Students' Perception of Innovative Pedagogy in Facilitating Learning: A Case of DarTU

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Abstract

The third result area of the Sustainable Business and Employability through HEI's Innovative Pedagogy (SUSIE) focuses on "enhanced relevance and pedagogical capacity by increasing active (e) pedagogy competence of teachers." This was intended to be achieved through various capacity building sessions to instructors in all three partner institutions, namely: Mwenge Catholic University (MWECAU), Moshi Corporative University (MOCU) and the former Tumaini University Dar es Salaam College (TUDARCo), now Dar es Salaam Tumaini University (DarTU). The main focus of this paper is on the perception of students on innovative pedagogy in facilitating learning at DarTU. The study however looks back on training that was provided to instructors and their contents and the methods instructors used in implementing these innovative pedagogical skills so as to get a holistic picture. A desktop review was conducted to collect necessary information on the trainings, its content and the participants who partook in the training. A questionnaire was distributed to 273 students in order to get an understanding on their perception of how these innovative pedagogical skills played a role in their understanding of the respective lessons. SPSS was used to analyse the data and findings reveal that innovative pedagogical skills not only play a significant role in enabling students to learn, it also increased class attendance, and improved grades of students in their respective classes. The study concludes by recommending institutions of higher learning to employ innovative pedagogy in teaching and to improve infrastructure to facilitate learning.

Keywords: innovative pedagogy, SUSIE project, DARTU

Introduction

DarTU understands that the aim of higher education is to prepare students for personal fulfilling and social beneficial employment as well as the creation of knowledgeable and responsible citizens (Universities Strategic Plan 2020/21-2024/25). It also recognizes that Innovation and entrepreneurship are important factors in the development of emerging economies like Tanzania. Innovation and entrepreneurship are also essential drivers of economic growth. The capacity of recent graduates to turn their concepts into marketable goods or services and launch businesses to meet the demands of their local markets tends to encourage self-employment and job creation. The entrepreneurial abilities of persons who launch such enterprises or "start-ups" play a significant role in how successful they are. DarTU created two core courses that cut across all Schools, in their second year, second semester and third year first semester, to encourage innovation and entrepreneurship. These courses are MGMT 225: Innovation, Entrepreneurship and Enterprise Development and MGMT 311: Harnessing Entrepreneurship and an Innovators Mindset. The courses were designed in such a way that students must develop and deliver a business pitch of their ideas at the end of the course. In their pitch, they should be able to show the social problems and present an innovative solution that the community will be willing to pay for. Students were also equipped on intellectual property, financing, and marketing in addition to competency-based training, which hones their skills and knowledge and prepares them for a successful start-up. Three key concepts in these courses were solving a problem in the society, coming up with environmentally friendly businesses and business that foster gender equality and gender equity.

DarTU partnered with Turku University of Applied Science (TUAS) Mwenge Catholic University (MWECAU) and Moshi Corporative University (MOCU) in the Sustainable Business and Employability through HEI's Innovative Pedagogy (SUSIE) for four years (2020 – 2024). The main aim of the project was co-creation, co-designing and collaboration with public, private and third sectors to respond complex challenges of 21st century in terms of innovation, sustainable development and employability. It had three result areas:

i. Strengthened capacity building improved by sustainable leadership and strategy work,
ii. Enhanced relevance and pedagogical capacity by increasing active (e-) pedagogy competence of teachers,
iii. Improved accessible and interactive learning environments by establishing interactive Campus HUBs and e-learning facilities to public libraries.

The third result area was achieved through capacity building sessions that were conducted to team members in the SUSIE project, and to DarTU staff. These capacity building sessions focused on innovative pedagogy in both face to face and online classes. Additionally, there was close collaboration with other stakeholders such as Sahara Venture, Zaidi Recyclers and conferences, to further enrich the experience. In October 19th, 2024 an Academia Sparks conference was conducted in collaboration with Sahara Venture, and empirical presentations further shed light on the role innovative pedagogy facilitates training. The innovation and entrepreneurship courses at DarTU employed innovative pedagogy in their classes. Facilitators received train-the-trainer courses on how each topic can be taught innovatively to build skills, foster understanding and improve competencies of the students. The first cohort took place in academic year 2022/23, and this paper assesses how students perceived the training and the pedagogical techniques used in their classrooms.

