepreneurial competencies include skills like personal and business skills: team work, project management; commercial simulations; negotiation; & presentations skills analytical; communication; problem solving; leadership; flexibility; self-learning; and creative skills. Also the researcher in (Thandeka, 2008) points out a number of entrepreneurial competencies which include: initiative skills like self-confidence, self-efficacy, self-esteem, ability to gather resources, tolerance of ambiguity, risk taking propensity, opportunity alertness, creativity, innovation, optimism, problem solving, optimism, and decision making; Leadership skills like ability to learn, energy, integrity, capacity for hard work, frugality, accountability' independence and autonomy, perseverance, negotiation skills, and time management skills; Business skills like strategy and business plans, operations, financial management skills, marketing, human resources, legal, communication, networking, supply value chain management skills, operational skills, human resource management skills, business systems and processing skills, ICT skills, technical skills, general management, research and development; entrepreneurial skills like industry/market opportunity, calculated risk talking, creativity, innovation, role model interpretation, gathering resources, opportunity recognition and technical skills; personal skills like decision making, achievement motivation and commitment, inner control, persistence, leadership, problem solving, ability to learn, networking, literacy and numeracy, adapting to change, time management skills, negotiation skills and communication; and technical skills like product/service development and product/service production, are key parameters of assessing the competency level as required by industry. More factors like passion for entrepreneurship, tendency to stick to beliefs, perseverance, grit, relevant previous experiences, mentoring and networking, learning, team management and resource mobilization are critical to the success of an entrepreneur (Asia-Pacific Economic Cooperation Secretariat, 2018).

According to (Weligamage & Siengthai, 2003), employers normally give their comments on the skills they are looking for in new employees. The following are some of the most common skills and their definitions expected from their new employees: time management, the ability to manage several tasks at once, to set priorities and allocate time effectively in order to meet multiple deadlines; self-understanding, ability to know about strengths and personal characteristics; learning Skills like ability to learn effectively from a wide range of sources including competencies such as learning what matters, organizing information and critical thinking; teamwork skills like ability to work effectively as a member of a team and to understand the dynamics that make teams successful; leadership skills like ability to lead, influence and motivate others; problem solving skills like ability to identify, prioritize and solve problems, to ask the right questions, sort out the many facets of the problem and determine possible solutions; working with diversity for example, ability to respect and tolerate different points of view, values and philosophies of life and deal constructively with people who differ from yourself; career planning like ability to manage your career in a constantly changing world of work; understanding workplace like ability to grasp the underlying values of the workplace, its dynamics and expectations; and risk assessment management, ability to assess alternative courses of action in terms of their consequences and associated risks and to identify alternative ways to reduce inherent risk. Other characteristics of an entrepreneur according to (Nwabufo, 2013) cited by (Ejeka & Mgbonyebi, 2016) include: self-confidence; risk taking; task (result) orientation; drive and energy; leadership; creativity; taking initiative; aggressive; trusting; fair and honest; delegation of authority; loyal; supportive; good planner and organizer. In another study by e-women group (e-Women, 2016), a list of ten (10) skills expected from entrepreneurs in 2020 are outlined. These skills include; complex problem solving, critical thinking, creativity, people management, coordinating with others, emotional intelligence, judgment and decision

making, service orientation, negotiation and cognitive flexibility.

Globally, people across the world are increasingly recognizing the positive impact that the creation of new businesses can have on employment levels, as well as the competitive advantages that small firms can bring to the marketplace (Scase, 2000). In the research by (Sousa & Almeida, 2014), entrepreneurship contribute to the country's economic growth through: innovation and creation of new products or processes to increase value to the existing ones; creation and running of businesses enterprises; aiding firms to internationalize and managing its risks; as the county's economy continues to grow, companies become competitive and this appeals to foreign investment. Similarly, according to (Maresch, Harms, Kailer, & Wimmer-Wurm, 2016), being an entrepreneur is advantageous because: it is an attractive career; entrepreneurship brings greater satisfaction to an entrepreneur though generation of huge profit in business; creates power, more exposure and self-confidence to an entrepreneur.

