AN EXPLORATORY STUDY OF THE 'CREATIVITY TOOLBOX' AS A TEACHING TOOL TO PROMOTE CREATIVITY IN LEARNING.

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Abstract

The intention of presenting this article on the use of the creativity toolbox, which has been used to explore creativity in teaching and learning which assists educators in, fostering student engagement and student centeredness in the class room . The article further aims to present information on the monitoring and evaluation of the use of the creativity toolbox during lesson planning, classroom activities and behavior management. The research project was prompted due to the lack of poor concentration and literacy levels that contribute to a lack of classroom engagement within the Public Relations Practice module. The research aims to encourage active learning via various teaching strategies such as the use of the creativity toolbox. This proactive approach is linked to the constructive approach to encourage students to interact with content and tools in a creative way that shapes content into learning, knowledge and understanding. The findings of the research present the use of the creativity toolbox emphasising the learning experience in the classroom. Students enjoyed lessons being planned to accommodate a style of learning that catered to their understanding by assisting them absorb content and made the lesson interactive. This study aims to provide a contribution to teaching strategies in a higher educational classroom amongst many different levels of students.

1. Introduction

The article explores the use of the creativity toolbox in promoting creativity in teaching and learning in relation to a higher educational classroom. This article aims to assist educators in fostering student engagement in the classroom. Furthermore the research reported in this study hopes to encourage educators to use tools via the creativity toolbox to make learning experiences in the classroom more student centered.

The identified problem affecting the respondents in this study was that they struggled to concentrate, or even interpret the topics discussed in class. Due to the surroundings of the institute, attendance turned out to be a major concern; this directly affected the grades of the students and put immense pressure and stress on the educator to improve the throughput rate.

Gravett and Geyser (2004, p.22) state that teaching aimed at developing the kinds of capabilities associated with higher education is more complex and demanding than that of past years. The student profile in higher education has changed rapidly worldwide. Classes are diverse in terms of student motivation, aspirations, expectations, cultural backgrounds, first language and range of ability.

These led to the foundations of the creativity toolbox, which contains crayons, A3 chart paper, beads, balls and feather boas amongst other things. The premise of having these tools is to stimulate thinking outside the box, encourage students to actively engage in content and caters to the diversity of learning as opposed to merely being passive learners. Thus stimulating learning and absorption of information through interaction associated with the active learning theory which explores experiences that stimulate meaningful learning, Eison (2010).

Some of the learning tools and items mentioned above should be familiar to students as its items found at the primary level of an educational environment which would, encourage and engage their interpretation of content in the classroom.

The creativity toolbox is meant to supplement a lesson by allowing for fun in the classroom. The idea behind the creativity toolbox is to allow students to actively engage with the content that they are studying and not overwhelm students, but rather guide them from easy and new to the more intricate as substantiated by the different orders of thinking in Blooms Taxonomy. This allows the educator to start of teaching in the classroom with low order thinking activities and gradually move over to the higher order activities as to develop the student into a critical thinker and independent learner, Overbaugh and Schulz (2013).

2. Research question and objectives

2.1. Research question

The study tries to contribute to the recognition of improving student engagement with the use of creativity. The creativity toolbox will assist educators with student engagement by using the 21st century teaching techniques.

21st century teaching techniques incorporates learning skills that are critical and creative as well as using communication as an element of collaboration of both literacy and life skills which leads to a holistic experience in the classroom, Gravett and Geyser, (2004).

A further point is that this idea is simple and addresses the situation effectively. Making a lesson exciting will engage students. By engaging students, educators are fostering a learning environment for students to develop critical thinking skills, catering to the different learning styles and judging how students relate to content.

The rationale for this research stemmed from the visible lack of interaction and interest in classroom activities, which influence student's behavior.

The aim is to increasing critical thinking skills of students and creating opportunities as well as encouraging and stimulating social learning. Therefore the study set out to determine the impact will the creativity toolbox have when applied to the higher educational classroom to encourage student engagement in the learning content of a specific module.

2.1. Objectives to be achieved

Linked to the research question the primary objective of the research is to create an interactive teaching and learning module via the creativity toolbox that will encourage active student engagement with the module contents. It is envisaged that the use of the creativity toolbox will advance critical thinking skills and active learning by encouraging student engagement in the classroom.

2.2 The Creativity Toolbox

Below are some examples of how the creativity toolbox can be used.

2.1.1 Feather Boas – for role-plays' which will aid students in remembering scenarios performed in the classroom. Like being a form of disturbance in the communication process, or creating an image when talking to an audience. Allowing student to take on a persona when presenting. Can assist in boosting student's confidence.

2.1.2 Cards – Color coordination when answering questions, dividing students for group work.

2.1.3 Paper, crayons, felt pens – making charts, drawing mind maps, drawing pictures to stimulate visual learning.

2.1.4 Magazines – to make charts, refer to media articles, have a direct example of a text in front of them, boosting reading and writing skills.

2.1.5 Online forum - were students can converse online, complete task and generate discussion.

3. Brief Literature Review

Creativity is defined as the tendency to generate or recognise ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others" (Franken, 2014).

Black, Paul, Wiliam and Dylan (1998) suggest that creativity in education is implied and recognised by the practical aspect found in a classroom. With reference to the creativity toolbox it can be seen as a way of communicating the content from the subject in a familiar format.

Bonwell and Eison, (1991) state that active learning instructional strategies include a wide range of activities that share the common element of involving students in doing things and thinking about the things they are doing.

When students are encouraged to use creativity in learning they become interested in learning, more about the subject and tend to be open to challenges and new methods of finding answers. Further to this, they tend to work well in teams as well as autonomously. Education Scotland, (2013) adds that students also tend to have a greater ownership over their learning.

Curse (2014) states that whilst there appears to be a consensus that creativity should be encouraged in education and in the design and technology of curriculum in particular, to the extent to which this is a reality within the present day system is open to question.