The main aim of the two courses were one; to introduce students to contextual aspects of small businesses and entrepreneurship such as identification of societal needs, challenges and translation of the same into business opportunities through formulation of ideas on how to address them using the knowledge and skills learnt in class. The second course aimed at enabling students to have functioning businesses through implementable Business Model Canvas (BMC) and Business Plan (BP). It aimed to equip students with the practical capabilities of translating the problem-solving process into a business venture that can generate employment for oneself and others. It further focused on best practices to preserve the environment and to create a gender inclusive and conscious business. The innovative pedagogy learning approach requires students to be able to demonstrate their learned knowledge and skills in order to achieve specific predetermined competencies. While this seemed to have been done during the business plan and business model canvas presentation, this research aims to determine from the students, their perception on the course and its relevance in their daily endeavours. The contextual scope of this study was on the innovative pedagogy skills that trainers learned during the train-the-trainer workshops and trainings prepared by the SUSIE project. The study will be confined itself on students who studied both MGMT 225: Innovation, Entrepreneurship and Enterprise Development and MGMT 311: Harnessing Entrepreneurship and an Innovators Mindset course. This is due to the fact that the research aims to assess its effectiveness in increasing the intention of students to pursue the entrepreneurial venture. It also confined itself in the four Schools at DarTU, namely School of Business Studies (SoBS), School of Education and Human Development (SoEHD), School of Humanities and Social Sciences (SoHSS) and School of Law and Justice (SoLJu) who were taught this course in the academic year 2022.

Literature Review

This section defines the two key terminologies: perception and innovative pedagogy. It further provides empirical studies from other institutions across the world. The Britannica Dictionary (2024) defines perception as the process whereby sensory stimulation is translated into organized experience. That experience, or percept, is the joint product of the stimulation and of the process itself. Student perception describes how learners view and understand the things they have seen and experienced during the learning process. Their understanding and behaviour in the classroom are shaped by their senses and emotions. Depending on a variety of factors, including the type of lecturer, the online versus offline learning environment and the challenges students have when participating in speaking activities, their perception may be either good or negative (Tshehla, Chodokufa and Coasta, 2023; Mahlaole and Melabana, 2021). Understanding students' perception on their learning experience, enables improvement of the said course, and enhances learning experience on students (Tutuba, 2023).

Sanual (2024) defines innovative pedagogy as "the process of proactively introducing new teaching strategies and methods into the classroom to improve academic outcomes and address real problems to promote equitable learning." According to the study, students tend to have different needs, come from different educational background, and have different attention spans and interest. It further notes that different cultural background and language abilities also impacts learning. Since innovative pedagogy focuses on the learner, learners become active knowledge seekers, peer learning and learning in small and large groups is enhanced and differentiated instructions and self regulated learning also improves the learning experience. Additionally, the learning environment should be learner centred, structured and well designed, highly personalized, inclusive and facilitate social learning.

The innovation and entrepreneurship courses at DarTU aimed at stimulating the intention of students to venture into entrepreneurship. In incorporating the innovative pedagogy in the training, teaching tools that were used included videos, public discussions, simulations, observation of the natural environment and visitation from entrepreneurs and regulatory bodies in the class. These included, but where not limited to Zaidi recyclers, who spoke on environmentally friendly business ideas and how to turn waste into valuable businesses. Sahara Ventures, visited on multiple occasions to speak with students and share insights on integrating technology in the business. There were also public lectures from the National Economic Empowerment Council, Dar es Salaam Stock Exchange and other stakeholders. Students were also sent to observe different business environment and establish what does and what doesn't work as far as businesses are concerned. All this was to enable them to understand, and eventually venture into entrepreneurship.

