Journal of Psychology & Behavior Research
ISSN 2640-9895 (Print) ISSN 2640-9909 (Online)
Vol. 1, No. 1, 2019
www.scholink.org/ojs/index.php/jpbr

Original Paper

Predictors of Undergraduates' Creativity Potentials in Southwestern Nigeria

Felix-Kingsley Obialo[1*] & Adenike E. Emeke[2]

[1] University of Ibadan School of Business, University of Ibadan, Ibadan, Nigeria

[2] Institute of Education, University of Ibadan, Ibadan, Nigeria

[*] Felix-Kingsley Obialo, University of Ibadan School of Business, University of Ibadan, Ibadan, Nigeria

Received: February 4, 2019 Accepted: February 16, 2019 Online Published: February 22, 2019

doi:10.22158/jpbr.v1n1p1 URL: http://dx.doi.org/10.22158/jpbr.v1n1p1

Abstract

This study investigated the degree of relationship between eight psychosocial factors and their potential for creativity among undergraduates in southwestern Nigeria. Multistage sampling was used to select 651 respondents who responded to four psycho-social creativity instruments. Risk-taking behavior recorded a mean score of 40.75 (SD of 7.55). Peer pressure threshold mean score was 38.26 (SD of 6.470). Knowledge of creativity mean score was 35.33 (SD of 6.61). Attitude towards creativity revealed a mean score of 41.07 (SD of 6.45). The mean score on the Williams Creativity Test was 72.73 (SD of 7.69). Peer pressure and creativity have a significant correlation of 0.200 ($p<0.05$). Knowledge/awareness of creativity has a significant correlation of 0.545 ($p<0.05$). Correlation between attitude and creativity is 0.532 significant at $p<0.05$. The significant correlation between age and creativity is 0.104 ($p<0.05$). The correlation between gender and creativity is 0.036 which is not significant ($p<0.05$). Risk-taking behaviour and creativity have a correlation of 0.007 which is not significant ($p<0.005$). The correlation between parental influence and creativity is 0.064, and it is not significant ($p<0.05$), while the course of study and creativity have no significant correlation of -0.047. The results suggest implications for stakeholders in the educational system.

Keywords

creativity, creativity potential, undergraduates, psychosocial factors, southwestern Nigeria

1. Introduction

Problematic events of contemporary society have proved beyond doubt that life is complex and full of challenges. The existence of these complexities in life means that every community must invent means of confronting life's complications. Over the centuries until the modern era, therefore, societies have developed means and ways of confronting problems associated with change through adaptation and innovation. Adaptation and innovation have been possible through creative individuals and groups who have received one form of education or the other. Education thus becomes an important tool for developing creative instincts in people. Creativity is the ability to conceive new inventions, produce works of arts, solve problems in new ways or develop an idea based on an existing, new or unconventional approach (Wells, 2006). Creativity assists people to get the most out of their experiences and resources thus forming part of the basis of any programme for sustainable development (Akinboye, 2003). It is now at the center of man's quest to improve the quality of his life and that of his fellow human beings.

Creative societies are now dominating not only the realm of science and technology but also other fields of human activity. Creativity as such becomes an integral part of contemporary life. Nations, groups, and individuals that neglect creativity would tend to do so to the detriment of their growth and development. Thus, Akinboye (2003) asserts that: "The creative person is at the heart of society's capacity to improve the human condition. Creativity and innovation are the ultimate human resources that produce human success—be it personal, business, family or organizational" (p.v). From the above exposition, it can be deduced that all forms of education as an inevitable tool for development must inculcate the spirit of creativity in its beneficiaries for it to serve its purpose of existence. Consequently, education needs the utmost care as the type of education in any society determines the quality of its graduates and essentially the leaders such a society would have. This fact means that education is the undisputed tool for change. Education must be given all necessary considerations. This consideration, therefore, must include quality inputs such as quality teachers, quality teaching/planning, provision of a conducive environment and teaching aids.

2. Literature Review

The graduates of any educational system will reflect the curriculum they were exposed to during learning. This exposure will determine the available workforce of the society that owns such an educational system. With the current universal trend towards the enrichment of the quality of life of humanity through sustainable technological and economic growth, policymakers globally are now looking to creativity, innovation and human talent as the vehicles of future productivity and social dynamism (Lebler & McWilliams, 2008). Creative and relational capacities are now globally valued more than instrumental skills that used to be popular (IBM, 2010; Puccio, Cabra, & Schwagler, 2017). Instrumental skills tend to equip graduates with the wherewithal to manage existing means of production, which are routinely

followed without the skills to cope with those issues that may not have been taught while in school. The Nigerian *National Policy on Education* (2004, pp. 31-32) states that: university education shall make an optimum contribution to national development by:

(a) intensifying and diversifying its programmes for the development of high-level manpower within the context of the needs of the nation;

(b) making professional courses to reflect our national requirements;

(c) making all students as part of a general programme of all-round improvement in university education, to offer general study courses such as history of ideas, philosophy of knowledge and nationalism.

