Role-Play Simulation as An Effective and Socially Dynamic Learning Strategy for VET

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Abstract

This article presents a rationale for why role-play simulation is an effective and socially dynamic learning strategy for Vocational Education and Training (VET). The factors of generational change, world of work demands due to global economics, and rapid technological developments are frontiers for educationists to consider during the process of learning. Role-play simulation offers learners not only the opportunity to practice problem-solving in practitioner contexts but also to engage in transformative learning through focusing on their interpersonal communication skills. A study conducted at Elyna Designers limited, in Kampala, Uganda on Students enrolled for their industrial training revealed that they lacked skills to operate equipment, knowledge on a product design process and group dynamics considered vital in both learning environments and work places. The group comprised thirty (30) students; fifteen (15) interior design students on internship in Computer Aided Design (CAD), seven (7) on Internship in surface and product design, and eight (8) Interior Design students on internship in soft furnishing. The company supervisor introduced students to role-play simulation learning and group work tasks while monitoring them during the implementation process. Work activities included: designing the compound, space planning the studios and, designing fabrics for the soft furnishings and attires for the different categories of company clients. Through a collaborative learning approach during the internship, it was evidenced that products produced by the interns demonstrated levels of professional competencies attained through role-play simulation. Overall, hands-on training and role-play simulation should be emphasized while students are receiving institutionalized training in order to avoid the lack of workplace operational skills during internship.

Keywords: Role-play simulation, transformative learning, industrial training and professional competence

INTRODUCTION

Simulation and Role-play can be important learning strategies that create long lasting understanding among learners. Simulation involves participating in a real learning experience that closely resembles an actual setting. Clapper (2010) states that, the advantages of using simulation are numerous and include the ability to help learners make meaning of complex tasks, while also developing critical thinking and cultural skills required for the 21st century work place. He further stresses that, Role-play has the ability to develop and enhance content skills as well as skills needed for future success by incorporating realistic or real world problems.

The goal of learning design is to help create educational settings and sessions that are learner and activity centered. Authentic learning activities can better engage learners. Role playing is an interesting example of an active learning and teaching strategy (Erturk, 2015). Erturk continues to express that, Role-play is very useful in providing

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teachers with an opportunity to create a constructive alignment between learning activities, assessments, and learning outcomes (Biggs & Tang, 2011). Furthermore, it encourages important two-way feedback between teachers and students through experiential learning and active dialogue where both parties can ask relevant questions to one another (Coffield, 2008).

As highlighted by Chen and Martin (2014).

> "Learning approaches should (1) focus on change and not just knowledge attainment, (2) Reveal behaviors in a real-world context, (3) highlight internal and external influences on environmental behavior, and (4) include a problem-solving approach that demands a solution. Role-play simulations addresses these criteria and can influence the perspective change necessary to promote sustainable behavior" (p. 1).

These approaches therefore are embedded in transformative learning theory.
Transformative learning offers a theory of learning that is uniquely adult, abstract, idealized, and grounded in the nature of human communication. First is *instrumental* learning, which focuses on learning through task-oriented problem solving and determination of cause and effect relationships—learning to do, based on empirical-analytic discovery. Second, transformative learning is *communicative* learning, which is learning involved in understanding the meaning of what others "communicate concerning values, ideals, feelings, moral decisions, and such concepts as freedom, justice, love, labor, autonomy, commitment and democracy" (Mezirow 1991a).
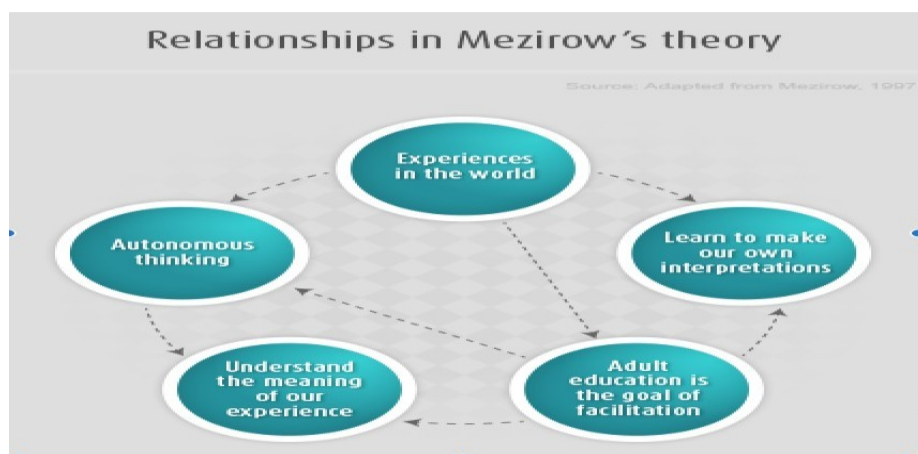
Figure 1: Showing transformative learning model adopted from Mezirow's theory of learning
Source: https://www.google.com/transformativelearningmodel.