In another study by (Grecu & Denes, 2017), the impact of entrepreneurship has features like: highest innovativeness; self-employment (independent living); skills, knowledge and abilities for higher employment; planning, problem solving and risk taking; social development through entrepreneurship research and financial support; interaction to spot and utilize commercial opportunities in the market; self-confidence; technical or professional knowledge and skills; growth and development of the economic; recognizing opportunities; business venture initiation; business management; business marketing; information systems and finance; self-employment; enabling entrepreneurial mind-set; establishment of a new enterprise, risk taking to start a business; higher competition; productivity; flexibility and knowledge for quick decision making; leadership abilities; increased awareness of the importance of being an entrepreneur; problems solving ability; search for information and analyze it for decision making and planning; communication skills and presentation ability; recognition ability for commercial opportunities; business disciplines like as marketing, management, finance and information systems.

According to (Zahra, 2016), gaps in entrepreneurial skills acquisition include: management deficiency; how to acquire the financial support from banks and financial institutions; inadequate economic sphere; insufficient government policies; inconsideration of market issues; problems in product or service supply; lack of interest and dissatisfaction in work or at the work place; inaccurate evaluation of project; lack of related experience; expertise and good work relationships; problems of partnership and team work; unclear determination of business sector; substituted product/service; negative influences by the family; inconsideration of legal issues; and cheating and fraud. Other researchers, (Anicic, Vukotic, & Maksimovic, 2017) stated that the common challenges faced by entrepreneurs include: difficulty for find favorable financing sources for starting the new business venture; lack of good managerial skills, as a result of the gap between the education system and the needs of the business market; low purchasing power; insufficient knowledge of the products or services; inadequate sounding technical knowledge for production development; insufficient mentorship for production development; poor management of business risks like high expenses which reduce goods and services competitiveness in foreign markets; and other obstacles complicated administrative procedures, corruption and high level of economy in Growth Domestic Product (GDP).

Additionally, researchers (Jyoti, Edward, & Adekunle, 2018) indicated that most entrepreneurs, all over the world, face some common constraints such as lack of access to institutional capital, lack of access to lucrative markets, poor marketing and branding, inadequate planning, lack of access to suitable working space, lack

of business management skills and abilities, inadequate, poor management of financial records, limited ideas on new product development, and lack of on-going business support.

Research Methodology

The research was carried out using survey questions which were formulated basing on previous related studies. The questionnaire consisted of 102 survey questions from the following constructs: entrepreneurship skills acquired; entrepreneurship competency levels; impact of the entrepreneurship skills; gaps in the entrepreneurship skills acquisition. And a Likert scale was used ranging from 1 to 5, where 1 represented the lowest and 5 represented the highest.

Pilot study was conducted and the test data was collected from ten (10) graduates of Muni University staying in Aura town: 5 graduates from Bachelor of Information Systems, 2 from the 2017 graduation cohort, 3 from the 2018 graduation cohort; the other 5 graduates from Bachelor of Science in Information Technology, 3 from the 2017 graduation cohort and 2 from the 2018 graduation. Through this process, the instruction achieved the content validity of the study, 3 experts with experiences from teaching and industrial were used to analyse the validity of the research, and they demonstrated that the items were articulate and understandable to the respondents.

The study used the data that was collected from Bachelor of Science in Information Technology and Bachelor of Information Systems graduates of Muni University 2017 and 2018. This study aimed at investigating the acquisition and application levels of entrepreneurial skills acquired by ICT graduates from Muni University. The questionnaire had five sections. The first section captured the bio data of respondents, the second section identifies the entrepreneurial skills acquired by Muni University ICT Graduates, the third assesses the entrepreneurial competency levels of Muni University ICT Graduates, the fourth examines the impact of the entrepreneurial skills acquired by Muni University ICT Graduates and the fifth evaluates the gaps in the entrepreneurial skills acquired among Muni University ICT Graduates.

The study administered 60 online questionnaires developed in Google forms, sent to 60 graduates of Muni University, 43 were the personal emails (google and yahoo domain emails) and 17 were Muni University (organisational) emails and only 41 were received as filled making the return rate was 68.33%. 32 responses were from personal emails and only 9 from Muni University emails which indicated that the respondents preferred personal emails than Muni University emails.

Package for the Social Sciences (SPSS) version 21 program was used to analyse the collected data. The reliability of the research instrument was tested using Cronbach's alpha and was found to be 0.960.

Findings and Discussion

The analysis of this study shows that out of 41 respondents, 28 (68%) were male and only 13(32%) were female as show in figure below.