- University research shall be relevant to the nation's development goals. In this regard, universities shall be encouraged to disseminate their research results to both government and industries.
- University teaching shall seek to inculcate community spirit in the students through project and action research.

However, consistent trends for about two decades in Nigeria suggest "a vote of no confidence" on the quality of Nigerian graduates. For instance, a World Bank study (Bollag, 2002) revealed that employers complain about the quality of Nigerian university graduates. Idaka and Joshua (2009) also report that other stakeholders like parents, lecturers and other people share this worry. Some employers now re-train graduates before they are considered fit to work in their establishments because they fail to meet the needs of the labour market (NUC, 2004).

The above scenario would seem to suggest that the first objective of the Nigerian policy of education with regards to university education which is "the development of high-level manpower within the context of the needs of the nation" (*National Policy on Education*, 2004) is not being met. This is testified to by the galaxy of complaints about the graduates of the Nigerian university system, which force employers sometimes to embark upon the specialised training of graduates before engaging them to work. Such a situation does not imply that the graduates truly constitute what may be described as a high-level workforce when they graduate from the universities. The reason for the inability of the Nigerian graduates to be easily assimilated into the workforce without any re-training is multidimensional. However, it could be because while they were undergraduates, they were taught to be what Rogers (cited by Rowson, 2014) described as "conformists, stereotypical individuals whose education is 'completed' rather than freely creative and original thinkers". Consequently, this group of conformists would seem to be uncomfortable and irrelevant in situations requiring creativity and innovation. Further, the above assertion of Rogers tends to hold true based on records from four major public universities sampled for this study. Obialo (2011) reports that records from the various exams and records units of these four universities in the Southwestern part of Nigeria show that between 2000 and 2010 majority of the graduates finished with a minimum of second class lower division (2^2). The revelation implies that the majority of the graduates are average academically. Similarly, this fact suggests that the workplace lack

of performance by Nigerian graduates might not be a question of whether the graduates possess the requisite intelligence for performance.

It may be safe to conclude that the reason why some Nigerian undergraduates are retrained before being considered fit for employment is that they have been found to possess little or no creative skills to cope with the numerous challenges they may face in the course of their work. It means therefore that graduates who are not creative or are not driven by creative tendencies cannot contribute to the growth and development of the nation. Thus, the average Nigerian graduate needs retraining to face the challenges of the workplace. This fact challenges one to find out factors that may influence the creativity of the Nigerian undergraduate before graduation. The findings of this study can, therefore, help stakeholders of the education industry in their quest to have a more creative generation of graduates for the Nigerian society.

Studies by many researchers have shown that there are factors that foster creativity in the same way that others serve as blocks to creativity globally. Such factors that nurture creativity include age, gender, attitude, knowledge/awareness, culture, parental influence, peer pressure, motivation, risk-taking behaviour, environment or climate and birth order (Nwazuoke, 1994; Beetlestone, 1998; Piirto, 2004; Sawyer, 2006; Yoloye, 2009; Obialo, 2011; Karwowski, 2015; Obialo, 2018). However, literature also reveals that there are blocks to creativity in gender, attitude, culture, environment, and age, to mention a few. From the above, it is evident that personal traits and social factors can either foster or serve as barriers to creativity. This study, therefore, focused on some of these factors related to the undergraduate who is a potential creator. This is with the view to discovering those qualities that help the individual to thrive in the area of creativity. Usually, inventions, innovations, and problem solving begin with the individual. Given the factors mentioned above, the following factors: parental influence, age, attitude, awareness/knowledge, gender, risk-taking behaviour and peer pressure, which are linked to creativity, were the variables for this study.

Every human person is born into a family. Whatever that person becomes is essentially a combination of nature and nurture provided first by the family. The family thus serves as the first medium of influence on everybody. The role of the family as exemplified in the influence of the parents has been documented (Sawyer, 2006). He posited that more than half of creative people grew up in stable, happy families. The implication would suggest that parents have great influences on their children. If parents influence their children, this influence would also affect the creativity of such children because parents are the first teachers of children. In the same token, some parents have negative influences on their children. Such parental influences would affect such children in issues like creativity.

Dacey (2007) contends that certain ages are critical to the development of creativity. Dacey posits that the first one and half years are the most critical in the development of creativity in the child as that is the time one of the tiniest components of the brain, the micro-neutron is developed. However, he concludes that there is no direct evidence to suggest any ideal period in a person's life to foster

creativity. Further, Anderson, Berg, Lawenius and Ruth (2013) in a longitudinal study discovered that creativity does not significantly decline with age.