As a way of reinforcing entrepreneurial mindset, students who presented their business ideas during the DarTU Week annual event, were awarded with different prices and certificate of recognizing their work. Exceptional business ideas where spilled over to the Innovation and Entre-cum-Techno-Preneurship Acceleration Facility (IETePAF), for improvement and launch of the respective businesses. This is a competitive opportunity, where only businesses that identified a societal problem, came up with innovative solution that customers would be willing to pay for were selected. The model for ideal business idea is shown in figure 1 below:

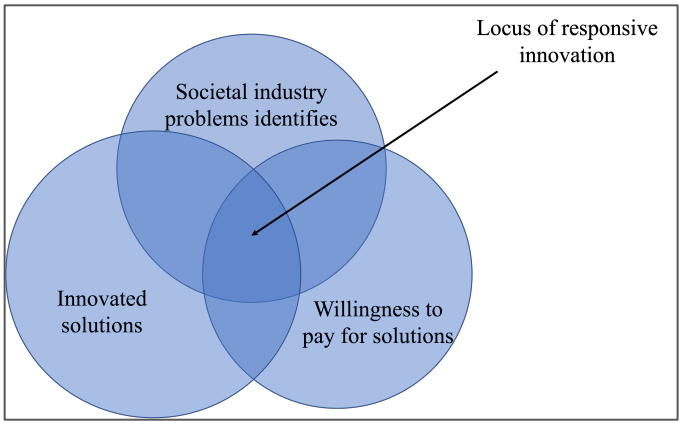

Figure 1: Model for Ideal Business Idea

Slautchev, Lapspita and Patxel (2012) in their paper on effects of entrepreneurship education at Universities established that in the short run (shortly after graduation) and long term (five years after graduation), students' do intend to become self-employed or entrepreneurs. Changes in the attendance of entrepreneurship classes throughout the same period are correlated with changes in entrepreneurial intentions through the application of a difference-in-differences technique. The research took place in Germany, and in the study, only those without any prior entrepreneurial goals were examined in order to take into consideration any potential bias resulting from self-selection into entrepreneurship classes. According to their findings, entrepreneurship education has a positive long-term impact on students' aspirations to start their own businesses or work for themselves, but a negative short-term impact on the same aspirations. This study, while similar to the one of

the researchers, differ in that the current study aims to establish whether or not innovation and entrepreneurship courses do impact students into becoming entrepreneurs and does not segregate on prior intentions on self-employment.

Patricia, Jambrino, Velasco and Kokash, (2016) in their paper on impact of entrepreneurship programmemes on university students in Malaga University's noted that using the Theory of Planned Behaviour as a basis enlightens on students' intention to pursue entrepreneurship. Their two goals were to assess the effectiveness of the university system's educational programmes and analyse the impact of the primary components of an orientation to entrepreneurship. An investigation of entrepreneurial inclination was conducted on a sample of 392 students at Malaga University using Ajzen's seminal model (1991). The findings showed that the students have a moderate propensity for entrepreneurship since their decision to launch a business is thwarted by perceptions of risk and self-doubt. The practical ramifications of this research for institutions creating business formation programmes are noteworthy. This study offers intriguing insights that may facilitate the establishment of new businesses and reduce unemployment. While this study is similar, it does not assess the impact of the course, rather effectiveness and orientation. This study aimed to assess the impact of the two courses on enabling students to start their own businesses.

Tshehla, Chodokufa and Costa (2023) in their research on "entrepreneurship education's influence on learner's entrepreneurship intention in South African Schools" they evaluated how entrepreneurship education affects students' intentions regarding careers in entrepreneurship while they are in high school. A total of 240 grade 12 students with entrepreneurial education from the three townships in the City of Tshwane Mamelodi, Atteridgeville, and Soshanguve—participated in a quantitative study. To gather information, a closed-ended, structured questionnaire was employed. Using SPSS software, data was analysed using both inferential and descriptive statistics. Results demonstrated a connection between theoretical education and experience learning and students' intentions to pursue entrepreneurship, with experiential learning having a major impact on students' development of entrepreneurial intentions. Thus, experiential learning should be prioritized in order to increase the efficacy of entrepreneurship education for high school students. The results of the study also showed that the decision to pursue entrepreneurship as a career is influenced by the topic of entrepreneurship. Because of this, students should network with businesspeople around the world to meet successful individuals who chose entrepreneurship as their job. This study is relevant and similar to the one being conducted. The two main differences are one, it focuses on high school students while this looks into university students; and two, it was conducted in South Africa, which is quite different from Tanzania.