Figure 1: Gender Category by Respondents

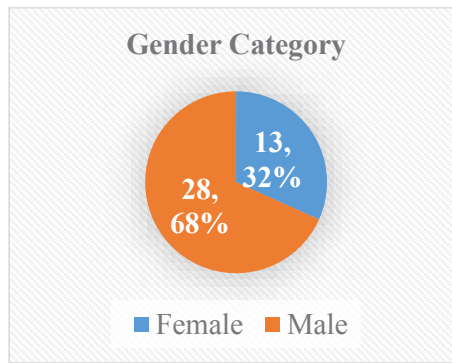


Figure 2: shows the age category of the respondents, 30 (73%) were between age of 26 to 30 and 11(27%) were between 20 to 25 years.

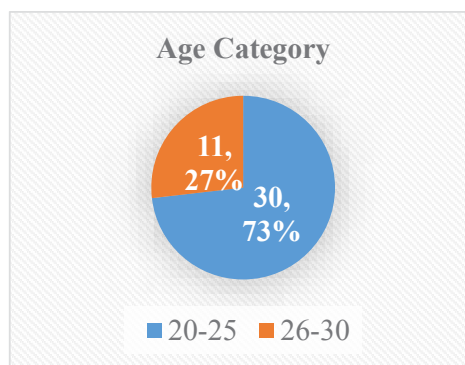


Fig. 2: Age Category by Respondents

Figure 3 shows the employment status of respondents, 29 (71%) were employed and 12(29%) were not employed.

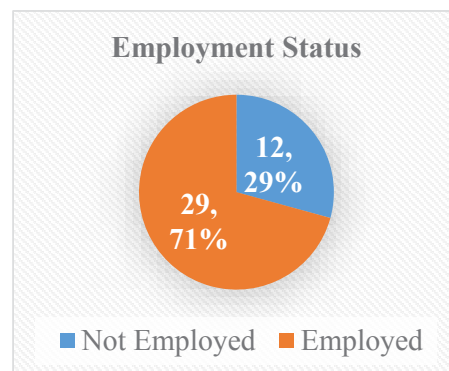


Fig. 3: Employment Status of Respondents

Figure 4 shows the graduation year of respondents, 23 (56%) graduated 2017 and 18(44%) graduated 2018.

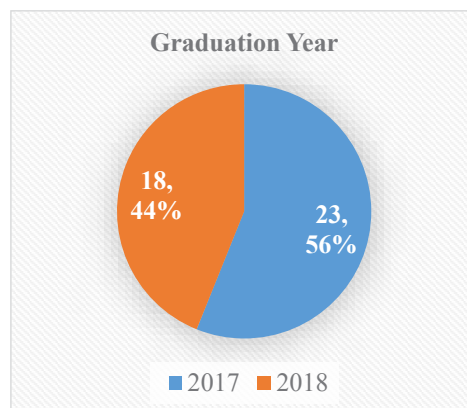


Fig. 4: Graduation Year of Respondents

Figure 5 shows the programmes studied by respondents, 26 (63%) were for Bachelor of Information Systems (ISM) and 15 (37%) were for Bachelor of Science in Information Technology (ITM).

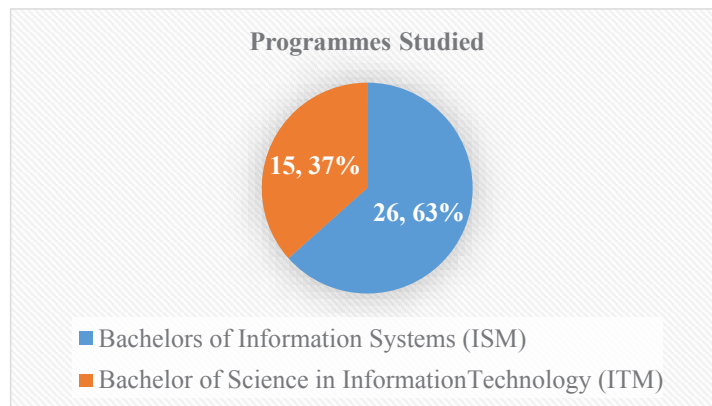


Fig. 5: Programmes Studied by Respondents

In order to analyse objective one to four, 5 Likert scale was as shown in table 1.1-2.