Gender has also been found to relate to creativity revealing many differences (Hill, 2000). For instance, Nwazuoke, Osiki, and Nwazuoke (2000) in a study to describe the creativity profile of Junior Secondary School students discovered that the male subjects performed better than the female participants. They, like Sawyer (2006) ascribed this to the socio-cultural pressure that does not favour the female gender. This position can be justified in the sense that the Nigerian society places a lot of importance on the male child. Those who hold traditional views perceive the male as more important than the female. This cultural advantage enables the male to access both educational and non-educational facilities, thereby putting the male ahead of the female. However, there would seem to be no conclusive evidence that one gender is superior to the other in creativity. In a survey of a select group of 37 award-winning creative academics in Australian universities, which aimed at understanding the link between creativity and higher education pedagogy, McWilliams and Dawson (2007) discovered that there is no significant difference in the creativity of both male and female respondents. They reported that their finding corresponds with a similar result in a study in the United Kingdom.

Risk-taking behaviour has been found to nurture creativity (Sawyer, 2006). The spirit of innovation means that the one who creates is ready to break barriers or reject long-held beliefs and practices and try new opportunities and possibilities without considering the consequences. Risk-taking behaviour thus is a motivation for creativity. Risk-taking has been linked with creative people since the inception of creativity studies in the 1950s (Piirto, 2004). Risk-taking behaviour encourages one to try new and unusual things. It is a sign that the one taking the risk exercises a kind of independence of purpose irrespective of the consequences of such action. Risk takers are not afraid of failure, and so break barriers that may prevent them from exploring the possibilities they foresee before them. Risk taking in creators may be manifested in attempting new forms, styles or subjects. This courage or motivation to take risks allows creators to fail, fall and after that begin all over again to search for solutions to problems facing them. Creative people threaten the existing order without fear. While others in the society or group may be afraid or ashamed of failure, creative people see failure as stepping stones for discovery and solution. Creativity among risk-takers thus becomes a reward for curiosity and exploration. There is a motivation, which encourages confidence and a willingness to take risks.

The issue of risk-taking behaviour brings us to the question of attitude and creative behaviour. One's attitude can account for one's behaviour because behaviour is motivated. People either consciously or unknowingly convey attitudes about creativity. When such an attitude is negative, it stifles creativity. It thus leads to stereotypes and stereotyping is the antithesis of a creative approach to life's problems (Beetlestone, 1998). In a study of factors affecting managers and executives' attitude towards creativity training, Keong and Soon (1996) found that there was a significant correlation between risk-taking attitude and creativity level. They also revealed strong correlations between creativity training attitude

and self-rated creativity level and risk-taking attitude.

If attitude affects behaviour, one can conclude that being aware of or knowledgeable about any phenomenon would assist one to develop a positive attitude or disposition towards that thing. Unilever Research Vlaardingen (URV, Vlaardingen, The Netherlands) developed a Creativity Awareness Programme (CAP) to enhance both individual and organization creativity (Mostert & Frijling, 2001). The package comprises the Creativity Awareness Model, the Creativity Climate Questionnaire, and the Creativity Awareness Training Modules. These three form an all-in-one package suitable for individuals and organizations looking for ways to enhance the use of creativity. Mostert and Frijling (2001) reported that 300 employees of Unilever that underwent the Creativity Awareness Programme responded positively to it. The programme also led to the enhanced creativity of the workers and ultimately the organization through creative problem solving. In another study, Shriki (2009) exposed 17 prospective mathematics teachers to a series of activities aimed at developing their awareness of creativity. He reported that the subjects developed awareness of the various aspects of creativity. These activities also helped to deepen the subjects' mathematical and didactic knowledge.

Awareness of a thing may insulate one from pressure or influence from people concerning it. This peer influence could also concern the area of creativity. Peer pressure exists for everybody irrespective of age, just that this pressure varies from age to age and may be positive or negative. For instance, peer relations are important for the different aspects of adolescent development (Dekovic, Engels, Shirai, De Kort, & Anker, 2002). Adolescents with poor peer relations carry this to adulthood as evidenced by psychopathological symptoms (Bagwell, Newcomb, & Bukowski, 1998). Gable (2000) working on the influence of peer pressure on the creativity of children discovered that their peers greatly influence children between the ages of 9 and 12. This is because they are at the stage he called the realistic stage. For her, this is the stage that the children experience an increased amount of detail and the use of symbols. They begin to be shaped by the symbols they use and thus begin to develop a set of values learned from peers. Han, Hu, Liu, Jia, and Adey (2013) studied peer influence on creativity among 5th graders and found it significant. These characteristics exhibited at this stage of development make children vulnerable to peer pressure. This type of pressure can negatively influence children's creativity.

The above literature would seem to suggest that most Nigerian studies in creativity tend to concentrate on children and adolescents in primary and secondary schools. This verdict leaves a gap, which further work in other areas of creativity and among other categories of students and groups would fill. Evidence from literature identified some factors relating to creativity. This study, therefore, examines the possible relationship of the following factors: parental influence, age, gender, risk-taking behaviour, peer pressure, attitude and knowledge/awareness on creativity among undergraduates in Oyo, Osun and Lagos States of Nigeria.