Sampene, Li, Khan, Oteng and Opoku, (2022) in their study on Yes! I want to be an entrepreneur: A study on university students' entrepreneurship intentions through the theory of planned behaviour, noted that since university students are the exact replicas of society, they also tend to display precocious abilities and an unwavering commitment to entrepreneurial practices. However, Ghana is hardly an exception to the dearth of empirical studies supporting their entrepreneur intention (EI) in emerging economies. This study uses the theory of planned behaviour (TPB) to analyse entrepreneur intention (EI) among college students. They used a survey research design approach to gather data from 370 students at the University of Cape Coast, School of Business (UCC-SoB) for this aim. Next, they used the PLS-SEM approach to examine the results. The study's findings showed that entrepreneurship intention is directly influenced by attitudes toward entrepreneurship, perceptions of social norms, perceived entrepreneurial ability, and entrepreneurship education. Furthermore, the findings showed that the association between intention to pursue entrepreneurship, perceived social norms, perceived entrepreneurial capacity, and attitude toward entrepreneurship is mediated by entrepreneurship education. Additionally, they discovered that the association between entrepreneurship education and entrepreneurship intention is moderated by perceived university support. The study recommends that to encourage students to pursue entrepreneurship, universities should encourage entrepreneurship programmes through training, business model development, exchange programmes, entrepreneurship clubs, entrepreneurial pitches, and company incubators.

Mangasini A (2015) in his study on entrepreneurship education and business start-ups: assessing entrepreneurial tendencies among university graduates in Tanzania, noted that Tanzania's government is encouraging entrepreneurship programmes in higher education with the expectation that graduates will be more capable of starting their own businesses. Few graduates have, launched their own companies. The thesis explains this by quantifying entrepreneurial tendencies, evaluating the factors that influence these tendencies, identifying obstacles to the establishment of new businesses, and evaluating the factors that influence graduates' intents to enter the entrepreneurial field. A cross-sectional research approach was used, and systematic random sampling was used to sample 308 graduates. Information was gathered through a self-administered questionnaire that included key informant interviews and the General Enterprising Tendencies Test. The results demonstrated that university graduates' entrepreneurial instincts were generally low. Furthermore, compared to their peers, graduates who studied entrepreneurship had stronger entrepreneurial instincts. Additionally, factors that helped predict entrepreneurial tendencies were entrepreneurship education, parents' educational attainment, the number of children in the family, the occupation of the parents, age, and birth order position. Inappropriate teaching strategies, a lack of business experience, weak university curricula, obligations to large families, and bureaucratic inclinations were other significant obstacles to university graduates starting their own businesses. The study however concluded that there was a positive association between studying entrepreneurship and entrepreneurial entry intention.

Tutuba (2023) in his paper on Entrepreneurship education in the Tanzanian higher education institutes: The learning theories perspective, noted that development of new skills through entrepreneurship education is essential for future progress. The development policies that prioritize innovation have put additional expectations on entrepreneurial education. However, the majority of the current research and discussion in this topic focuses on developing curricula, developing teaching staff within the ecosystem of entrepreneurial education, and determining whether or not entrepreneurship education can affect an individual's intention to pursue entrepreneurship. The individual characteristics and learning environment of students have a significant impact on the implementation of entrepreneurship education, according to learning theories. Tanzania's higher education sector is expanding significantly, yet there are still some difficulties in delivering high-calibre graduates. Effective teaching is the main problem among them, along with infrastructures, learning environments, and class numbers (number of students enrolled in a course). The research outlines some cutting-edge methods of instruction that are used in Tanzanian higher education to foster the growth of students' attitudes, behaviours, aptitudes, and skills. Applying entrepreneurship education to produce value in a variety of settings and contexts is important, ranging from corporate settings and start-ups to the public sector, charities, colleges, and social businesses.