Table 1.1: Likert Scale

Response Rate	Response Mode	Description
1	SD	Strongly Disagree
2	D	Disagree
3	NS	Not Sure
4	A	Agree
5	SA	Strongly Agree

Table 1.2: Likert Scale

Response Rate	Description
1	Strongly Disagree
2	Disagree
3	Not Sure
4	Agree
5	Strongly Agree

Objective One: To identify the entrepreneurial skills acquired by Muni University ICT Graduates

Table 2 below shows that majority of the respondents strongly agreed that ability to think creatively and critically, problem solving attitude, analytical abilities, numeracy (applying mathematical and statistical analysis methods) are the top five factors of innovative skills acquired during the course of study. They also agreed that necessary technical ability, risk taking ability and numerical competence ability were important skills acquired though ranked among the last three.

Table 2: Innovative skills

NO.	Innovativeness	Percentage Frequencies (in 100%)					Median	Interpretation
		SD	D	NS	A	SA		
1	Ability to think creatively	0.00	4.88	0.00	34.15	60.98	5	Strongly Agree
2	Ability to think critically	0.00	2.44	2.44	39.02	56.10	5	Strongly Agree
3	Problem solving attitude	0.00	4.88	2.44	31.71	60.98	5	Strongly Agree
4	Analytical abilities	0.00	4.88	4.88	36.59	53.66	5	Strongly Agree
5	Numeracy (applying mathematical and statistical analysis methods)	0.00	4.88	12.20	29.27	53.66	5	Strongly Agree
6	Risk taking ability	0.00	4.88	9.76	43.90	41.46	4	Agree
7	Numerical competence ability	0.00	7.32	7.32	36.59	48.78	4	Agree
8	Necessary technical ability	0.00	7.32	9.76	43.90	39.02	4	Agree

In terms of business and economics management skills, respondents strongly agreed that all the above six items were acquired during period of study at Muni University, they also agree that skills like marketing ability (segment the market, distribution and manage customer service process), knowledge for commercial or financial management (financial indicators, metrics, dimensions, and variables), legal aspect of business / basic business laws (related to tax requirements, business structures, industrial relations, national and international vat policies) and accounting skills were ranked last as shown in table 3.

Table 3: Business and Economics Management skills

NO.	Business and Economics Management	Percentage Frequencies (in 100%)					Median	Interpretation
		SD	D	NS	A	SA		
1	Computing ability (using specialized software)	0.00	9.76	2.44	26.83	60.98	5	Strongly Agree
2	Research methods	0.00	4.88	2.44	41.46	51.22	5	Strongly Agree
3	Project management ability (monitor, evaluate, analyze, design, develop and implement).	2.44	2.44	0.00	39.02	56.10	5	Strongly Agree
4	Negotiation abilities (with customers, suppliers, competitors, business partners, employees, etc.)	0.00	7.32	9.76	29.27	53.66	5	Strongly Agree
5	Leadership ability (inspire, motivate, analytical, conflict resolution, creativity, delegation, flexibility, and honesty)	0.00	4.88	4.88	34.15	56.10	5	Strongly Agree
6	Time management skills (ability to organize, plan, schedule and prioritize your daily activities).	2.44	2.44	4.88	29.27	60.98	5	Strongly Agree
7	Ability to set business goals	0.00	2.44	2.44	53.66	41.46	4	Agree
8	Ability to achieve business goals	0.00	4.88	2.44	58.54	34.15	4	Agree
9	Ability to bear Mental Pressure of business							
10	Business plan development	0.00	7.32	0.00	43.90	48.78	4	Agree
11	Sales ability (finding customers, research and learn their needs, Pricing, Promotion etc.)	2.44	9.76	14.63	41.46	31.71	4	Agree
12	Marketing ability (segment the market, Distribution, manage customer service process, etc.)	2.44	12.20	19.51	24.39	41.46	4	Agree
13	Knowledge for commercial or financial management (financial indicators, metrics, dimensions, and variables).	0.00	12.20	9.76	41.46	36.59	4	Agree
14	Legal aspect of business / basic business laws (related to tax requirements, business structures, industrial relations, national and international vat policies, etc.).	2.44	14.63	14.63	48.78	19.51	4	Agree
15	Accounting skills	4.88	9.76	17.07	43.90	24.39	4	Agree

Table 4 shows how respondents responded to the questions regarding human relations and interpersonal skills. Majority strongly agreed that good working relationship, flexibility, inner discipline and good listening ability were ranked top while assertiveness, need for influencing other (leadership and teamwork) and strong willpower were ranked last though they agreed that they attained the skills.