It can be proposed that educators are willing to adopt the type of structures and practices which will foster creativity with the use of technology in the classroom. This may be a function of the education system but, perhaps more importantly, of the implicit theories which educators hold in relation to their creative ability in particular and to learning and assessment in general.

Dervishaj and Xhillari, (2014) suggests that creativity is a basic capacity of human intelligence. Human intelligence is not only creative, but multi-faceted. It is for this reason that we emphasise that all students have creative capacities and that they all are different. One area of crucial importance is this respect of learning and understanding. Activities which are open

ended, which are meaningful and which encourage active involvement and real opportunities for students to become engaged and apply and construct learning.

Active learning strategies can be created and used to engage students. This will assist in thinking critically or creatively, speaking with a partner, in a small group, or with the entire class, expressing ideas through writing, exploring personal attitudes and values, giving and receiving feedback, and reflecting upon the learning process, (Eison, 2010).

Learning is not a spectator sport! Students may not necessarily learn by sitting and listening in class, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to experiences, and apply it to their daily lives and even relay the information to others. They must make what they learn part of themselves, (Chickering and Gamson, 1967).

Fry, Ketteridge and Marshall, (2009) suggest that what students do is actually more important in determining what is learned. This implies that students in higher education must engage with and take personal responsibility for their learning. Higher education educators should work towards producing graduates who are capable of thinking critically and creatively. Learning requires opportunities for practice and exploration, thinking and reflection, interaction with others and educators.

When creating an environment that will encourage active learning through creative activities, educators' should aim to increase the critical thinking skills of students. The creativity toolbox has useful links that educators can use to increase deep learning in the classroom. By using creative activities, students not only remember, they also apply and remember what occurred in that lesson, (Snowman and McCown, 2012).

Whilst using comprehension by understanding the meaning of, and interpreting instructions student are allowed the freedom to think critically and execute instructions given in class. In the application aspect using the concepts in a new situation, (like role-playing and drawing charts) or topics learned in the classroom can help students with remembering content discussed. The synthesis aspect is illustrated by associating concepts to form a whole, with emphasis on creating a new meaning or structure and finally evaluation by making judgments about the value of ideas or materials presented, (Overbought and Schulz 2013).

Snowman, and McCown, (2012) state that meaningful learning only occurs when students construct a personal interpretation of the world by filtering new ideas and experiences through

existing schemata or schemes. To assist students in constructing their own meaning, educators are encouraged to use items from the creativity toolbox in lesson planning and allowing student an allotted time to be creative.

In the classroom, the constructivist view of learning can point towards a number of different teaching practices. It usually means encouraging students to use active techniques (experiments, real-world problem solving) to create more knowledge and then to reflect on and talk about what they are doing and how their understanding is changing. Educators should be aware of the students' pre-existing conceptions, and guides the activity to address them and then build on them using creativity in teaching, (Concept to Classroom, 2004).

The link between a constructivist approach of learning and the multiple intelligence theory is that the classroom activities frequently activate and utilize more than one of the multiple intelligences with the tools from the creativity toolbox. Such examples may include class discussions, presentation, drawings, group work and debates. Linking multiple intelligences to the constructivist approach that focuses on encouraging creativity in learning implies that students will be given the opportunity to engage with the contents using the intelligence most natural to them.

As per discussions at educator forums and enrichment workshops held at higher educational facilities, the relevance of the creativity toolbox is when the educator has to plan a lesson. Lesson planning that is structured to cater to all learning styles of students, and having the option of separating work into group activities and individual's activities are essential, whilst bearing in mind the correspondence to the lesson outcomes.

Linking the context of using the creativity toolbox within class, it is important to note that the focus of using such tools is to create active learning. Active learning is experiential, mindful, and engaging. Through it you can explore a set of learning experiences that can become effective and interesting, and you can take more responsibility for your education. Active learning requires that students learn by doing things themselves, (Study Guides and Strategies, 2013)

Being able to use newly acquired information and applying it within various contexts require students to develop and use critical thinking skills. Early to learn (2013) explains that critical thinking is about thinking about any problem in which the person evaluates the information and uses such conclusions to guide future behaviour. Such critical thinking skills, to be learned tough creativity does however require active student engagement. Sound out (2013) explains that such engagement depicts the willingness of students to attend and participate in activities.

5. Research methodology and design

The research methodology represented in this article subscribes to the quantitative research approach. Quantitative research allows for the collection of information in a structured format. This process reviews opinions that then can facilitate the production of relevant information to support the study aims and objectives. The reasoning for this method is that it allows for feedback that can be converted into numerical and statistical format, Du Plooy-Cilliers, Davis and Bezuidenhout, (2014). This approach matched the research requirements perfectly as it produced a combination of statistical and experiential data that could be used to determine the value of using the creativity toolbox to promote creativity towards improving learning. This quantitative method determined the use of creativity toolbox to encourage creativity in the classroom, Murugan and Paken (2013). The research design employed for this study is based on the exploratory method using questionnaire design. Harwell (2010, p.153) postulates that data is used to exchange, complement and in some cases follow up on unexpected findings. The focus of this article is to interpret and explain relationships between variables and may or may not be guided by a particular theoretical perspective.

5.1 Questionnaire Design

After being exposed to the creativity toolbox students were asked to complete questionnaires. The questionnaire was taking teaching and learning strategies that form part of the creativity toolbox into consideration. The questionnaire employed a combination of both open and closed ended questions, were the objective was to get the most honest opinion from student who had interacted and engaged with the creativity toolbox. The questionnaire also included a cover letter and consent form informing students the reason for the research as well as their participation in the study. The survey was printed and handed to students to complete and to be handed back by a specific time period as to ensure that their valid opinions can be captured in time.

5.2 Data Collection Method

Data related to this research was obtained using a questionnaire.

The Glossary of Statistical Terms (2005) defines a questionnaire as an investigation of the characteristics of a given population by collecting data from a sample of that population, and

estimating their characteristics through the systematic use of statistical information. Questionnaires are used as part of the survey design to collect the relevant information, (Teaching and Learning in Higher Education, 2013).