Methodology

The philosophy in this research is positivist worldview, which emphasizes factual knowledge gleaned from measurement and observation and is reliable, was adopted in this study (Ryan, 2018). It is consistent as a philosophy with the empiricist interpretation that knowledge derives from human experience. Since the researcher is not a part of the study in positivism, there are no considerations for human interests in the research (Rao, 2018). This study used a deductive approach, which according to Saunders *et al.* (2008), is centred on formulating a hypothesis or hypotheses based on accepted theory, followed by the creation of a research plan to test the hypothesis. This method involves assessing claims made in relation to an established theory using the data that has been gathered.

A descriptive design was adopted by this research since its goal is to gather data for a systematic description of a phenomenon. In relation to the research problem, the design aids in providing answers to the what, when, where, and how questions (Rao, 2018). This study assesses 857 students who studied the course in two consecutive academic semesters of 2022/23 and 2023/24. These students are from four main Schools; School of Business Studies, School of Education and Human Development, School of Humanities and Social Sciences, and School of Law and Justice at the Dar es Salaam Tumaini University– DarTU.

Multistage sampling techniques was used to provide all respondents with equal opportunity of participation. The first stage was to sample the number of students in their respective schools. Sampling in the study employed the Yamane (1967) formula which states:

n = N

1 + N (e) 2

In this formula, N = is the population size and e is the level of precision, in this case 95%. According to Yamane (1967) formula, with a population of 857, the sample was 273.

The study used Google forms to analyse its findings. Online questionnaires were distributed to respondents, and the system managed to analyse and come forth with charts and figures that were analysed and discussed using other authors in similar studies.

Research Findings

The number of students selected was proportional to the class sizes in the first cohort. This was important in order to get a thorough representation from each class. Table 1 and Figure 2 shows the number of respondents:

Table 1 Number of Respondents

SN	Programmeme	Total	Sample	%
1	Bachelor of Business Administration (BBA)	94	**30**	11
2	Bachelor of Human Resource Management (BHRM)	116	**37**	14
3	Bachelor of Mass Communications (BMC)	139	**44**	16
4	Bachelor of Arts in Library Information Studies (BALIS)	32	**10**	4
5	Bachelor of Information Management (BIM)	51	**16**	6
6	Bachelor of Arts in Education (BAED)	69	**22**	8
7	Bachelor of Laws (LLB)	195	**62**	23
8	Bachelor of Laws Evening Session (LLBE)	161	**51**	19
	TOTAL	**857**	**273**	**100**

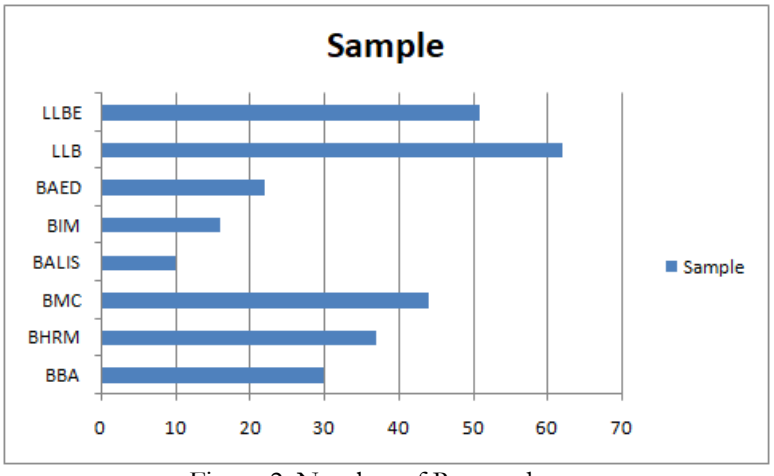

Figure 2: Number of Respondents

From the findings, it is obvious that majority of the students (42%) where Law students, followed by Mass Communication students (16%) and Human Resource Management students (14%). These are the most

popular courses at DarTU at the moment. These findings contradict TCU Students' enrolment in HEIs by field of education, 2022/23, which ranks Business with the highest enrolment, followed by social sciences and followed by Law (TCU, 2022). These differences may be a result of the quality of Law degree at DarTU in the country.