Table 4: Human Relations and Interpersonal Skills

NO.	Human Relations and Interpersonal Skills	Percentage Frequencies (in 100%)					Median	Interpretation
		SD	D	NS	A	SA		
1	Good working relationship	0.00	0.00	2.44	34.15	63.41	5	Strongly Agree
2	Flexibility	0.00	0.00	2.44	39.02	58.54	5	Strongly Agree
3	Inner discipline	0.00	0.00	4.88	31.71	63.41	5	Strongly Agree
4	Good Listener (listening ability)	0.00	4.88	0.00	24.39	70.73	5	Strongly Agree
5	learning ability	0.00	0.00	2.44	26.83	70.73	5	Strongly Agree
6	Hard working	0.00	7.32	0.00	26.83	65.85	5	Strongly Agree
7	Initiative taking ability (willingness to begin)	0.00	2.44	0.00	41.46	56.10	5	Strongly Agree
8	Smartness	0.00	2.44	7.32	26.83	63.41	5	Strongly Agree
9	Politeness	0.00	2.44	2.44	34.15	60.98	5	Strongly Agree
10	Ideas sharing	0.00	2.44	2.44	34.15	60.98	5	Strongly Agree
11	Willingness to help	0.00	4.88	7.32	29.27	58.54	5	Strongly Agree
12	Awareness ability	0.00	2.44	4.88	31.71	60.98	5	Strongly Agree
13	Optimism	0.00	0.00	12.20	48.78	39.02	4	Agree
14	Strong willpower	0.00	0.00	7.32	48.78	43.90	4	Agree
15	Need for influencing other (leadership and teamwork)	0.00	4.88	2.44	43.90	48.78	4	Agree
16	Assertiveness	0.00	7.32	2.44	48.78	41.46	4	Agree

Table 5 below shows that communication skills was one of the entrepreneurial skills acquired by Muni University ICT graduates. Respondents were demonstrating that they attained reading and writing ability, presenting findings (explaining simple and complex data) and understanding other person's point of view were strongly agreed to be among the top communication skills required.

Table 5: Communication Skills

NO.	Human Relations and Interpersonal Skills	Percentage Frequencies (in 100%)					Median	Interpretation
		SD	D	NS	A	SA		
1	Reading ability	0.00	2.44	4.88	31.71	60.98	5	Strongly Agree
2	Writing ability	0.00	2.44	4.88	36.59	56.10	5	Strongly Agree
3	Presenting findings (explaining simple and complex data)	0.00	4.88	2.44	34.15	58.54	5	Strongly Agree
4	Understanding other person's point of view	0.00	7.32	2.44	36.59	53.66	5	Strongly Agree
5	Keeping eye contact when a person speaks to you	0.00	2.44	4.88	36.59	56.10	5	Strongly Agree
6	Giving feedback to communications e.g. returning phone calls and emails	2.44	0.00	2.44	34.15	60.98	5	Strongly Agree
7	Firm but friendly tone when speaking	0.00	12.20	0.00	43.90	43.90	4	Agree
8	Dialoguing with others even with those you disagree	2.44	7.32	0.00	43.90	46.34	4	Agree

Objective Two: To assess the entrepreneurial competency levels of Muni University ICT graduates.

From table 6, Muni University ICT graduates strongly agreed that computer literacy and information technology (ICT applications); creativity, innovation, opportunity identification and life skills (problem solving, time management, decision making, ability to learn, change management) were ranked among the top three entrepreneurial competency while securing resources and finances to start, run and grow business; strategy development business planning, contingency plans and organizational control, supplier, purchasing and inventory management were ranked among the last.

Table 6: Entrepreneurial competency levels of Muni University ICT graduates.

