PROBLEM-BASED LEARNING (PBL): A NEW FRONTIER TO ENHANCE GRADUATE EMPLOYABILITY

Strand A: Employability in New Frontiers
Track 3:   Arts and Social Sciences

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Abstract

Graduate unemployment in the Arts and Social Science has been attributed to universities teaching non-market demand-driven courses. However, this paper attributes graduate unemployment to inadequate quality university education and employability. Education of youth must, therefore, focus on lifelong learning and problem solving to empower them to interact actively with societal challenges. Gulu University in northern Uganda was established to promote community transformation and industrialization for sustainable development in a society affected by 20 years of civil war that left it with inadequate quality of education and graduates resulting in low graduate employability and resultant poverty. At Gulu University the DANIDA funded "Building Stronger Universities" (BSU) Project in collaboration with a consortium of universities in Denmark, has piloted Problem Based Learning (PBL) pedagogy focused on problem identification and solving, creative and critical thinking, knowledge acquisition, teamwork and communication skills. E-learning through Moodle as an open-source learning platform is used to reach employed students studying outside the normal teaching hours.

PBL and eLearning are used as innovative learner-centered, self-driven and self-sustaining pedagogy and as tools for community engagement, promoting youth innovativeness and

entrepreneurship. The integration of PBL into teaching and learning has generated new knowledge and skills.

This paper describes how the graduate students' training in PBL has been piloted, through community engagements in which they have used PBL skills to support Local Governments, SME's, schools and community groups to work out interventions to development challenges. The PBL method is aligned with the action research where students work within real-life situations within the community and workplace. This approach has resulted in successful business development, job creation, and improved entrepreneurial skills in a double way where both the students and the stakeholders have developed and benefited mutually from the PBL approach.

Keywords: Problem-Based Learning, Employability, Graduate-unemployment

Introduction

This paper is a critical analysis and projection of the impact of the Problem Based Learning (PBL) in graduate training at Gulu University. A graduate is a person who completed an undergraduate course and has been awarded a first degree (Oxford Learners Dictionary). Universities are perceived as hub for producing well-rounded citizens, graduates for the workplace and labour market (Archer & Chetty, 2013: 135). Employment prospects is the primary purpose of pursuing higher education (Harry, Chinyamurindi & Mjoli, 2018: 2). Yet, there is low graduate absorption rate into the labour market. In spite of the NDP II theme: "Growth, Employment and Socio-economic Transformation for Prosperity", the youth unemployment rate remained high, estimated at 78 percent (NDP II: 4).

The paper is based on the evaluations made during the series of Problem Based Learning (PBL) workshops, graduate students group work organized and the piloting of PBL in Gulu University between 2015 and 2019 under Building Stronger Universities (BSU) Project funded by DANIDA.

"Around one-fifth of the world's young people are not in employment, education or training. Despite the economic recovery, unemployment remains high, and youth and youth are more likely to be unemployed than adults around the world" (ILO, 2017:11).

Unemployment and employability are problems of the twenty-first century affecting university graduates.

Youth unemployment rate which is the number of unemployed 15-24 years old expressed as a percentage of the youth labor force (OECD, 2018). The university graduates as well fall within the above youth age bracket. For instance in a study by Action Aid International (2013), 60 per cent of the unemployed were fresh graduates who had spent over 5 years looking for employment (Ngoma & Ntale , 2016: 125). For instance NCHE Report (2013) statistics for 2006 indicates that 73,204 (79 %) students had enrolled for Arts and Humanities as compared to 19,401 (21 %) in sciences and technology. In 2009/2010, 78,420 (65 %) students had enrolled for Arts and Humanities as compared to 41,220 (35 %) in sciences and technology. In 2010/2011, 103,836 (74 %) students had enrolled for Arts and Humanities as compared to 35,847 (26 %) in sciences and technology (NCHE, 2013: 16).