Data validity proves to be a vital aspect when undertaking any form of research. The credibly of the creativity toolbox will be achieved by feedback forms. The transferability and dependability of the quantitative research will be based on the students information collected. The method of questionnaires will be used to ensure that there will be a result at the end of the project, Stringer (2006, pp.46-52).

5.3 Sampling method

The population for the research was essentially all the students at a private higher education institution in Durban enrolled for a Diploma in Public Relations. The study confines itself to second year students who have registered for the Public Relations Practice module.

According to Research Methodology.net, convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher.

This implies that convenience sampling has been applied where the respondents were selected based on the fact that they are convenient for the researcher to access as she is offering the module to the student group. The sample size for the study is thirteen students.

Since the sample size is limited, this will ensure that when research is being conducted that no opinions or views can be imposed onto the student, therefore the reliability and honesty in data collection and reporting is ethical. In this way the reliability of the study can be effective by selecting the students from a particular class that has used the creativity toolbox. Therefore the data collected will be factual and up to date.

5.4 Limitations of the study

The first of these relates to time constraints. Interaction time with the respondent group is limited due to the timetable structure. Financial constraints include printing, cost of paper, stationary and the use of technology for both the sample group and the researcher. Another limitation affecting the study includes different ages of the students raging from nineteen to

twenty five; therefore there level of understanding and interpretation will be different from each others. Results also proved that they could not be generalised due to the exploratory nature of this research.

5.5 Ethical issues

Stringer (2006) states there are various reasons why it is important to adhere to ethical norms in research. These include promoting knowledge transference, the values that are essential to collaborative work, such as trust, accountability and mutual respect. Also ensuring that the researcher is held accountable; and to help build public support for research.

The researcher employed the notion of consent forms when handing out questionnaires, as to allow the research analyse the data collected. The process of participating in this research study is totally voluntary and no means of coercion of student participation will occur. Having a sense of respect for opinions and views that may criticize or contradict with the study as well as allowing the respondents the opportunity to withdraw from the questionnaires if they choose. Being honest in reporting on the data collected and also referencing work that is not my own. The confidentiality of the students will be ensured by referring to students as respondents and not referring to them by the individual names. The researcher will ensure that no discrimination takes place against the respondents who prefer not to participate in the research as it will not impact the outcome of the study. The research will only use the data collected via the data collection tool for research purposes only.

6. Data Analysis and Findings

The goal of data analysis is to understand the perspectives of respondents. Pie graphs with scales and descriptive analysis represent findings. The data is presented and grouped as per questionnaire that students have answered.

6.1 Gender Differentiation

The purpose of this question was to determine the ratio of males and females in the class, and whether this would affect the type of activities in class. Figure 6.1.1 below provides details about the gender of the respondents that participated in this study. Figure 6.1.1 indicates that 90% were female and only 10% were male.

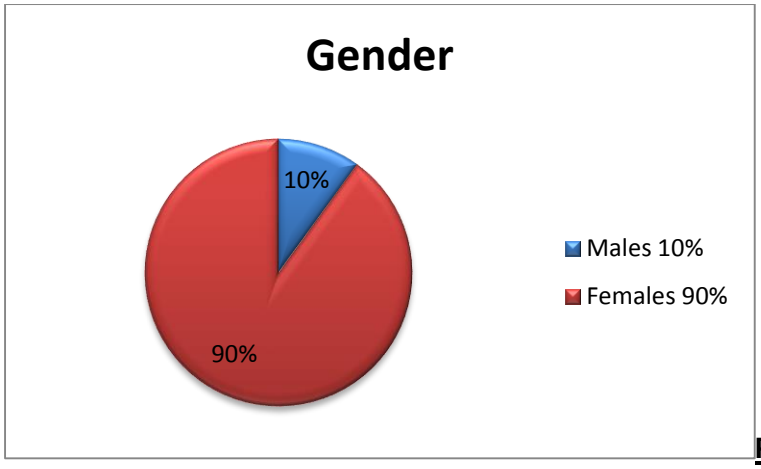

Figure 6.1.1

Figure 6.1.1 Gender Differentiation

The implication of this finding is that the use of the creativity toolbox may be presented from a more female perspective in terms of the activities chosen in class. This however did not impact the amount of creative activities completed in class.

6.2 Description of a Typical Lecture

The purpose of this question was to gauge what perception students had about a typical lecture. This allowed the researcher an opportunity of reflecting on lesson planning and considering areas that needed attention in terms of delivery in the classroom. Figure 6.2.1 below provides an overview about how students described a typical lecture that incorporated the tools from the creativity toolbox. Some of the tools used would have been charts, colour pens, magazines, cards, and dress up props, games and online activities.

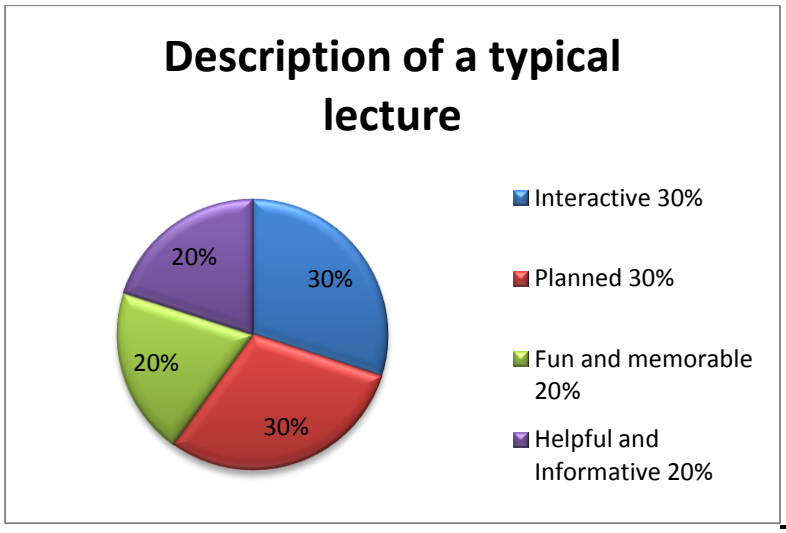

Figure 6.2.1

Figure 6.2.1 Description of a Typical Lecture

Based on figure 6.2.1 students perceive the use of the creativity toolbox as a method that assisted them in remembering content, encouraged them to actively engage in the lesson and remember the content so that it can be applied to other situations. The above student's descriptions assisted the researcher in gaining an understanding of reflection as too which tools from the creativity toolbox assisted in creating meaningful learning. Figure 6.2.1 reflects that the tools from the creativity toolbox created structure in the lesson with allowed students to grasp concepts applicable to the module. 20% of students describe the lecture as informative, meaning that they have gained a deeper understanding of what was discussed in the class, which can be linked them developing critical thinking skills.