N0.	Competency	Percentage Frequencies (in 100%)					Median	Interpretation
		SD	D	NS	A	SA		
1	Computer literacy and information technology (ICT applications)	0.00	2.44	0.00	9.76	87.80	5	Very Competent
2	Creativity, innovation and opportunity Identification	0.00	2.44	2.44	41.46	53.66	5	Very Competent
3	Life skills (problem solving, time management, decision making, ability to learn, change management)	0.00	2.44	0.00	39.02	58.54	5	Very Competent
4	Literacy and numeracy	0.00	2.44	4.88	21.95	70.73	5	Very Competent
5	Role Models (Learning from others)	2.44	2.44	4.88	26.83	63.41	5	Very Competent
6	Self-Motivation, commitment, resilience and confidence building	0.00	4.88	0.00	31.71	63.41	5	Very Competent
7	Technical and vocational skills	0.00	2.44	7.32	36.59	53.66	5	Very Competent
8	Business systems, procedures, processes and records	4.88	2.44	4.88	60.98	26.83	4	Competent
9	Business linkages, industry clusters and networking	7.32	9.76	14.63	46.34	21.95	4	Competent
10	Communication and access to relevant information	0.00	7.32	2.44	41.46	48.78	4	Competent
11	Financial Management including cash flow, forecasting, pricing and costing	4.88	7.32	9.76	34.15	43.90	4	Competent
12	Human Resource Management and organizational planning	4.88	7.32	12.20	46.34	29.27	4	Competent
13	Legal (Business registration, government requirements, regulations and incentives)	7.32	7.32	14.63	48.78	21.95	4	Competent
14	Marketing, promotions, customer relations and competitor analysis	2.44	7.32	12.20	34.15	43.90	4	Competent
15	Operations including quality control and production planning	4.88	4.88	19.51	29.27	41.46	4	Competent
16	Research & development including technical, market and product development.	4.88	2.44	14.63	39.02	39.02	4	Competent
17	Risk taking (Calculated)	7.32	7.32	2.44	39.02	43.90	4	Competent
18	Securing resources and finances to start, run and grow business	7.32	2.44	9.76	41.46	39.02	4	Competent
19	Strategy development, business planning, contingency plans and organizational control	7.32	2.44	7.32	43.90	39.02	4	Competent
20	Supplier, purchasing and inventory management.	4.88	7.32	7.32	41.46	39.02	4	Competent

Objective Three: To examine the impact of the entrepreneurial skills acquired by Muni University ICT graduates

Table 7 shows that the respondents strongly agreed that career advancement, job acquisition, interest in owning personal business, having knowledge required to start a business, demonstrating innovativeness and problem solving ability were the top six impacts of entrepreneurial skills to Muni University ICT graduates while promotion of entrepreneurial research, more exposure, initiating business projects, demonstrating risk taking ability, utilizing better opportunities in the market and generating of huge profit margins in business were ranked last six impacts.

Table 7: Impact of the entrepreneurial skills acquired by Muni University ICT graduates

NO.	Impact of Acquired Entrepreneurial Skills	Percentage Frequencies (in 100%)					Median	Interpretation
		SD	D	NS	A	SA		
1	More career advancement	4.88	2.44	0.00	41.46	51.22	5	Strongly Agree
2	Job creation / acquisition	4.88	2.44	0.00	39.02	53.66	5	Strongly Agree
3	Interested in setting your own business	4.88	4.88	0.00	29.27	60.98	5	Strongly Agree
4	Do you have the knowledge required to start a business	7.32	2.44	0.00	31.71	58.54	5	Strongly Agree
5	Demonstrated innovativeness ability	4.88	2.44	0.00	41.46	51.22	5	Strongly Agree
6	Demonstrated problem solving ability	4.88	2.44	0.00	34.15	58.54	5	Strongly Agree
7	Higher self-confidence (do things in your own way without worrying what other people think)	4.88	7.32	0.00	36.59	51.22	5	Strongly Agree
8	Demonstrated technical or professional knowledge	4.88	2.44	0.00	36.59	56.10	5	Strongly Agree
9	Demonstrated business management skills	4.88	2.44	0.00	34.15	58.54	5	Strongly Agree
10	Increased or improved business knowledge	7.32	2.44	0.00	34.15	56.10	5	Strongly Agree
11	Secured salary job	4.88	14.63	0.00	48.78	29.27	4	Agree
12	Secured self-employment or independent living	4.88	2.44	0.00	46.34	46.34	4	Agree
13	Promotion of entrepreneurial research	4.88	9.76	0.00	53.66	31.71	4	Agree
14	More exposure	4.88	4.88	0.00	41.46	48.78	4	Agree
15	Initiated business project	7.32	12.20	0.00	41.46	39.02	4	Agree
16	Demonstrated risk taking ability	4.88	7.32	0.00	39.02	48.78	4	Agree
17	Utilized better opportunities in the market	4.88	2.44	0.00	51.22	41.46	4	Agree
18	Generated huge profit margins in business	9.76	14.63	0.00	46.34	29.27	4	Agree