Furthermore, the number of academic programmes offered in higher education institutions in Uganda has continued to grow. NCHE (2013) report indicates that 457 or 21.8 % of the programmes at the university level were at first-degree level. In areas of management and business studies there were 710 programmes and closely followed by Arts and Humanities (705 programmes) (NCHE, 2013: 20). This implies that more graduates are being produced into the labour market than the number of jobs created thereby increasing competition for jobs and the resultant prevalence of unemployment. This is an indicator that there exists a mismatch between labour supply into the job market and demand.

In spite of the prevalence in graduate unemployment, the Higher Education sector in Uganda has registered increase in number of universities. In 2015/16 the university subsector had 9 public and 42 private institutions giving a total of 51 HEIs. The universities constituted 23 % of the tertiary sub-sector sector (NCHE, 2018: 13).

Low graduate employability in Arts and Social Sciences is attributed to universities teaching programmes which do not meet the labour market demand. However, NCHE (2013) argues that Higher Education is everybody's business. The state, the public, the parents, the students, business and the media are all stakeholders in the provision of quality higher education (NCHE, 2013: 4). Ntale et al (2019) affirms that "the problem of graduate unemployment should not be a problem of the Ministry of Youth Affairs alone, but all state and non-state actors should be allowed to discuss freely on how to create opportunities for the youth graduates." They further argue that addressing unemployment will need representation of all stakeholders impacted by the decisions made, which would include institutions of higher education (both private and public), current students and recent graduates of these programs and organizations interested in a well-educated and qualified work force (Ntale et al, 2019: 123).

The British Council (2014) report indicates that "too few graduates gain the skills they need to find work. Nowhere is this quality challenge more evident than the transition to the labour market. Graduate unemployment rates are high in many countries and employers across the region complain of a lack of basic, technical and transferable skills (2014: 3).

Ngoma & Ntale (2016) attribute graduate unemployment in Uganda to "universities' failure to pass on the appropriate employability skills through students' career training, insufficient social

networking orientation and exposure at local, regional and international levels as well as the general lack of psychological preparedness of the graduates to take on challenges with hope, optimism and resilience" (Ngoma & Ntale, 2016: 125, 126).

In the UK context, employability is defined in terms of generic skills learnt from one context and is transferable to another context (Yorke, 2006: 12). Yorke further notes that "employers in the UK tended to value generic skills more highly than disciplinary–based understanding and skills" (Yorke, 2006: 4). Yorke unpacking employability noted that it is demonstrated by the graduate ability to obtain any job, the student being developed by his or her experience of higher education through a circular and extra-curricular process and employability as the possession of relevant achievements and potential (Yorke, 2006: 6).

From the South African universities' context, 'employability' refers to the competencies and abilities that graduates need to enhance employment opportunities in the labour market. Consequently, higher education is perceived as a pathway to enhance employability (Harry, Chinyamurindi & Mjoli, 2018: 3).

However, employability in the Ugandan and sub-Saharan context is not the same way as in the UK. Conversely, there is great disconnect between knowledge, skills and attributes, and expectation at workplace in Africa (Archer & Chetty, 2013: 136). Therefore, a "mismatch between employers' and employees' expectations" (Ngoma & Ntale (2016. 125).

In 2014, youth unemployment in Uganda stood between 64 % and 70 %, and about 400,000 youths were released annually into the job market to compete for approximately 9,000 available jobs. About 30 % of the youths who were institutionally qualified in Uganda are unable to find jobs, and the situation was even worse for semi-skilled and unskilled youths (Magelah & Ntambirweki-Karugonjo: 2014, ii). Ntale et al (2019) attributes graduate unemployment to their desire for wage–

paying formal jobs, which are harder to find compared to those with less education who go in for manual or casual labor (Ntale et al, 2019:112).