Furthermore, Transformative learning attempts to explain how our expectations, framed within cultural assumptions and presuppositions, directly influence the meaning we derive from our experiences. According to Sahin and Doganty (2018) transformative learning can be applied by providing opportunities for critical thinking. Teachers create opportunities for critical thinking through providing content that introduces new ideas. So students get the opportunity to engage with new content through journaling, dialoguing with other students, and critically questioning their own assumptions and beliefs. He continues to state that, transformative learning occurs

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when you relate to others going through the same transformative process, students bounce ideas off one another and are inspired by the changes friends and acquaintances make. Finally, students are provided with opportunities to act on new perspectives as an indication that transformation has taken place (Sahin & Doganty, 2018).

Rapid growth of infrastructure development in the recent past has increased chances of job Market to graduated students. In order to keep up with the demands, universities hold responsibility to produce students with sufficient background and excellent qualification. As an assurance for the performance of students the standards, preparation and exposure to industrial training is a must. In order to ensure that graduate students are well equipped with excellent qualification and background, the industrial training program is made a compulsory course for all students. Furthermore, with this training program, it also helps students to be exposed to the reality of their different trades and expected responsibilities which include the daily interaction within working environment and writing skills. As to investigate the level of students' achievement in the training program, this study was carried out to evaluate their performance before and after the industrial training program. These evaluations were based on three main aspects; behavior, communication and work attitude.

Statement and Contextualizing of the Problem
The department of Art and Industrial Design in Kyambogo University (KyU) offers students with opportunities to further enhance on their hands-on competencies within the various artistic professions. Role-play simulations have not been used during these processes of which, real workplace experiences have been affected in terms of the interns' ability to design ideas, present design concepts and defend their functionality, conformability, aesthetic value, and manage the implementation process. Therefore, in collaboration with Elyna Designers Ltd, KyU students from the Interior Design Program and Textile and surface decoration were enrolled for an internship exercise in order to establish the extent to which role-play simulation could enhance practical learning and acquisition of professional competence relevant in the world of work.

METHODOLOGY

The study used a Role-play learning strategy towards achieving tangible results that validated the research process. The study employed a Participatory Action Research design (PAR) that considers Role-play as a vital learning strategy that could be used to facilitate peer to peer interaction, thus facilitating learning (Kamerade, 2011). It sought to observe, document, analyze, and interpret characteristics, patterns, attributes, and meanings of learners' ability to use simulated learning environments to acquire skills, knowledge and competencies needed in the world of work (MacDonald, 2012). This learning strategy created long lasting understanding because of the Simulation of the learning environment which involved participating in a very real learning experience that closely resembles an actual setting. The strategy upheld the concepts of [learning to learn] (Wirth & Perkins, 2008) [Fig.2] and [learning by doing] (Dewey,1938) [Fig.3] which are theoretical models that enhance all the practices adopted in Vocational Pedagogy for the achievement of professional competencies in Technical Vocational Education and Training (TVET.

Figure 2: Showing one of the learning to learn models
Source: (Buzan, 2013)

In view of the learning to learn model in figure 2, for success to be realized during the training processes, learners pass through a trying out process during a planned event. It is during the same event that feedback, consistent checks and adjustments are made by both the trainers and learners in order to register success. Listening, observing and note taking using a logbook were considered paramount during skills training. Positive criticism through mentorship during role-play simulation learning process was to contribute to knowledge creation and skills acquisition; thus recognition of one's ability to learn, unlearn and relearn towards building competency.
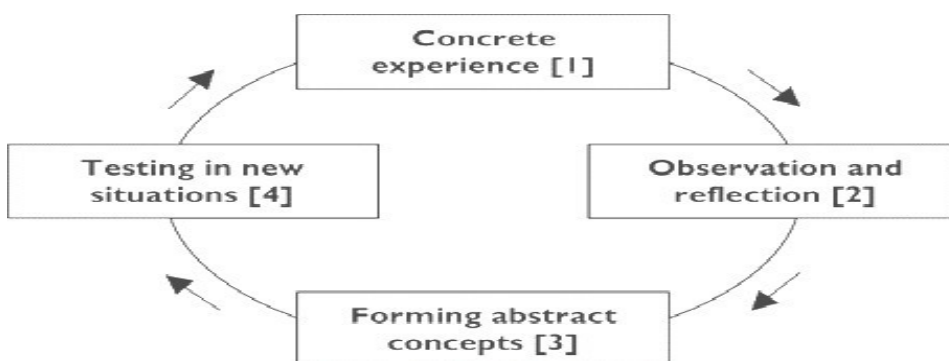
Figure 3: Showing learning by doing adopted from John Dewey's theory of learning
Source: Retrieved from: https://www.researchgate.net/figure/Learning-by-doing-by-John- Dewey-23_fig3_261204298