3. Scope of the Study

The study concerned itself with explaining the variations in creativity among undergraduates in Oyo, Osun and Lagos States. The study had as its population, undergraduates in all public universities in Oyo, Osun and Lagos states from where the sample for the study was selected. The analysis and results were restricted to the variables of the study in the stated population.

4. Research Questions

Based on the above exposition, this work posed the following questions:

1) What is the profile of students' scores in risk-taking behaviour, peer pressure, parental influence, knowledge/awareness, attitude, and creativity?

2) To what extent do parental influence, risk-taking behaviour, peer pressure, knowledge/awareness, attitude, age, the course of study and gender, jointly predict the level of creativity among undergraduates in Oyo, Osun and Lagos States?

5. Methods

5.1 Design

The study adopted the survey design. Consequently, the independent variables were not manipulated and the other relevant variables controlled. The researchers only measured what had taken place and drew inferences from the results by the correlation between the dependent and independent variables.

5.2 Sample

Multistage sampling technique was adopted to select undergraduates from four universities out of the fourteen public universities in the three states. The first stage involved purposive sampling. According to Kerlinger and Lee (2000), purposive sampling is characterized by the use of judgment and deliberate effort to obtain a representative sample by including presumably typical areas and groups in the sample. Consequently, the six states in southwestern Nigeria were divided into two categories namely, the coastal and the hinterland states. This gave rise to the coastal states being Lagos, Ogun and Ondo states. While Oyo, Osun, and Ekiti constituted the hinterland states. As a result, the public universities in the six states were stratified according to the age and availability of courses. Stratification due to age was based on how old each university is. Each university that falls into this category must also have turned out graduates who would have been employed in the labour market in Nigeria for a minimum of fifteen years. The fifteen-year gap was purposively used because the feedback from the labour market was judged to have resulted from years of observation, experience, and empirical studies. The longest number of years spent at the university for a course is six years for medicine. Hence, the universities were at least twenty-five years old.

There was also stratification due to the availability of courses in the fields of arts, social sciences, education, science/engineering, and medicine. Consequently, the four universities that were purposively selected were University of Ibadan (U.I), Ibadan, Oyo State and Obafemi Awolowo University (OAU), Ile Ife, Osun State. Both represent Universities in the hinterland states while University of Lagos (UNILAG), Akoka and Lagos State University (LASU), Ojo, Lagos State represented universities in the coastal states. The remaining universities do not fully meet the two criteria for stratification. Some are specialised universities offering courses in only one or two areas of specialization such as education or engineering/technology.

In each university, cluster sampling was used to select 200 undergraduates. According to Patten (2001), cluster sampling may be used if members of a universe belong to a pre-existing group called "cluster". In the university setting, the natural clusters are the different departments or faculties. The faculties were clustered into five groups in each university. Hence, the clusters included the following faculties: Education, Science/Engineering/Technology, Humanities/Arts/Law, Social Sciences/Management and Veterinary Medicine/Medicine/Pharmacy. In each cluster of faculties, 40 participants were randomly selected by going to the different departments which constitute the faculty clusters. This ensured that 200 undergraduates were administered the four instruments used for this study in every university. This resulted in 800 undergraduates in the four sampled universities. However, 651 participants were able to return their instruments before data analysis began.

5.3 Instrumentation

Four instruments were used to generate data for the study. They are Predictors of Creativity among Nigerian University Undergraduates Questionnaire (**POCANUQ**); Knowledge/Awareness of Nigerian Undergraduates on Creativity Questionnaire (**KANUCQ**); Attitude of Nigerian Undergraduates towards Creativity Questionnaire (**ANUCQ**) and Creativity Assessment Package (**CAP**) (Williams, 1993). The first three were designed by Obialo (2011).

6. Results

6.1 Research Question 1

What is the profile of students' scores in risk-taking behaviour, peer pressure, parental influence, knowledge/awareness, attitude, and creativity?

Table 1. **Profile of Students' Scores in Risk-Taking Behaviour, Peer Pressure, Parental Influence, Knowledge, Attitude and Creativity**

Var. No.	Variable Name	N	Minimum	Maximum	Mean	STD
1	Age	651	20	35	20.84	1.82
2	Risk Taking Behaviour	650	21.00	72.00	40.75	7.55
3	Peer Pressure	650	16.00	64.00	38.26	6.47
4	Parental Influence	650	20.00	56.00	41.07	6.45
5	Knowledge of Creativity	649	20.00	68.00	35.33	6.61
6	Attitude towards Creativity	651	22.00	64.00	41.07	6.45
7	Williams Creativity Test	646	60.00	94.00	72.73	7.69

*Significant at $P<0.05$.