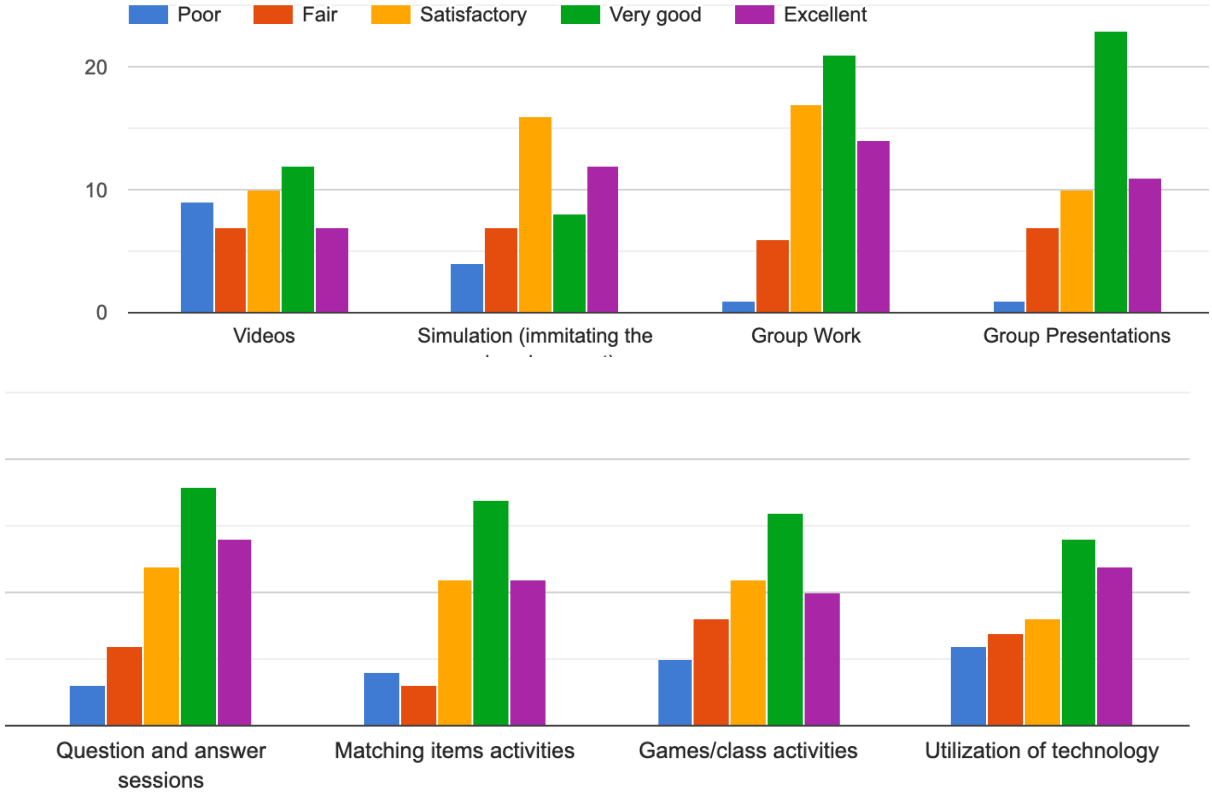

Figure 3: Favourite Participatory Approaches for Students

The course used various active pedagogy tools such as videos from other countries for exposure, simulation activities to enable students to get the feel of what they were taught, group work for networking and broadening of understanding, group presentations, question and answer sessions, matching items activities, games and class activities, and in a number of instances made us of technology. The aim of asking students on their favourite activity was to establish what to capitalize on in the future. Findings showed that there were mixed feelings on all these methods, which may be a result of individual preferences. Group work and group presentations however, seemed to stand out with majority of the students satisfied with this method. In their study, Omar, Mohammad, Shaimaa, Raed and Al-swalha (2020) determined that 96% percent of their 1,638 respondents preferred the flipped learning method which is the use of technology and classroom interactions. This is consistent with the findings from this research.