Objective four: To evaluate the gaps in the entrepreneurial skills acquisition among Muni University ICT graduate

Table 8 shows that respondents strongly disagreed that: entrepreneurship is not a rewarding venture; and it's for the less educated not for ICT graduates with 51.22% and 65.85% respectively. This means that they have a positive attitude towards Entrepreneurship. However, the majority find it: risky to venture into business/entrepreneurship; hard to provide feedbacks to communications e.g. returning phone calls and emails; some don't like to take the lead when in a group and it is really difficult to get finances/ loans for starting a new business venture for the majority.

Table 8: Gaps in the entrepreneurial skills acquisition among Muni University ICT graduate.

NO.	Gaps in Entrepreneurial Skill Acquired	Percentage Frequencies (in 100%)					Median	Interpretation
		SD	D	NS	A	SA		
1	Entrepreneurship is not a rewarding venture	51.22	31.71	2.44	7.32	7.32	1	Strongly Disagree
2	Entrepreneurship is for the less educated not for ICT graduates	65.85	17.07	2.44	7.32	7.32	1	Strongly Disagree
3	Entrepreneurial course didn't provide me with the necessary knowledge required to start a business	39.02	29.27	7.32	9.76	14.63	2	Disagree
4	I am unable to secure a well-functioning infrastructure in place to support business/start up	24.39	31.71	4.88	26.83	12.20	2	Disagree
5	I didn't acquire sufficient knowledge of the products or services	19.51	56.10	2.44	12.20	9.76	2	Disagree
6	I didn't acquire sound technical knowledge to start a business	31.71	41.46	2.44	14.63	9.76	2	Disagree
7	I am unable to start a business/entrepreneurial venture	39.02	36.59	2.44	12.20	9.76	2	Disagree
8	I am unable to identify mentors in business/entrepreneurial field	36.59	41.46	121.95	12.20	9.76	2	Disagree
9	I am not being encouraged by mentors to pursue my business/entrepreneurial idea	19.51	46.34	2.44	19.51	12.20	2	Disagree
10	I find it risky to venture into business/entrepreneurship	21.95	43.90	9.76	14.63	9.76	2	Disagree
11	I find it hard to provide feedbacks to communications e.g., returning phone calls, emails etc.	39.02	36.59	4.88	14.63	4.88	2	Disagree
12	When I am in a group, I don't like to take the lead	48.78	34.15	2.44	7.32	7.32	2	Disagree
13	It is really difficulty to get finances/ loans for starting a new business venture	14.63	12.20	7.32	36.59	29.27	4	Agree

Conclusion

Amidst challenges like sluggish responses from the research respondents, valuable information regarding the acquisition and application levels of entrepreneurial skills by ICT graduates of Muni University has been obtained and can be used to improve entrepreneurship curriculum for ICT students of Muni University.

The research has identified the following entrepreneurship skills as the most acquired during the course of study by ICT Muni University students: ability to think creatively and critically; problem solving attitude; analytical abilities; computing ability (using specialized software); research methods; project management ability (monitor, evaluate, analyze, design, develop and implement); negotiation abilities (with customers, suppliers, competitors, business partners and employees among others); leadership ability (inspire, motivate, analytical, conflict resolution, creativity, delegation, flexibility, and honesty); good working relationship; flexibility; inner discipline; good listener (listening ability); learning ability; hardworking; writing ability; presenting findings (explaining simple and complex data); and understanding other person's point of view.

The study also shows that there is need for improvement in the following entrepreneurship skills acquisition among the ICT students of Muni University: numerical competence ability; necessary technical ability; marketing ability (segment the market, distribution and manage customer service process); knowledge for commercial or financial management (financial indicators, metrics, dimensions, and variables); legal

aspect of business/basic business laws (related to tax requirements, business structures, industrial relations, national and international vat policies among others); accounting skills; assertiveness; giving feedback to communications like returning phone calls and emails; and firm but friendly tone when speaking and dialoguing with others even with those you disagree.