From Table 1, the mean age of the sample population is 20.84 years with a standard deviation of 1.82. The table also reveals a mean score of 40.75 and a standard deviation of 7.55 respectively in risk-taking behaviour by the sample. In the area of peer pressure threshold, a mean score of 38.26 and a standard deviation of 6.47 was recorded. Parental influence yielded a mean score of 41.07 and a standard deviation of 6.45. The knowledge of creativity yielded a mean score of 35.33 and a standard deviation of 6.61. Attitude towards creativity reveals a mean score of 41.07 and a standard deviation of 6.45. The mean score on the Williams Creativity Test is 72.73 with a standard deviation of 7.69.

6.2 Discussion

The mean age of the respondents found to be 20.84 could be explained by the fact that more people are now gaining admission into Nigerian universities at an early age. This was not the case in the past when prospective candidates had fewer universities to attend, and the competition for admission was stiff. Candidates then had to wait longer at home before accessing university education. This period of waiting added to the university entry age.

Further, the number of private and state universities is on the increase giving more opportunities for young people to gain admission into the public universities used for this study. The universities for the study are located in the South Western part of Nigeria noted for decades of free education. This fact is also enhanced by the Federal government's current policy of free, compulsory and basic universal primary education for all (FRN, 2004). The availability of these twin privileges and programmes of the south western states and the federal government would, therefore, seem to have paid off in the early entrance of eligible young people into the universities sampled.

Risk-taking behaviour which had a mean score of 40.75, indicates that the sample comprises people with average risk-taking behaviour. This set of participants would seem not favourably disposed to engage in risk-taking behaviour. The results from the table also show that more females returned their questionnaires for analysis. This might have affected the overall result in risk-taking behaviour. This is especially so in an African setting like Nigeria where there is always a tendency on the part of people to conform to societal patterns (Akinboye, 2003; Nwazuoke, 1994). These patterns are part of the African and Nigerian cultural practices, which teach members of the community to conform to set behavioural patterns and conventions. This tendency to conform would seem to have constrained the female gender to behave in expected patterns.

Consequently, some conventional attitude and behaviour are imposed on them. These patterns obviously would deny them the readiness to take risks, as this pattern also becomes a system of values. Values favour some while inhibiting others (Runco, 2007). In Nigeria, as appear common across Africa, the value systems seem to favour the male gender while inhibiting the female. Risk-taking behaviours would seem to be a trait not expected of the female gender. Consequently, it might have become a trait, which societal values and expectations do not associate with females since some societies believe that some patterns of behaviour do not fit the female gender (Sawyer, 2006). In spite of the above, it is also a possibility that the male participants in this study have also been constrained by the attitude to avoid all manner of risks. This would make them not to have any positive attitude towards issues concerning risk-taking. Anyone with an attitude that does not want to offend the established norms and ethos of the society would necessarily shun issues of risk-taking. Those who are comfortable with the status quo do not like to think outside the box and are consequently not good at taking risks. Studies have shown that those who do not take risks are usually not creative (McWilliams & Dawson, 2008; Piirto, 2004). This finding would seem to contradict the above as Table 1 shows that the mean creativity score is 72.73 on the Williams Creativity Test (Exercise in Divergent Feeling).

Peer pressure exists when the individual depends on the opinions of others to act. There is consequently recourse to external influences. Studies have shown that many children are highly creative except during the fourth-grade slump when they lose some of their creative potential (Runco, 2007; Sawyer, 2006; Gable, 2000). The creative slump exists because, at that stage of development, children are taught to conform, influenced by what teachers, parents and the society consider appropriate and right. However, this loss is temporary. As the child grows and develops, adolescence is reached, and the pressures of the adolescent are experienced (Gable, 2000; Scholastic, 2018). Since adolescence is the age of peer influence, it takes a lot from the adolescent to be different from his/her peers. This is when they also lose their creative potentials as the desire to conform becomes attractive, tempting, and normal. The mean age of the sample for this study which is 20.84, suggests that the respondents are hardly out of their teen years. For them to perform with a mean score of 38.26, which is an average possible score, also suggests that the respondents are still torn between peer expectations and independence. Since peer pressure implies

following the crowd and working in and according to group expectations, creativity is stifled (Gable, 2000).

Knowledge implies understanding (Runco, 2007). This understanding provides information that is useful in gaining insights into phenomenon and concepts. Knowledge of creativity provides insights into the construct ultimately enhancing creativity (Shriki, 2009). The mean knowledge/awareness of the creativity score of the participants of the study is 35.33, which means an average knowledge/awareness of creativity. This could, therefore, have influenced their overall creativity score. Moreover, ignorance of the idea or concept of creativity would suggest that there is no conscious effort by both the individual and the universities to nurture creativity in the participants. The result would seem therefore not be surprising, as the mean creativity score of the participants in the creativity test is 72.73 which indicates an average level of creativity according to the scoring analysis for this study. This shows that there exists a weak correlation between the knowledge/awareness score of the participants with their creativity score. It may therefore, be correct to conclude that they lacked specific experience or information that could have helped them gain insightful thinking (Martisen, 1995). Perhaps a better knowledge/awareness of creativity could have improved their performance in the creativity test. Consequently, the performance in the creativity test might not necessarily be due to their knowledge of creativity.