6.3 Recalling topics discussed in class

The purpose of this question was to determine if student would be able to recall topics discussed in class. These lessons would have incorporated the tools from the creativity toolbox.

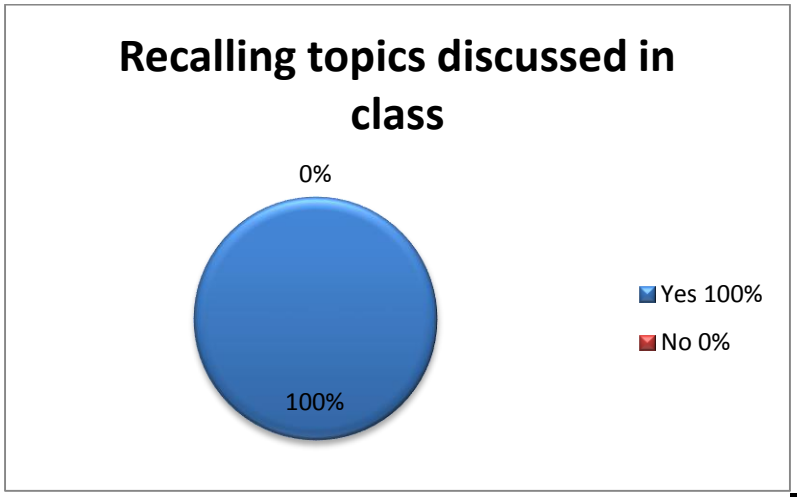

Figure 6.3.1

Figure 6.3.1 Recalling topics discussed in class

Figure 6.3.1 represents 100%, meaning all respondents that participated have indicated yes as they are able to recall topics discussed in class. Therefore this can be an indication that the use of the tools from the creativity toolbox does promote creativity in teaching and learning. This question associated to the lesson planning by linking activities in class to the theory of multiple intelligence and constructivist approach as students generate ideas and knowledge from interacting with each other and presenting information in a contemporary format. In this

way students begin to think critically and motivate them to learn independently as well as in groups.

6.4 Influenced the Ability to Recall

The purpose of this question was to determine which tools from the creativity toolbox influenced student's ability to recall information. Figure 6.4.1 provides details on some of the tools and teaching methods described in the creativity toolbox. Figure 6.4.1 represents the impact of role-playing at 9% in terms of recalling what was done in class will apply to the student whose learning style is that of a kinaesthic learner.

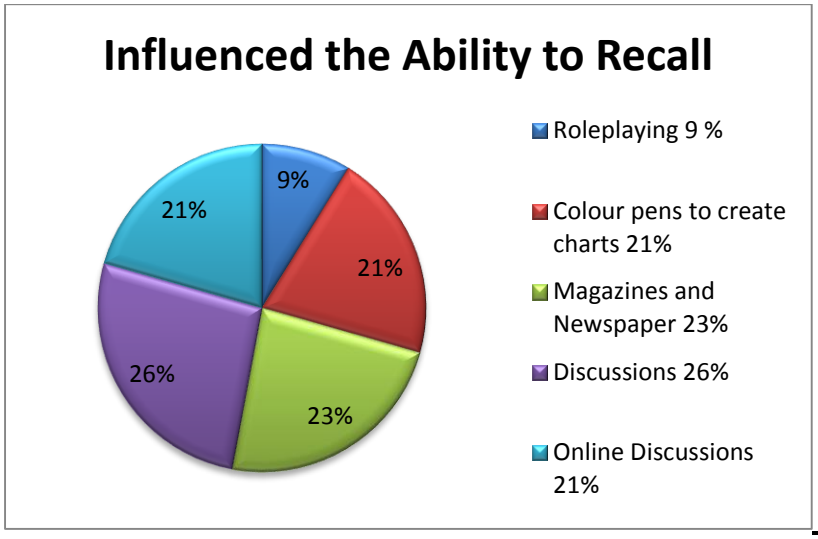

Figure 6.4.1

Figure 6.4.1 Influences related to the ability of recalling

The visual learners in the class are described and characterized by the students who use magazines and newspapers as well as colour pens and art supplies to create charts. Figure 6.4.1 indicate that 26% of students prefer discussions as these students are auditory learners, whilst 21% of learners that prefer using online discussion profiles are learners that use blending learning to create understanding. These findings suggest that the tools from the creativity toolbox promote creative learning and adhere to the different learning styles of student in a classroom. The creativity toolbox enables learning with different teaching and learning strategies to the varied intelligences of the students. The constructivist theory relates here as in figure 6.4.1 , 26% of students prefer discussions, which directly relates to the conversing and transferring of information. They begin to create knowledge from concepts discussed in the classroom.

6.5 Do you think using the creative techniques mentioned above stimulates learning in the classroom?

The purpose of this question is to determine if creative teaching techniques via the creativity toolbox stimulate learning in the classroom. This question also allowed the researcher an opportunity to reflect on teaching practice. Figure 6.5.1 provides information as to whether students agree or disagree about the above mentioned techniques, stimulating learning in the classroom.