A total of thirty (30) students on internship participated in the study and these included: fifteen (15) interior design students on internship in Computer Aided Design (CAD), seven (7) on Internship in surface and product design, and eight (8) Interior Design students. Students who got placement in Elyna Designers Ltd were introduced to Fashion and Apparel design, Interior design, Landscape design and Computer Aided design. It should be noted that as an incubation Centre, Elyna Designers Ltd also provides opportunities to students that have completed higher institution of learning and are in the process of joining the world of work. During internship, students acted as

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the service providers and the directors of the institution as their clients. Thus, practicing real workplace dynamics, that is; how to come up with the design ideas. Present the desired ideas to the clients, defend the desired ideas according to their functionality, conformability, aesthetic value and explain the implementation process of the designed ideas.

A meeting was convened during which the interns met with the directors and were taken through their expectations as per the expected design ideas and final products. The interns listed the tools and materials that were required for the proposed projects and management promised to avail whatever was needed to execute the transformation process. In order to instill a sense of team spirit, interns were divided into three groups and accorded tasks under the supervision of the work place supervisors. The CAD interns were assigned a task of coming up with three dimension (3D) impressions of the planned interiors and exterior of the company suitable for a learning environment. The textile interns were tasked to acquire sources of inspirations and design logos for the learning center, create designs for different soft furnishings to be used in the interiors, like curtains and wall hangings. It was still the responsibility of the textile interns who were then tasked to design and make curtains, floor rags and cushions for the furniture in the interiors. The act of role playing and simulation of the working environment enabled the interns to own their learning process and ensure mastery and retention of what was learnt. It should therefore be noted that role-play simulation is a technique to replace and amplify real experiences with guided ones, often "immersive" in nature, that evoke or replicate substantial aspects of the real world in a fully interactive fashion within various hands-on oriented training programmes as asserted by Shock (2010).

RESULTS AND DISCUSSION

Results are presented and discussed under the three key aspects for this article: Role-play simulation, transformative learning and professional competence. Through the implementation of role-play strategy as a tool to enhance practical learning and acquisition of professional competence, a collaborative learning strategy was implemented by the interns, supervisors and directors. To assess its impact on professional competence acquisition, triangulation method of data collection was used to justify the data collected.

Role- play simulation
Role-play in this internship involved turning the company environment into a workshop learning space. The directors acted as the clients while the internees acted as the service providers. This enabled the interns to experience the work place dynamics that is; how to handle projects collaboratively as workers of the company and how to interact with the clients. Subsequently, one of the interns noted that if learning at the university was carried out as project based as it is done during this internship, learning would have been interesting and more useful.

All the tasks were handled in groups which enabled the interns to acquire skills in working with different types of people and developing a sense of responsibility as each was supposed to accomplish his/her task in order to achieve the desired goal within the prescribed time. Joma, Al-Abed & Nafi, (2016) further uphold the notion of self-responsibility within a given environment while appreciating the uniqueness of each individual involved. The interns were also motivated in that, they utilized opportunities

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of expressing their design ideas to the clients and even allowed to implement them. This provided a chance for the interns to expound the knowledge acquired from using the designing software that were introduced to them and in the process obtaining mastery. Sometimes they even went out of their way and stayed at the company until late in the evening or even coming earlier than expected trying to accomplish their tasks. This implied they were exposed to a free learning environment that built their level of trust through mentorship and motivated them to act responsibly as they looked ahead to witness the outcome of their efforts. One of the interns testified, *"I now have a purpose in life. I will proudly mention that I was part of the design team for this learning space".* The simulation of the working environment enabled the interns to experience a feel of the working atmosphere during which duties were not specific. In this case, on top of the professional competenciescompetencies acquired, interns were imparted with soft skills. Similarly, a cross section of interns commented *"all of us have been able to participate because we have different strengths and this has helped us learn from each other therefore finishing the assignments on time"*

Transformative Learning
The internship process was transformative in a way that, the interns interacted with the supervisors freely. There was no formal class learning while each intern was free to bring out his/her idea which on the other hand was not trashed but brainstormed to establish whether it was viable. This enhanced the esteem of the interns and they participated fully in all the activities carried out during the internship period. This helped them to easily note down the activities carried out each day in their log books which made their report writing easy because they owned their learning processes.