The above pattern of a weak but significant relationship between predictor and criterion would seem to have been replicated when the same participants returned a mean score of 41.07 on attitude towards creativity. This translates to average attitude towards creativity. Literature revealed that attitude shapes performance towards any construct (Idris, 2006; Obialo, 2004; Keong & Soon, 1996). In that sense, people who have a negative attitude towards creativity are not expected to take the idea of creativity seriously. Consequently, they may not be expected to perform well in creativity tests. The result of the sample suggests that the average attitude helped the sample to achieve in the creativity test. Bowkett (2007) contends that a creative attitude should underline the achievement of core skills, such as literacy and numeracy. Where such an attitude is lacking such skills would be absent. This average attitude of the undergraduates towards creativity suggests that an awareness programme would be needed to improve this attitude. Such a programme would among others expose undergraduates to the gains of creativity for the growth and development of the Nigerian society. This position finds support in the work of Keong and Soon (1996). They studied how the significance of individual demographic, job related, and organizational environment related to managers and executives' attitude towards creativity. They found among other things that creativity training influenced a change of attitude in the participants. Similar training aimed at changing the negative attitude of Nigerian undergraduates would thus facilitate the improvement of attitude towards creativity among undergraduates.

Parental influence on the study participants was found to be on the average as the table reveals a mean score of 41.07. This might be explained by the fact that admission into the university might have provided the respondents a haven where they were protected against the influences of their parents. The

fact that the average respondent is barely out of the teenage year as reported in the table points to the possibility of a minimal influence of parents over their young adult undergraduate children. The mean age for the sample for this study, 20.84, suggests that the subjects are young adults. The young adult group consists of people from about 19 to 30 years of age (Feist & Feist, 2002). Erickson (1982) describes young adults as having the strength of love and exclusivity. Consequently, despite the virtue of love, exclusivity is necessary for intimacy thereby excluding certain individuals, activities, and ideas to develop a strong sense of identity. As undergraduates, who have left the control of their parents, therefore, the newfound university environment may have provided a veritable avenue for escaping the controlling or overbearing influences of their parents. Hence, the returned average scores on the subtest of parental influence by the respondents is not very surprising. The independence would enable them to look for new alliances in their fellow undergraduates. These new colleagues would thus, in turn, influence them.

For the course of study, the sample recorded a mean score of 2.98 and a standard deviation of 1.39. Every discipline needs creativity to succeed since creativity is at the heart of human growth, development, and progress. The same principle can be applied to all disciplines to find the creative potential or otherwise of the practitioners. Thus, we have different interdisciplinary categories of creativity such as expressive, scientific, inventive, innovative, entrepreneurial, interpersonal and conceptual creativity which assist every sphere of discipline to witness success.

Table 1 reveals that the participants recorded a mean score of 72.73 on the creativity test out of a possible score of 100. This result indicates that the sample is moderately creative according to the scoring standard for this study. This result would seem to contradict the reason literature (Idika & Joshua, 2009; Lebler & McWilliam, 2008; NUC, 2004; Bollag, 2002), ascribes to the inability of Nigerian graduates not to perform at the workplace. That Nigerian university graduates are not able to rise to the challenges experienced in the workplace shows that there could be more than the literature has revealed. One could hypothesize that Nigerian undergraduates might have a creativity slump similar to the fourth-grade slump reported by literature (Runco, 2007; Sawyer, 2006). It would, therefore, be possible that while Nigerian undergraduates are creative at school, they lose this creative ability before they graduate from school. This could thus be a post-graduation creativity slump.

In the same vein, the disparity between the complaints from literature about the creativity of Nigerian graduates and the sample's creativity score could be because of the age of the sample. The mean age of the participants is 20.84. This implies that the average respondent is hardly out of their teen years. Some studies have reported critical periods in life during which creativity may be cultivated (Dacey, 1989, 2007; Gould, 1978; Jaquish & Ripple, 1980). These are the first five years, the early adolescence, early adult life (around 20 years), 29 to 31 years, the early forties and 65 to 70 years. There is a tendency for the average respondent in this study to possess the creative skills of teenagers or youth. As youths, the subjects strive to gain psychic and physical freedom from their parents (Feist J. & Feist G., 2002; Gould, 1978), and so the independence gives them the privilege of exploring life's experiences, and as such, they

could become creative because of the exuberance of youthfulness and newfound freedom. In the same token, Dacey (2007) asserts that young people in this critical moment become inspired to think more imaginatively and take greater risks in acting on their thoughts. This subsequently results in creative outputs.