According to a NCHE tracer study for the 2014 graduates for seven universities and seven colleges, graduate employability was conceptualized by their engagement in gainful employment that is related to the field of study. The study established that most of graduates 2741 (67.9 %) were employed in areas related to their field of training. Only 869 (21.5 %) graduates were engaged in work that was not related to their areas of study (NCHE, 2019: 25).

Furthermore, time taken to get into gainful employment by academic programme for the 2014 graduates in the humanities and social science sampled indicated that out of the 3,459 graduates sampled, 2,002 (57. 9 %) got gainful employment within less than a year. A total of 1040 (30.1 %) got jobs within one to two years. A total of 176 (5.1 %) got employed within two to three years. A total of 23 (0.7 %) got jobs after five years. A sample population of 218 (6.3 %) did not respond (NCHE, 2019: 25). Investigating the relevant skills required for employment, key skills the respondents identified included oral and written communication, accounting/book keeping, marketing and customer care, which were related to their higher education programmes (NCHE, 2019: 28). The above mentioned skills do not fall in the category of 21st-century generic skills.

In northern Uganda, in spite of graduates having academic qualifications, they are challenged in obtaining any job including low-level jobs. According to the Uganda Bureau of Statistics (UBOS, 2019), "Work comprises any activity performed by persons of any sex and age to produce goods or to provide services for use by others or own use" (UBOS, 2018: 27). "The regional disaggregation of the population showed the Eastern region having the highest proportion of the working population in 2016/17 (27 %), Western, 25.5 %, Central 22.9 % while the Northern region had the lowest at 21 %" (UBOS, 2019: 28). "The overall unemployment rate (UR) was 9.2 percent

in 2016/17 with the females experiencing higher unemployment rate (13 percent) than males (6 percent)" Similarly, there existed differentials by residence with unemployment levels being higher among urban residents (14 percent) than rural residents (6 percent) during 2016/17 (UBOS, 2019: 34).

The current debate and strategy to solve youth unemployment are on the promotion of science and vocational disciplines. Magelah & Ntambirweki-Karugonjo (2014) argue that "there is a need to focus on and engage youth computing, craftsmanship, and technical and electrical engineering disciplines (2014: iii). However, this study asserts that youth unemployment and employability are more associated with the lack of 21st-century generic skills and PBL Knowledge, skills and attitudes than academic knowledge and qualification.

Rukwengye (2018), observes that missing in Uganda's employment-education debate is the criticality of these 21st century soft skills as "critical thinking, questioning, problem solving, negotiation, people management, collaboration and communication" essential for increasing employability (Rukwengye, 2018: 11). Yet, student awareness with regards to employability is often overlooked (Harry, Chinyamurindi & Mjoli (2018: 2).

Employability skills are the "transferable skills needed by an individual to make them employable". Employability depends on graduates "knowledge, skills, and attitudes". Employability skills include communication and interpersonal skills, problem-solving skills, using your initiatives and being self-motivated, organizational skills, teamwork and negotiation skills (STEMNET, 2017). Gunson et al. (2018) observe that "employability skills remain an issue even among highly educated graduates" (Gunson, R., Murray, C., & Williamson, I. 2018. 20).

Employability is also defined as "a set of achievements – skills, understandings and personal attributes – that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community, and the economy." (Yorke, 2006: 8). Employability skills are therefore a set of skills and behaviors that are necessary for every job. Employability skills are sometimes called soft skills, foundational skills, work-readiness skills, or job-readiness skills. Employability skills allow you to: communicate with coworkers and solve problems. (Cambridge Dictionary). Employability is therefore linked to the skills, attitude, mindset needed for the 21st century and defined within both global and local contexts.

The World Economic Forum (WEF) (2018) identified the employability skills to include: Analytical thinking and innovation, creativity, originality, and initiative, active learning and learning strategies, technology design and programming, complex problem-solving, critical thinking and analysis, leadership and social influence, reasoning, problem-solving, emotional intelligence and resilience, stress tolerance and flexibility.