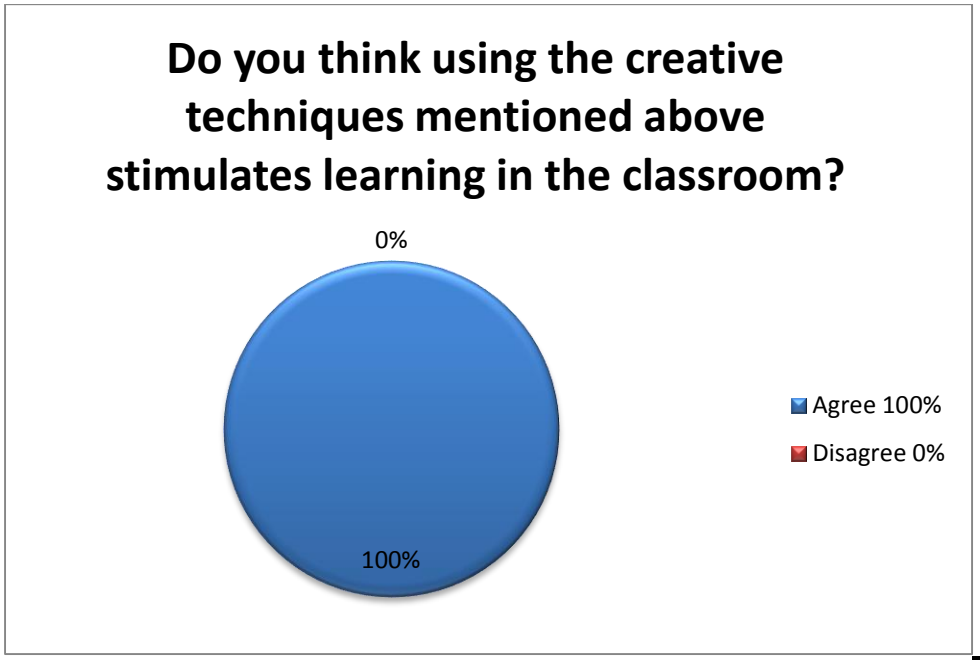

Figure 6.5.1

Figure 6.5.1 Do you think using the creative techniques mentioned above stimulates learning in the classroom

Figure 6.5.1 represents that all the respondents that participated have agreed that the creative techniques mentioned in figure 6.4.1 does stimulate learning in the classroom. Therefore this can be an indication that the use of the tools from the creativity toolbox does promote creativity in teaching and learning. This again stems from the constructivist approach that underlines the creativity toolbox. This essentially details that creativity in learning demands interaction and contemporary 21st century teaching methods to keep students interested and aid them to developing skills of critical thinking and deeper learning.

6.6 Satisfaction of Creative Techniques

The purpose of this question was to examine the satisfaction level of students with the use and exposure to the creativity toolbox. Figure 6.6.1 reflects the satisfaction levels of the creative techniques use in the classroom via the creativity toolbox.

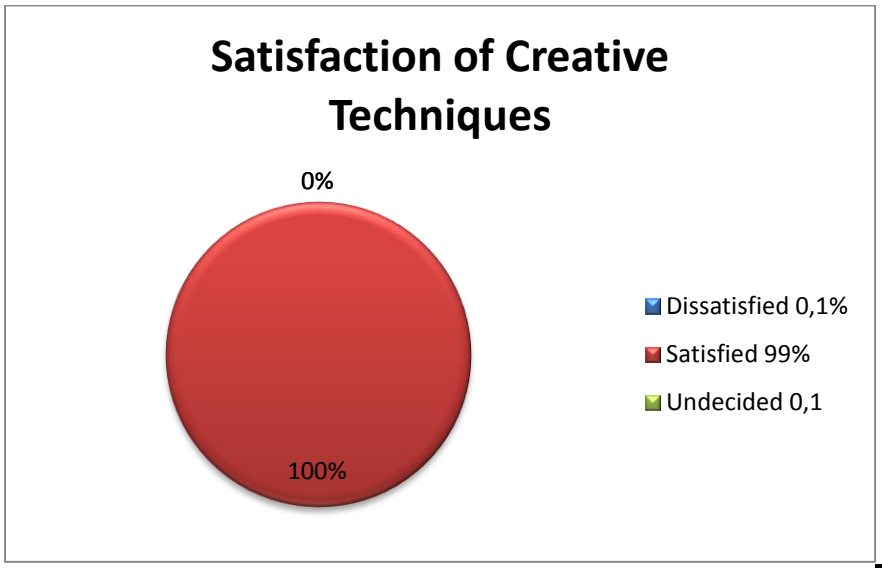

Figure 6.6.1

Figure 6.6.1 Satisfactions of Creative Techniques

Figure 6.6.1 represent that all the respondents that participated have indicated that they are satisfied with the creative techniques mentioned in figure 6.4.1 used to stimulate learning in the classroom. This therefore reflects that the use of technology in classroom engagement via online forums and activities that are aligned with the creativity toolbox generates a holistic learning environment. These findings also state that the creativity toolbox positively impacts a higher education classroom by making lessons memorable and encouraging student engagement.

6.7 How often do you visit the Student Portal and Edmodo?

The purpose of this question was to examine the student usage of the online component relating to the creativity toolbox. This is where all materials relating to their subjects can be found as well as the online forum for the module that the research is being conduct upon.

Figure 6.7.1 reflects how often students visit the online profile that the creativity toolbox promotes.