However, one might contend that before these same undergraduates finish from the university, situations around them might have contributed to their creativity slump resulting in their inability to remain creative as the numerous complaints and retraining suggest from literature (Idaka & Joshua, 2009; NUC, 2004; Bollag, 2002). One situation may be the socio-economic state of affairs in the country. Obialo (2018) reported that many young Nigerians are not prepared for the modern economy no matter their educational background. This reality has the potential of affecting the world outlook of any category of people. This might develop into a spirit of apathy in undergraduates before they graduate. Such a situation would mean that these undergraduates do not see what the future holds for them. Lack of creative motivation would ultimately affect their creativity leading to a loss of creative expression. This slump might also be a consequence of a negative attitude developed towards the end of their studies. This becomes more so because of the absence of factors to motivate and inspire them into believing in creative enterprises. Thus, as graduates, they might not be found to be creative. This position finds credence in the work of Keong and Soon (1996). They reported that knowledge of creativity is not sufficient to produce creative outcomes. Though the result of this present study shows the sample to be moderately creative, the subjects might have developed a negative attitude about the whole issue before graduating.

Literature (Puccio & Murdock, 2007; Naderi & Abdullah, 2010) reveals the important contributions of personality variables to creativity. The findings of this study which have shown the significant relationship between the psychosocial variables and creativity support these earlier works. However, there is a disparity between the reports of this study and literature in explaining the creativity of graduates. This is because personality traits have not completely explained the creativity of the sample and the apparent absence of creativity reported in graduates of Nigerian universities for instance at the workplace. Mischel's (1999) study suggests that some situational variables at the workplace might account for this disparity. Situational variables describe the characteristics of a condition or environment. Mischel holds that the influence of situational variables and personal qualities can be ascertained by observing the uniformity or differences in people's responses in any given situation. Further, psychologists hold that human behaviour is a function of traits that are stable, environmental and situational (Runco, 2007). This combination of stable, natural traits and environmental, situational traits influences the individual in expressing their creative abilities. While the individual might possess creative traits, situational or environmental traits might deny the individual the possibility of expressing these same traits. The job situation variables might have affected the reported lack of creativity in the Nigerian graduate at the workplace. It follows that personality traits are reasonably stable but not absolutely constant (Runco, 2007).

In the same token, the fact that the predictive validity of personality creativity tests is not overwhelming (Runco, 2007) might be responsible for the inconsistency between the performance of Nigerian graduates at work and the creativity scores of the subjects of this study. This suggests that individuals with high-level creative traits as revealed by the sample might have some traits competing with their creative expressions. In the case of the correlation between the sample for this study and reported lack of creativity among graduates at the workplaces, it could be explained that though the sample reported traits normally associated with creativity, for instance, independence, this might not translate to creativity. There might be some factors, which ultimately rob potential graduates of displaying creative traits in the workplaces. One can then propose that the traits measured in this work do not necessarily guarantee creativity.

6.3 Research Question 2

To what extent do parental influence, risk-taking behaviour, peer pressure, knowledge/awareness, attitude, age, the course of study and gender, jointly predict the level of creativity among undergraduates in Oyo, Osun, and Lagos States?

Table 2. Prediction Level of the Variables on the Criterion (ANOVA)

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	172020.91	8	21502.61	62.056	.000*
Residual	219708.95	634	346.540		
Total	391729.86	642			
Model Summary					
R = .66					
R Squared = .44			Adjusted R Squared = .43		
Standard Error of Estimate = 18.62					

*Significant at P<0.05.

Table 2 shows that the use of eight psycho-social variables (parental influence, risk-taking behaviour, peer pressure, knowledge/awareness, attitude, age, the course of study and gender) when taken together seemed to be effective in predicting creativity among undergraduates ($F(8,634)=62.05$, $p<0.05$). The magnitude of the relationship between the creativity of the undergraduates and a combination of the independent variables is reflected in the values of coefficient of multiple regression (R) of 0.66, multiple regression square (R^2) of 0.44 and adjusted R square of 0.43. This means that 43% of the total variance in undergraduates' creativity can be explained by the combined influence of the eight-predictor variables.

6.4 Discussion

The result from Table 2 suggests that a combination of parental influence, risk-taking behaviour, peer pressure, knowledge/awareness, attitude, age, the course of study and gender significantly influences the creativity of undergraduates in Oyo, Osun and Lagos States. This is not surprising as the result supports the findings of different researchers who found a correlation between psychosocial factors and creativity in different studies (Noraini, 2006; Sawyer, 2006; Ortese, 2005; Piirto, 2004; Akinboye, 2003). These studies in various ways found that the above variables, which are aspects of the psychosocial nature of the sampled subjects, significantly predict their creativity. In the same way, these personality variables jointly influence the students' performance in the creativity construct. This again finds support in the work of Naderi and Abdullah (2010) who found a significant relationship in using measures of personality traits to investigate creativity among Iranian undergraduates studying in Malaysia.