"The challenge of employability affects the world differently. Employers are looking for skills and knowledge. Employability is throughout employment" (Malcolm Sweeting, Pro-Chancellor, The Open University, UK, COL Conference, 12th September 2019). In Uganda graduate employability is conceptualized by their engagement in gainful employment that is related to the field of study (NCHE, 2019: 25). This implies employability is determined by the quality of degree attained upon successful completion rather than the transferable generic skills. Yet, the graduate job output seems not to be commensurate to the quality of the degree attained. In a PBL workshop for the Master of Education and Master of Business Administration students in 2018, they perceived employability

as being able to obtain gainful employment, gain promotion, change job with ease to a better one (PBL workshops, 2018).

The question raised in this study is: Who is responsible for employability? This paper argues that employability is the responsibility of everybody. Employers who create jobs are partners in employability by providing the employment eco-system. The State provides the policy and development strategy for employability as every country has its specific skills defined by the development agenda and market demand. Through research, universities inform the development of skills, policy and development strategy for employability.

This paper further raises the critical question: What can universities offer beyond the lecture room and workforce? Universities are central to ensuring employability through content and pedagogy development.

Yorke argues that the role of "higher education [is] to facilitate the development in students of the understandings, skills, and attributes that will help them to make a success of their careers" (Yorke, 2006: 11). He shifts away from defining employability as skills to provide a new context of understanding and attributes. Yorke adds that, "the curricular process may facilitate the development of prerequisites appropriate to employment", however, employability is derived from "how the student learns from his or her experience" (Yorke, 2006: 7).

Statement of Problem

Problem Based Learning (PBL) in Gulu University was introduced in 2015 in collaboration with Aalborg University Department of Culture and Global Studies, Communication and Psychology, Education, Learning and Philosophy. Based on the University's vision, "to be a pillar for academic, professional and sustainable development" for community transformation, PBL was seen to be a

possible agent for change in Northern Uganda, a region lagging in national development. PBL was developed by Aalborg University as a strategy to produce skilled labour force which would transform North Denmark (North Jutland) a large rural area in Denmark (Krogh & Jensen, 2013). Founded in 1974 after a bottom-up initiative to promote problem-oriented research and teaching in Aalborg, the university is now a relevant actor for the local economy, community, and governance. In collaboration with the university, initiatives are developed with the departments of the university, involving students in the creation of their "cultural city". Aalborg city provides financial support to promote student initiated events and innovations. Through public-private partnership, the PBL model is enhanced as students are attached to private firms (Kresl & Letri, 2016). I

This paper attempts to make a case for employability through the adoption of Problem Based Learning as an agenda for employability in Uganda. Under the BSU project, a Danida funded Project in Gulu University, the Problem Based Learning methodology, an innovative learner-centered pedagogy has been adopted as a strategy to equip the students with 21st century skills to enhance graduate employability. The debate has been on how do we teach students employment skills? In Gulu University, PBL is considered a strategy to enhance employability and ingenuity which promotes job creation rather than job-seeking tendencies.

PBL promotes the concept of interdisciplinarity and flexibility in studying a problem in form of a project work. PBL therefore relates academic and professional activity to concrete societal conditions the student might deal with in real-life employment (Krogh & Jensen, 2013: 18, 19). Through PBL the student interacts with, and meets future employers' expectation with respect to their qualification and competence (Krogh & Jensen, 2013: 21).

The ideas and principles upon which PBL is created and practiced promotes the development of 21st-century skills of problem identification and solving, creative and critical thinking, and teamwork and knowledge acquisition. These are skills, attitudes and knowledge suitable for workplace situations. The PBL principles and methodologies include: "exemplarity, open curriculum, interdisciplinary and experience-based learning, peer learning and collaborative learning in groups (Krogh & Jensen, 2013: 22).

Specific Objectives

- To evaluate the performance of PBL as innovative pedagogies in the Arts and Social Sciences.
- To explore the impact of PBL pedagogy on graduate employability.