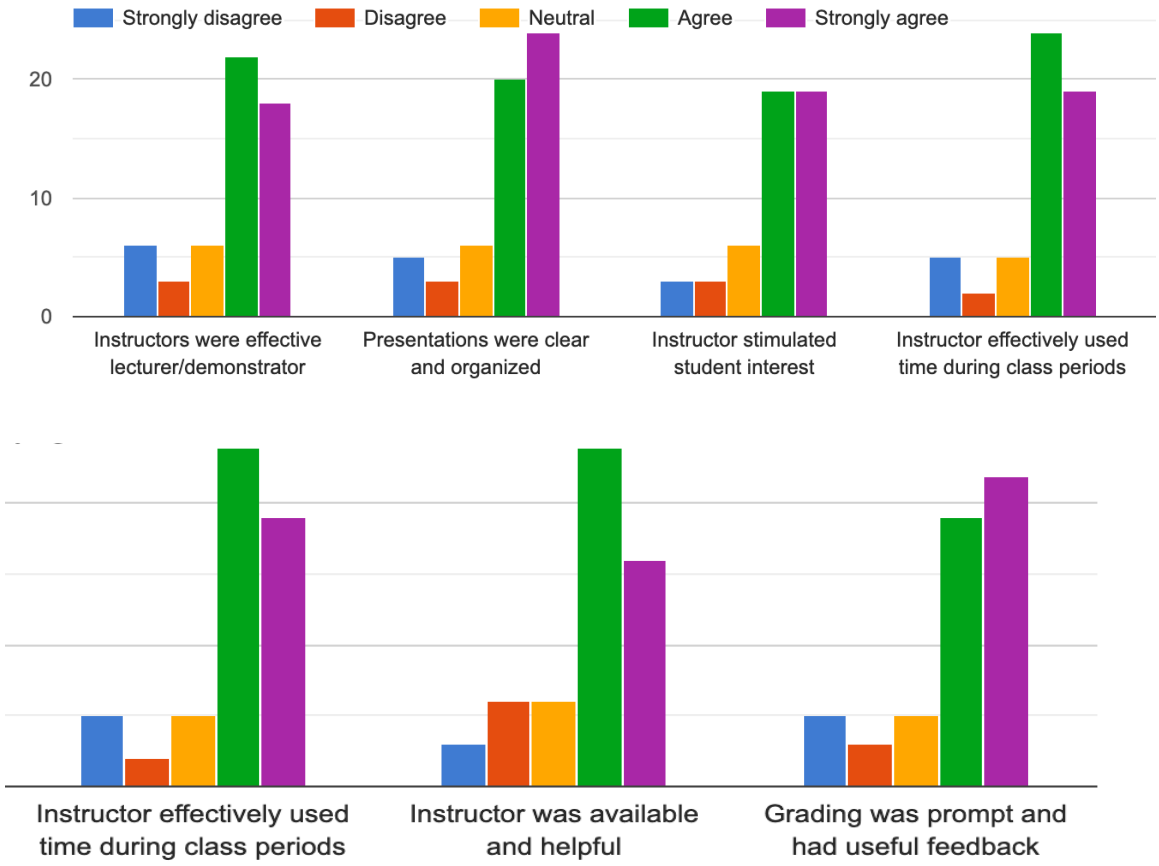

Figure 4: Skills and Responsiveness of the Instructor

The aim of this question was to establish students' perception on their instructors. Majority of the students (76%) were pleased with the clarity and Organisation of the presentations. These were followed by 58% of the students who strongly agreed that the grading and feedback was prompt and useful. This reflects the training conducted by the SUSIE project on both project members (two of which taught in these classes) and the train the trainer sessions, which among others focused on blended learning and Gamification; which is engagement through plays. These findings are consistent with Sanwal (2024) who cites students' satisfaction with instructors who employ blended learning, Gamification, computational thinking, experiential learning, embodied learning, Multiliteracies and discussion-based teaching and flipped classrooms.