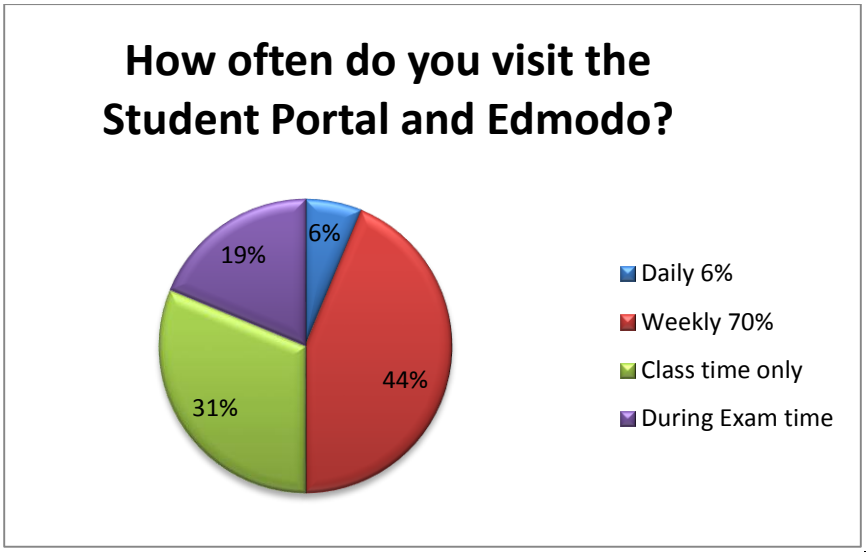

Figure 6.7.1

Figure 6.7.1 How often do you visit the Student Portal and Edmodo?

Figure 6.7.1 indicates the lack of daily usage; this is due to fact that students at the institute come from a visible lower income bracket and do not have the internet and Wi-Fi facilities. A method used to allow students to use the internet and participate in online discussion, was to have classes placed in labs and studios as to assist those that do not have regular access to these facilities. Edmodo and the student portal are aids to the creativity toolbox as the technology aspect, by trying and accommodating the varied leaning styles and intelligences of students. Bearing in mind that the student characteristics are of millennial students meaning they can relate more to the use of technology. However the lack of funds and the socio economic backgrounds limits their usage and exposure to technology.

6.8 Do you agree/disagree that interaction during class discussions leads to improves student/educator as well as student /student communication?

The purpose of this question was to determine if class interaction improved communication levels between peers and as well as with the educator. Figure 6.8.1 provides information as to whether students agree or disagree about the interaction during class discussions that leads to improved student/educator as well as student /student communication.

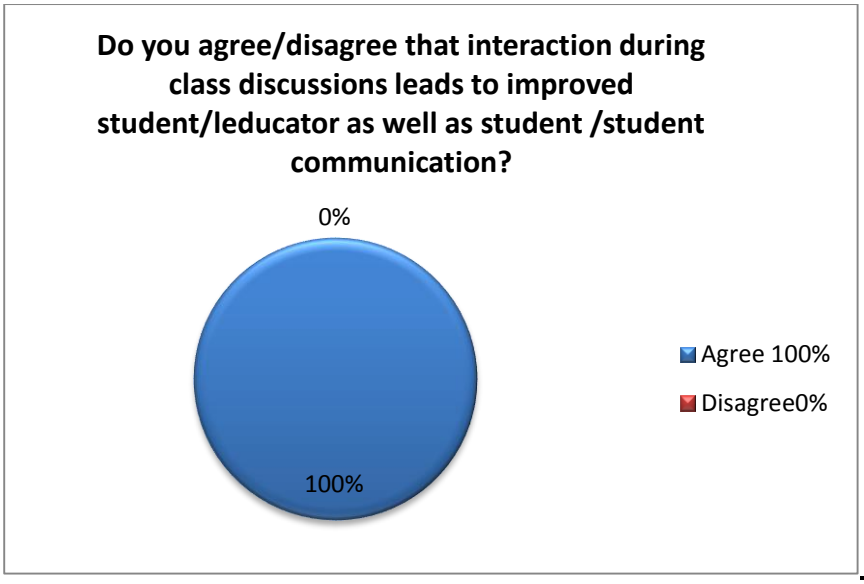

Figure 6.8.1

Figure 6.8 Do you agree/disagree that interaction during class discussions leads to improves student/educator as well as student /student communication?

Figure 6.8.1 represents that all the respondents that participated have indicated that they agree that the interaction during class discussions have improved student/educator as well as student /student communication. This creates a holistic environment that can assist the educator in building a relationship with the student and be able to structure learning as to maximise the teaching and learning in the classroom. These findings also reflect that the creativity toolbox created learning that allowed students to work autonomously and in groups and to become confident and motivated when doing so. This relates directly to the social learning theory which instructs knowledge and development of behaviour patterns, Bandura (1977).

6.9 Does the location of the Campus impact your attendance?

The purpose of this question was asked to determine if students were motivate and encourage enough to attend class and participate in activities, or if the central location of the campus

impacted on their attendance.

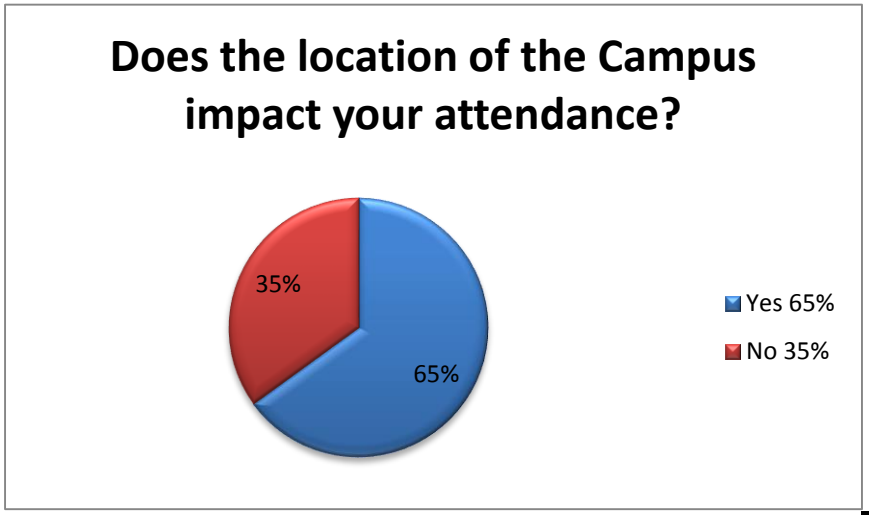

Figure 6.9.1

Figure 6.9.1 Does the location of the Campus impact your attendance?