Methodology

- Qualitative design.
- Qualitative evaluation research.
- Observational research and workshop learning evaluation.
- Participant observation, document analysis.
- Interview.

Qualitative evaluation research studies the social and organizational programme as well as interventions, where PBL is seen as an intervention to improve graduate quality and employability. The key question was: Does the intervention achieve its anticipated goal? (Bryman, 2012: 57).

Implementing PBL in Gulu University

Gulu University in Northern Uganda was established in 2002 to promote regional development through community transformation and industrialization for sustainable development. The

northern region had lagged in development due to inadequate quality of education and human resource.

DANIDA has funded the BSU collaboration between Gulu University and a consortium of Danish universities since 2011 to strengthen institutional research capacity as a means to build University capacity to develop solutions to societal problems through community engagement (DANIDA, 2013). The collaboration is aligned to Gulu University's vision, "to be a pillar for academic, professional and sustainable development" for community transformation (Gulu University, 2009).

PBL has been introduced and piloted at Gulu University through several phases and workshops targeting specific groups of stakeholders. The first phase was training of trainer workshop targeting a total of 35 lecturers from the Faculty of Education and Humanities and Faculty of Business and Development Studies. This training was facilitated by the north partners from Aalborg University.

The second phase was the collaborative training of Master students in the humanities and social sciences by north partners and Gulu University facilitators in cooperation. They were trained in group formation, problem identification and problem-solving and, data collection and analysis. They were given practical sessions of fieldwork and data collection in the community. Each group included faculty members and supervisors. The project groups disseminated the findings and peer assessment was done.

The third phase was the collaborative training of PBL facilitators in the assessment and examination of PBL group projects. During the training assessment tools were developed and tested in a real-life situation using students' group project work.

Following the successful training of 25 lecturers in the PBL principles, methodology and assessment, and community-based piloting of PBL group projects with 35 students of Master of Business Administration in 2016, PBL has been rolled out to Master of Educational Management and Master of Public Administration Programme. In the initial phases, Gulu University lecturers with the Danish partners, collaboratively taught PBL in the graduate courses. However, from 2018, the Gulu staff has gradually taken over the teaching of PBL in the Masters courses. The year 2019 has witnessed PBL being taught solely by Gulu academic staff. Capacity building workshops in PBL continues to be organized to equip lecturers and encourage good practices.

PBL has been institutionalized by integrating it in selected reviewed Masters Programme in the Faculties of Education and Humanities and the Faculty of Business and Development Studies. A total of eight programmes were developed integrating the PBL pedagogy. The successful implementation in the two faculties will lead to its roll out to other faculties especially within the Social Sciences and Humanities. Master in Information and Communication Technology for Development is being introduced to PBL during 2019-2021.

Year	Groups of PBL taught persons	Number
2015	Lecturers	35
2016	Masters of Administration	35
2017	Masters of Education	25
2018	Masters of Administration, Masters of Education, Masters of Public Administration	95
2019	Masters of Administration, Masters of Public Administration, Masters of Educational Management	95
2020*	Masters of Administration, Masters of Education, Masters of Public Administration	105
2021*	Masters of Administration, Masters of Education, Masters of Public Administration	105

Table 1. PBL training of staff and graduate students (2 years Masters programme). * Expected numbers depending on the actual uptake.

Graduate students are sent out to the community every semester for a duration of one week to support SME in entrepreneurial innovation in business using action research as an intervention into challenges facing the community. The graduate programmes run over the weekend to enable the students to study while working. The graduate students are organized into groups under selected themes. Each of the 11 groups had faculty members/supervisors (minimum of two) and 4-7 students. The project is assessed as course work and marked out of 40 per cent.