The study assessed the most ranked entrepreneurship competency levels of Muni University ICT graduates and results indicate that the respondents were very competent in the following skills; computer literacy and information technology (ICT applications), creativity, innovation, opportunity identification and life skills (problem solving, time management, decision making, ability to learn, change management) while skills like; securing resources and finances to start, run and grow business, strategy development, business planning, contingency plans and organizational control, supplier, purchasing and inventory management were least ranked implying need for improvement in those skills.

The study examined the impact of the acquired entrepreneurship skills on the ICT graduates of Muni University and the results shown that the following were ranked highly: more career advancement; job acquisition; interest in setting own business; knowledge required to start a business; demonstrating innovativeness and problem solving ability while skills like: initiating business project; demonstrating risk taking ability; utilizing better opportunities in the market and generating huge profit margins in business we ranked low implying better teaching approaches should be used to improve those skills.

The study also evaluated the gaps in the entrepreneurial skills acquired among Muni University ICT graduates. The entrepreneurial course provided them with necessary knowledge required to start a business. However, the same study found out that some ICT graduates: find it hard to communicate effectively over the phone and emails; don't like to take the lead; find it difficult to acquire start-up capital.

Generally, this study will help to improve; teaching methodology for entrepreneurship education and entrepreneurship curriculum development for ICT students in ICT students of Muni University and many Universities around the globe.

Recommendations and Way Forward

The researchers recommend that the following items should be improved:

- Students should be trained in numerical problem solving but not solution takers.
- Students should be equipped with necessary technical knowledge required to start up a business.
- Equipping students with information and knowledge on business proposal writing and securing finances or loans for starting running and growing a new business venture.
- Students should be trained marketing skills such as market segmentation, distribution, manage customer service process, promotions, customer relations and competitor analysis skills.
- Students should be equipped with knowledge for commercial or financial management such as financial indicators, metrics, dimensions, and variables.
- Students should be equipped with knowledge about the legal aspect of business or basic business laws (related to tax requirements, business structures, industrial relations, national and international VAT policies, etc.).

- There is a need for students to be trained basic accounting skills.
- Students should acquire effective communication skills when interacting over phone calls and emails.
- More knowledge is required in business operations such as quality control, production planning, supply, purchase and inventory management and organizational control.
- Students should obtain skills in research and development.
- Muni University should develop alumni tracking system.

And the following should be maintained:

- Training innovativeness such as creativity, critical thinking, analytical and problem-solving skills for job creation should be upheld.
- Good business knowledge, business management skills, technical or professional knowledge should uphold.
- Excellent communication skills as such reading, writing and presentations of findings by explaining simple and complex data exhibited by ICT graduates from Muni University should be maintained.
- Excellent human relations and interpersonal skills such as good working relationships, flexibility, inner discipline, good listening ability exhibited by ICT graduates from Muni University should be maintained
- Excellent life skills such as problem solving, time management, decision making, learning ability, opportunity identification change management and high self-confidence (do things in your own way without worrying what other people think) among ICT graduates should be maintained.
- Equipping ICT students with knowledge in computer literacy like using specialized software and information technology (ICT applications) should continue.
- Equipping ICT students with knowledge in project management such as monitor, evaluate, analyze, design, develop and implement business projects should continue.
- Training negotiation abilities with; customers, suppliers, competitors, business partners and employees to ICT students should continue.

The study was subjected to ICT graduates from Muni University only. Thus, it is also necessary to carry out a detailed study on the ICT graduates from other Universities in Uganda. Since this research is being the first in Muni University, there is a need to continuously conduct more similar studies to other subsequent graduates to keep investigating the acquisition and application levels of entrepreneurial skills acquired by ICT graduates from Muni University for future improvement in entrepreneurship curriculum for ICT students, based on research findings, and keeping track of the career progress for ICT graduates of Muni University.

The researchers' recommendations conquer with the research done by (Fenton & Barry, 2011) whose findings show the best methods to entrepreneurship education include: modules of entrepreneurship; studying feasibility; competitions in business plan writing; study cases; using guest lecturers; simulated enterprises; information about campus incubators; enterprise boot camps; information about enterprise platform programmes; contacts or links with graduate entrepreneurs, enterprise development agencies, industrial liaison office, city and county enterprise boards; consulting experts and using blended/e-learning modules.

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