Figure 6.9.1 reflects the impact of the location of the campus in relation to the attendance of students. Figure 6.9.1 shows that 65% of students stated that the location of the campus does affect they attendance, whilst 35 % stated that this does not impact on their attendance. This reflects that the impact on communication and student educator interaction impacted on 65 % of students minds as compared to the 35% that admitted that they were distracted. This finding is important as it shows the direct relation to lesson planning and engaging students, via the tools from the creativity toolbox. Therefore engaging students is important in as motivating them to attend class.

7. Contributions and Recommendations to the study

From the research of the Creativity Toolbox the researcher suggests the following contributions to the study.

It's evident that the creativity toolbox promotes creativity in learning. It assists students by having a lesson that is planned and structured to accommodate different learning styles. The research gathered illustrates findings that students agree with the teaching techniques employed by the study, in assisting them in recalling and creating their own understanding. The impact of the creativity toolbox was to create awareness of creativity in teaching and learning in the classroom with the application of teaching strategies and learning theories. It improves the quality of information and learning inside the classroom, as different activities were used to relate information and make learning more student- centred.

The use of magazines and discussions allowed students to generate a recall action during assessments. Magazines and newspaper's present contents as a direct example related to the module and this strengthens the link to attending lessons as they can view what is being discussed really does occur in industry. Reading and discussing the contents from the newspaper can also improve their reading and writing skills needed for the module. The use of colour pens to make charts allowed students to become creative and be able to work autonomously as well as a group. This allowed them to think critically and to develop motivation to start attending lessons. Realign ideas and concepts they engage would and be able to present these finding to the class, not only to improve presentation skills but assists students in grasping key outcomes and being able to put into action theories relating to the module. Again this links to learning styles that are auditory, visual as well as kinaesthetic.

The class discussions also allowed students to voice opinions, allowing for critically thinking and analysis of contents to be explored greatly. Role-playing can be used more to start engaging students to participate and act out. This will also boost confidence levels of students and allow them to remember key concepts.

A recommendation should be that the college provide devices and internet usage to student registered so that they are able to utilise online forums. The discussions can therefore lead to online debates and forums of interaction, which can greatly enhance outside class interaction.

8. Conclusion

The above exploratory research study looks at how creativity in teaching and learning can promote deeper learning. The study also discussed the different learning styles of a 21st century student that is evident in any classroom today.

The aim of the study was to promote creativity in teaching and learning. The research project aims to use creativity in the form of tools to encourage active learning via various teaching strategies. The creativity toolbox applied learning theories and activities to the classroom where students could interact with content and tools in a creative way and in this way shape content into knowledge.

The study now aims to informing new educators that a student learns in different ways as they have different learning styles. The study hopes to increase student engagement and encouragement for research initiatives under creativity in the classroom. This study hopes that the findings may be used in future to expand and generate information on teaching and

learning at a higher education institution, developing teaching and learning tools for millennial students.

9. Bibliography

Bandura, A. (1977). Social Learning Theory, Englewood Cliffs, NJ: Prentice Hall Chapter 1: article. [S.A.]. Constructivism: promoting active learning. [Online]. Available at: http://college.cengage.com/education/valmont/technology/1e/shared/content/articles/ch01constructivism.pdf [Accessed 21 November 2013].

Black, Paul, Wiliam and Dylan. (1998). Assessment in Education: Principles, Policy & Practice Mar1998, Vol. 5, Issue 1

Celestra. (2013). Creativity, Design and Communication. [Online]. Available at: http://celestra.ca/top-10-creativity-definitions/. [Accessed 21 November 2013].

Chickering, A. W. and Gamson, Z. F. (1967). Seven principles for good practice in undergraduate education. *AAHE Bulletin*, pages 7-39.

Clark, CD. 1992. The focus group interview and other kinds of group activities. [Online] Available at: http://ppa.aces.uiuc.edu/pdf_files/Focus.pdf [Accessed 21 November 2013].

Concept to Classroom. (2004). What is constructivism? [Online]. Available at: http://www.thirteen.org/edonline/concept2class/constructivism/ [Accessed 16 May 2013].

Curse, E. (2014). Using educational Video in the classroom: Theory , research and practice.[Online] :Available at : http://www.safarimontage.com/pdfs/training/usingeducationalvideointheclassroom.pdf . [Accessed 21 July 2014]

Du Plooy-Cilliers, F. Davis, C. and Bezuidenhout, R. (2014). Research Matters. Claremont: Juta. Chapters 2, 11, 12, 15

Dr. Dervishaj,A and Dr. Xhillari,R . (2014).Creativity in Teaching Different Subjects in English through Drama Techniques. Journal of Educational and Social Research MCSER Publishing, Rome-Italy Educator at Tirana University, Faculty of Foreign Languages, English Department

Early to learn. (2013). Glossary of terms. [Online]. Available at: http://www.earlytolearn.com/glossary-of-terms/. [Accessed 21 November 2013].

Education Scotland. (2013). Transforming Lives through learning. Foglham Alba. Scottish Government. United Kingdom. [Online]. Available at: http://www.educationscotland.gov.uk/learningteachingandassessment/approaches/creativity/about/index.asp . [Accessed 21 November 2013].

Education.com. (2014). United States of America. [Online]. Available at: http://www.education.com/reference/article/towards-definition-creativity/[Accessed 2 March 2014]

Edweek Teacher Organization. (2013). [Online]. Available at: http://www.edweek.org/tsb/articles/2010/10/12/01panel.h04.html. [Accessed 21 November 2013].

Franken ,R.E. (2014). [Online]. Available at: http://www.jdeducation.org/creativity---projects.html . [Accessed 21July 2014]

Fry, H, Ketteridge, S and Marshall, S. 2009. A Handbook for teaching and learning in higher education: enhancing academic practice. 3rd edition. New York, (NY): Routledge. ISBN: 9690415434645.