Theme	Site visited
Operations management	Gulu Country Diary Opit Investment Limited BIT 32
Vocational training and employability	Atiak Technical School Labora Commonwealth Vocational Training Center – Omoro St. Joseph Technical/Vocational School – Gulu
Financial management	Bar Dege Division, Gulu Municipality
Community Tourism	Purongo Cultural Center
Village savings and cooperative organizations	Opit Saving Groups
Social Services	Bar Dege Health Center II
ICT for Business innovation	Eyeconic Computer Bureau

Table 2. Organizations/communities visited (David Ross Olanya, 2018).

For instance, a group of students handled business succession at Churchill Courts Hotel and Hotel Pearl Afrique in Gulu which led to smooth succession and boost in business after the demise of the proprietors. A group studied community tourism around Kabalega National Park as a means to promote community initiatives in the management of wildlife and promoting youth employment. A group studied the use of smartphones to promote small businesses among the youth. Another group studied the management of primary schools as a means to improve performance and promote girl child education.

In the interventions the following topics were studied:

- Operations management
- Circular economy/waste management
- Financial management
- Social services/health sector
- ICT for business innovation
- Microfinance: savings and cooperatives
- Vocational skills training and youth employment.

Theme	Site visited
Appropriate technology uptake by smallholder Farmers: benefit from Equator seeds Ltd	Equator Seeds Ltd-Gulu
Water and Sanitation	Laroo Division-Gulu Municipality
Village Savings Lending Association	Gulu Main Market- Gulu Municipality
Digital economy: Banking Groups	Stanbic Bank-Gulu Branch
Solid waste disposal and Environmental Pollution	Layibi Division- Gulu Municipality

Table 3. Organizations/communities visited (David Ross Olanya, 2019).

How PBL promotes employability:

PBL is a "constructivist approach to learning, student-centered and participant-directed learning". Kolmos et al. (2008) argue that "the ability to take control of one's learning is seen as a qualification in itself and, as stressed in participatory research, a source of motivation (Kolmos et al 2008: 13). To Kolmos et al (2008), important principles in the Danish PBL-understanding are Problem orientation, interdisciplinary, exemplarity, participant direction and group work (Kolmos et al, 2008: 15, Krogh & Jensen, 2013: 24).

Through PBL, the university works with the community, industry and private sector to train the graduate in real-life situations and make the graduate employable in the employment ecosystem.

Students are embedded in the natural employment environment and are left to acquire skills and knowledge spontaneously.

PBL enhances a flexible, useable knowledge base. It exposes the student to concepts and skills essential for effective action in situations students are likely to encounter in future practice (Kelson & Distlehorst, 2008: 170). Through the PBL group project and field placement, the students are exposed to real-life situations in which they apply and related the PBL concepts and skills.

Through PBL challenges are viewed as an opportunity for initiating lasting solutions that translate into development. The learner-centered approach in PBL "empowers learners to conduct research, integrate theory and practice and apply knowledge and skills to develop a viable solution to a defined problem" (Cairns, Curtis, Sierros, & Bolyard, 2018: 3). Therefore, the PBL skills enable the graduate to work out solutions to personal and workplace challenges further providing an avenue for new opportunities. Mike Ojula, a Master of Public Administration Student reported that:

> "In the classroom, we had theoretical approach and knowledge, and through the PBL fieldwork, we were introduced to the real-life situation in which we applied the theoretical knowledge" (Interview: Mike Ojula, 16.10. 2019).

"The main principle of PBL is problem-solving" through self-discovery learning as teaching is based on a real-life problem (Flack, 2013: 274). Students enrolled in PBL are more proficient in problem finding and problem-solving (Mergendoller, Maxwell & Bellisimo (2006: 52). They view the problem from a broader spectrum given the multidisciplinary approach.

Betty Ajok a Master of Business student assessing the impact of PBL on her workplace performance noted that:

"PBL has transformed my attitude and mindset towards my job. I use my PBL knowledge to identify and solve problems at work. This has made me more efficient and effective in my performance" (Interview: Betty Ajok, MBA student 2016, 5th November 2018).