Figure 5: Showing students discussing and brainstorming
Source: Primary data (2019)

Professional competence
Since all the activities were executed as expected in the working environment, professionalism was considered, so by the end of the project all the interns had practiced the professional way of handling tasks and dealing with clients. They practiced listening and communication skills when dealing with clients. They practiced responding to feedbacks and being time conscious while handling clients' projects. They developed confidence because they practiced skills of developing ideas, how to introduce them to the clients and defending them in case it was necessary. The experiences provided a justification for the use of a logbook as a learning tool and, their participation in both individual and group assessment processes. *One intern had*

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this to say: "I used to think that i was just studying so that I can get a paper but now I have found out that, I am someone who is going be solving peoples' real life problems"

Figure 6: Showing students practically executing the work
Source: Primary data (2019)

During internship it was observed that the interns acquired various competencies needed in the world of Work. For instance, the three aspects considered during role-play learning strategy as shared in this article indicate that interns were introduced to group work as a learning strategy during which group members took up the assigned tasks seriously and endeavored to achieve the final goals for the specified projects. Leadership skills were other aspects achieved during internship due to the fact that each group was tasked to appoint a leader who would be responsible to ensure each member accomplished his/her task. Effective communication between the group members, supervisors and directors contributed to the systematic and comprehensive execution of the assigned projects. Interns were introduced to research skills in order to come up with different ideas to form concept banks from which they could select the best implementation option. This further enabled interns to engage in brainstorming sessions that enabled the development of their critical thinking and listening skills. Delegation was another aspect that enabled interns to build on their self-esteem. Group leaders were tasked to assign members with tasks so as to accomplish the desired goal thus developing the skill of responsibility. The CAD Interns came up with the layout designs for the exterior and interior using appropriate software. This experience introduced them to E-draw, Sweet home and Dream plan before the commencement of any project.

On the other hand, Challenges were encountered during the Role-play simulation learning strategies including time allocation to the Internship training was limited, projects could not be accomplished within the eight weeks for practical work; Limited funds to execute the approved projects and in the end directors were over whelmed with the finances in the short time; CAD students needed WIFI in order to execute their designs using the soft wares but this became very expensive for the identified clients; it was noted that interior design interns initially did not have the required skills in

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operating the sewing machines. Therefore, this took a lot of their time to learn than produce the required products expected for the projects. Power shortages, affected the designing process due to the fact that the company had no generator to provide alternative power. And it was observed that some of the CAD interns were not computer literate, which took a lot of time to train them, thus affecting a timely and consistent implementation of the set projects.

CONCLUSION AND RECOMMENDATIONS

Role-play simulation strategy sought to enhance acquisition of professional competence and confidence among interns from the Department of Art and Industrial Design. Through project-based learning, successfully, an impact was felt on the acquisition of professional competence among interns. They were engaged in practical activities acting as service providers and this made a positive impact towards improving their attitudes, knowledge and skills acquisition. They worked hand in hand with the supervisors and directors of the company to accomplish tasks through collaboration. Practical learning motivated interns into discovering new knowledge and becoming more inquisitive about their trade. The success of the internship process relied heavily on team work, to facilitate practical learning using the role-play strategy and also required collaborative efforts of directors, internal and university supervisors and the interns at large. Skills and competencies are not acquired by a one-time experience but over time through constant practice. Therefore, a need to uphold workshop learning by forming MOU with companies which provide placements for students and also put in place regular pedagogical strategies that equip and maintain the skills laboratories at the institutions with relevant materials and tools; to facilitate collaborative and practical learning sessions linked to the world of work for students to experience real life-oriented assignments. Learning by doing" and "learning to learn" should continue to be considered as core theoretical and pedagogical strategies in TVET.

Transformative learning having widened the interns understanding of theory and knowledge in skills training and the relevance of general knowledge in TVET, contributed to their analytical processes during training. Furthermore, relating knowledge generation to life experiences were encountered, team work dynamics, personal goals and critical thinking in decision making processes and thus contributing to the interns' professionalism and development of self-esteem. Introduction of CAD software application during the training processes empowered interns in understanding the current design trends and presentation of concepts from a professional perspective. Funding continues to be a challenge to both the interns and the identified workplace that participated in the internship exercise. In this case there is need for cost-sharing where need arises or clients should be in a position to establish and be guided on how much finances would be required to accomplish given tasks. Time allocated for Internship should be revised and if possible reviews programmes and give opportunities to students to experience the workplace life throughout the training period. Basically, hands-on training should be emphasized while students are receiving institutionalized training in order to avoid the lack of workplace operational skills during internship.

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