Gardner, H. 1963. Frames of mind. The theory of multiple intelligences. [Online]. Available at: http://digilib.bc.edu/reserves/ps369/winn/ps36963.pdf [Accessed 15 April 2013].

Gravett, S. and Geyser, H. 2004. Teaching and learning in higher education. Pretoria: Van Schaik.

Guiding principles of constructivist thinking. [S.A]. [Online]. Available at: https://notendur.hi.is//~joner/eaps/wh_consy.htm [Accessed 21 November 2013].

IIE. (2013). Teaching and Learning in the Higher Education Context, Module Guide. IIE . JHB

Instructional Design Theories. (2013). [Online]. Available at: http://www.instructionaldesign.org/theories/social-learning.html.[Accessed 21 November 2013]

Kumar, R. 2011. Research methodology. A step-by-step guide for beginners. 3rd edition. Los Angeles, (CA): Sage.

Lifecircles Incorporated. (2014). Learning theories- Constructivism. [Online]. Available at: http://www.lifecircles-inc.com/Learningtheories/constructivism/constructivism.html[Accessed 2 March 2014]

Murugan , J. Paken,S. (2013). Email. August 2013. jmurugan@rosebankcollege.co.za and shakti.paken@gmail.com

Overbaugh, RC and Schulz, L. [*s.a.*]. Bloom's taxonomy. [Online]. Available at: http://ww2.odu.edu/educ/roverbau/Bloom/blooms_taxonomy.htm [Accessed 26 May 2013].

Psychotherapy. (2013). [Online]. Available at: http://www.psychotherapy.org.uk/mixed_methods.html. [Accessed 21 November 2013].

Researchh Methodoly.net.(2014). http://research-methodology.net/sampling/convenience-sampling/.[Accessed 3 May 2015]

Sing, LC. 1999. Problem-solving in a constructivist environment. [Online]. Available at: http://www.ifets.info/journals/2_4/lee_chien_sing.html [Accessed 3 March 2014]

Snowman, J. and McCown, R. 2012. Psychology applied to teaching. Belmont, (CA). Wadsworth: Cengage learning.

Sound out. (2013). Student engagement. [Online]. Available at: http://www.soundout.org/student-engagement-AF.pdf . [Accessed 21 November 2013].

Stringer, E. 2006. Quantitative research in education. 2nd edition. New Jersey, (NJ): Pearson.

Study Guides and Strategies. (2013). [Online]. Available at: http://www.studygs.net/activelearn.htm. [Accessed 3 March 2014]

Skinner, C, Von Essen, L, Mersham, G and Motau, G. 2010. Handbook of public relations. 10th edition. Cape Town: Oxford University Press.

The Free Legal dictionary. (2013). Farlex. [Online]. Available at: http://legal-dictionary.thefreedictionary.com/Independent+Contractor [Accessed 21 November 2013]

10. Annexure A - Questionnaire

Study Title: The Creativity toolbox: An analysis of teaching tools to promote creativity in learning.

Dear Respondent

Thank you for reading this.

As your Public Relations Practice educator I would like to invite you to participate in this research study by completing the following questionnaire. It is entirely up to you whether you participate but your response would be valued and highly appreciated. You have been identified as a potential respondent as you have interacted with the elements of this study. All information will remain anonymous and the information will be used for the purposes of the research only.

The study surrounds itself with creativity in teaching and learning in a higher education context. With the use of technology in the form of Edmodo, the student portal as well as class discussion and group work activities. This study aims to determine whether the use of the Creativity toolbox impacts on creative learning within the classroom.

Please do not include any personal details as the completion of the questionnaire should be completed anonymously and all reasonable steps will be taken to ensure confidentiality. Responses from completed questionnaires will be collated for analysis. The original questionnaires will be retained by the researcher until the study is completed and destroyed once the research output has been submitted.

Should you wish to find out more about the research, please feel free to contact me via my email address provided above.

Questionnaire instructions

Please read through the questions below and try and complete them by either writing in an answer or simply ticking in the correct box. Please complete all the questions.

1. **What is your gender?**

Male		**Female**	

2. **How would you describe a typical lesson/lecture?**

3. **Are you able to recall specific topics discussed during a lecture?**

Yes	
No	

4. **In your opinion which of the following listed have an influence on your ability to recall information presented during a lesson best? Please select two options that most apply to you.**

_____ **Role playing**

_____ **The use of colour pens, crayons to draw charts, diagrams and illustrations**

_____ **The use of magazines and newspapers**

_____ **Discussions**

_____ **Online discussions and Forums**

5. **Do you think that using the creative items/techniques mentioned above stimulates learning within the classroom?**

_____ **Agree**

_____ **Disagree**

6. **Please explain your answer related to question five (5) above.**

_____

_____

_____

_____

7. **How satisfied are you with the use of creative techniques as mentioned in question five (5) during the execution of a lesson?**

1 **Very Dissatisfied**	**2** **Dissatisfied**	**3** **Undecided**	**4** **Satisfied**	**5** **Very Satisfied**

8. **How often do you visit the student portal?**

_____ **Daily**

_____ **Weekly**

_____ **Class time only**

_____ **Only when needed or Examination Period**

9. **How often do you visit Edmodo?**

_____ **Daily**

_____ **Weekly**

_____ **Class time only**

_____ **Only when needed or Examination Period**

10. **Do you think that interaction during discussions leads to improved student /lecture as well as student/student communication?**

1 Strongly Agree	**2 Agree**	**3 Undecided**	**4 Disagree**	**5 Strongly Disagree**

11. **Seeing that Rosebank College is centrally located, entertainment options such as shopping, movies, pubs and malls are plentiful. Does this influence your class attendance?**

Yes	
No	

12. **Are you involved in any social outreach projects offered on campus? If you are please indicate below.**

Yes	
No	

Type of outreach project/s you involved in:

_____

_____

_____

_____

_____

Thank you for reading and participating in this research study.