PBL further stimulates creative and critical thinking hence a driver to innovation and new knowledge. PBL leads to "creativity development and innovative behavior" as it produces "knowledge-producing rather than knowledge reproducing students". "Creativity is a skill that enables students to find new solutions to generate and evaluate new ideas and to see things from a different perspective (Lund & Jensen, 2013: 117). Creativity is necessary for science, technology, and art that encompass everyday life and enables students to solve non-routine problems in the modern world (Ulger, 2018). The use of PBL in Arts and Social Science disciplines enhances critical thinking and innovativeness in handling societal issues and working out solutions. These are essential skills in ensuring graduate employability and marketability of the universities. Daniel Oyite a Master of Business student appreciating the PBL training noted that

"We in group 7 who studied ICT for business innovation a case of Eyeconic Computer Bureau plan to establish a PBL oriented company which aims at providing research-based consultancy service. This will transform us into job creators than job seekers" (Interview: Daniel Oyite, MBA student 2017, 18th October 2019).

Through PBL pedagogy both global and local learning skills are imparted. The graduate acquires knowledge, skills, and attitudes which are important to maneuver job opportunities in the 21st century characterized by a competitive knowledge economy. Daniel Oyite a Master of Business student trained in PBL further noted that following the new attributes associated with PBL he acquired from the training, he was able to get a competitive job in South Sudan. Therefore PBL instills in the graduate the universal knowledge and skills which enhance employability.

Through the PBL approach Students are placed into the community and job environment to support change in attitude and apply the theoretical knowledge in a real and practical environment which enables them to learn from the community. Charles Ayimani, a Master of Public Administration Student reported that during the PBL fieldwork, he learnt that the community in which they were placed knew about the problem and how to work out a solution towards it. He reported that: "As a group, we went to the community with the mindset that we were the source of knowledge but while in the field we discovered that the community had more knowledge about the challenges facing them and the possible solutions, providing opportunity for us to learn" (Interview: Charles Ayimani, 16.10.2019).

During the PBL workshop, David Ross Olanya, the Dean Faculty of Business and Development Studies at Gulu University noted that:

> "We build capacity when we work to bring change and learn from what others are doing" (PBL Workshop 14.10.2019).

The critical question asked was 'how do we address these conditions for change?'

Zakaria Hanaan Lassen a facilitator at the PBL workshop observed that,

> "PBL deals with creating a change or working toward a solution" (PBL Workshop 14.10.2019).

Professor Iben Jensen, a facilitator at the PBL workshop added that although the PBL trained graduate may not be able to practically solve a problem, the individual is aware of the existing problem and how to work out a solution to it in a practical situation". Professor Inger Lassen added that "it does not mean that PBL should always work towards a solution to a problem but have knowledge of the problem" (PBL Workshop 14.10.2019).

PBL develops in the graduate a skill of critical thinking. The critical thinking skill enables the graduate to respond logically and within a contextualized situation. It provides the graduate greater

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advantage at job interviews by how the graduate responds to both oral and written interview questions. This is affirmed by Kolmos et al, (2008) who argue that through PBL learner's criticality, skill and sense of critical analysis are developed (Kolmos et al, 2008: 14).

Conclusion

The PBL principles and outcomes can provide a pathway to a positive attitude and environment that supports graduate quality and employability. PBL equips students with 21st-century skills of problem identification and solving, creative and critical thinking, and teamwork and knowledge acquisition. Some of the 21st-century competencies associated with PBL include resource management in terms of personnel, time, finances and infrastructure. Interpersonal skill competencies suitable for workplace situations include leadership, teamwork and tolerance, and negotiation skills. It is these skills, attitudes, and knowledge that enhance graduate quality and employability which is the graduate's ability to obtain employment, change jobs and ascend the employment ladder. This paper concludes that other than having a discipline specific specialized skills and knowledge, the 21st-century University graduates need the generic knowledge, skills and attitude to enhance their employability both locally and globally.

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