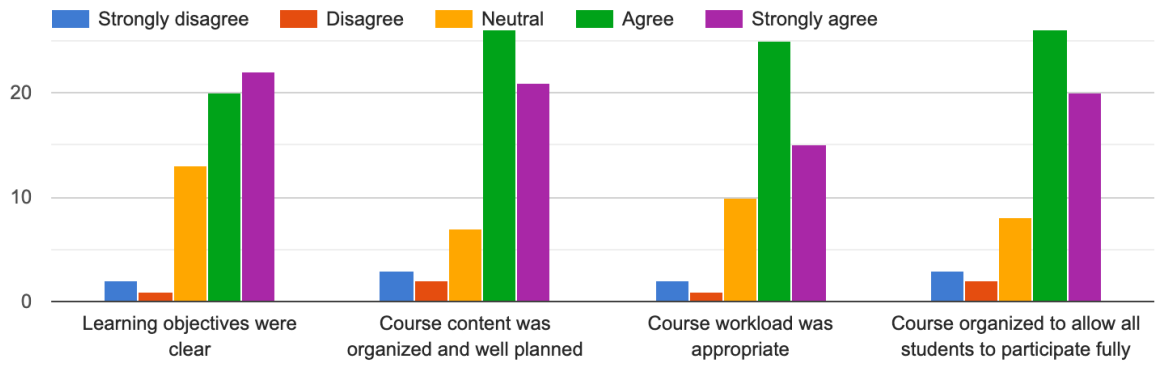

Figure 4: Skills and Responsiveness of the Instructor

There were four main areas assessed here; clarity of learning objectives, Organisation of course content, appropriate course workload and ability of students to participate in the course. Findings show student satisfaction in all four areas, especially course content Organisation and planning. This is another indication on the efficiency of the workshops and train the trainer sessions. The findings are consistent with Sinclaire (2023) where 67% of students rated course content as an important element in causing satisfaction with a course. This implies that higher learning institutions should pay attention not only to the course name, but course content and its relevance in the industry.

There were a number of additional comments from students in the questionnaires. However, the following did stand out and are relevant to this study. One, during classes, there were guest lecturers from Sahara Ventures, NEEC, Zaidi Recyclers, HDIF/Funguo etc. students shared their appreciation on what they learned from these Organisations, and the opportunities these interactions availed to them.

Students further recorded that, the course enabled those with businesses to improve their respective businesses. It was noted that 40 students spilled over to the innovation and accelerator facility after the course ended, to launch their businesses. An additional 15 students started their own businesses while studying the course.

Students further reported enjoying participating in the innovation and entrepreneurship courses due to its interactive nature, thought-proving content and relatedness with the outside environment. They further commented that their grades in this course were higher, as they both enjoyed and easily remembered what they were taught.

Conclusions

Findings show high satisfaction and positive perception of students on the innovation and entrepreneurship courses offered at DarTU. This is largely attributed to the innovative pedagogy employed by course instructors, which enriched the course. Having individuals and Organisations from the industry partake in the learning process, provided clarity on what to expect in the entrepreneurial ecosystem. Lessons from this course can be replicated in other courses as well, and can facilitate student's satisfaction, enhance learning and develop relevant competencies required in the industry. Implementation of innovative pedagogy in higher learning institutions however, requires capacity building for instructors, resources such as computers, internet connectivity, stationary, training tools and the like. It also requires the right environment, including interactive classrooms, ICT infrastructure, well structured curricula documents and Organisational commitment.

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