The implication of the above findings is comprehensive. The quest for a creative work force to drive the Nigerian society and economy has to begin with the individual. Literature revealed that each person is born with a latent creativity potential (Akinboye, 2003; Obialo, 2011; Puccio, 2012; Dawson & Andriopoulos, 2014). Both individuals and groups within the Nigerian society would do well to invest in the nurturing of personality traits that would enhance the creativity of each person. This investment in creativity would benefit not only the individuals concerned but also society. This calls for a change of attitude as literature (Hosseinee, 2008; Noraini, 2006; Mostert & Frijling, 2001) showed a correlation between attitude and creativity. A deliberate attempt at fostering creativity early in the school life of the Nigerian child will ensure that by the time the child gets to the university, the society will have potential creativity driven individual who will not only receive from the society but also give something in return. In this wise what is to be given is the benefit of the creative talents of the individuals.

Additionally, the corporate world needs a change of attitude and needs to invest in the task of promoting creativity since it will ultimately be a part of the beneficiaries of the graduates of our university system. A situation where graduates, as asserted by NUC (2004), are retrained (not just as a matter of induction into the place of work, but fresh retraining) before being considered fit for employment is worrisome. The many years of university education in which many human and material resources have been committed to their training is not just a waste of resources but also a waste of time. The corporate world, therefore, would reduce this wastage in both human and material terms by supporting the universities in training the

students while still in school. This is because a creative employee would cost less to hire, induct and retain. Those that have not developed their creative potential might become burdens, which the various employers might not want to carry.

From the preceding facts, one can argue that it is truly cheaper to train a student while in school than to train a graduate after leaving school. This is even true when we consider the possibility that an employee with low creativity might not be very receptive to training and might only be interested in doing things the old conventional way (Runco, 2007). This position is further enhanced by the study of Keong and Soon (1996), who studied how demographic and job-related factors influence the attitude of managers and executives towards creativity education. They found methodical differences existing between individual managers and executives. This discovery suggests that all employees may not be equally prepared for creativity training. This type of mentality does not make for a progressive and successful workforce (Akinboye, 2003). This reality might have motivated Noraini (2006) to conclude that students seek self-satisfaction in what they do in class and they need external recognition or rewards for their achievements and creativity. When corporate bodies in Nigeria invest in the creativity education of Nigerian undergraduates while they are still in school, it will pay off at the end; because these students will, in turn, serve the industry that must have spent a lot on them. The classroom thus becomes a good environment to nurture creativity while the corporate work comes in to motivate and reward the undergraduates with such training.

In the family setting, parents must learn to strike a balance between the dictates of culture and tradition, with religious beliefs and practices and the need to nurture and sustain a creative spirit in every child. It is erroneous for parents and other stakeholders to hold that culture, tradition, and religion are antithetical to fostering creativity in the individual. As Beaudin (2005) argues, the general notion that religion and if we add culture and tradition stifles creativity because of its dogmatic nature is false. She faults this incorrect notion using Islam and art as the basis of her argument. She proffers that a correlation truly exists between the sacred and arts as found in calligraphy and recitation of the Quran, which are major Islamic art forms. This she explains inspires the Muslim's love of the divine as God produces a devotion, which inspires the artists to exalt the message of the Quran in creative expressions such as painting entire verses on the head of a pin or developing the complex dimensions of early Kufic writings. This position is also true of the Christian religion, as different eras of Christianity have witnessed peculiar outbursts of artistic creativity by many individuals (Runco, 2007). Artists in Europe for devotional and worship purposes painted religious icons and scenes while they worked for courts or particular churches (Sawyer, 2006). Consequently, cultural, traditional or religious sentiments should not be an excuse for stifling creativity in Nigerian children and those undergraduates who are under the influence of their parents until they become independent much later in life.

Literature (Runco, 2007; Sawyer, 2006; Kerr & Gagliardi, 2003) revealed a tendency to focus on convergent learning or traditional intelligence in the school systems to the detriment of divergent or creative learning. This should not discourage the promotion of creativity by all stakeholders in the Nigerian educational system, especially the universities which serve as the bedrock of the nation's development (Kenawy, 2006). This is because a creative attitude should underpin the acquisition of core skills, such as literacy and numeracy (Bowkett, 2007). Though attitude is a fixed position, a creative attitude to life prepares one to face problems from many angles thus, broadening the individuals' horizon. That means that the promotion of creativity will also positively influence convergent education as the study of Shriki (2009) revealed.

7. Conclusion

The findings of this study showed that eight psychosocial factors (parental influence, risk-taking behaviour, peer pressure, knowledge/awareness, attitude, age, the course of study and gender) were significant in jointly predicting creativity among undergraduates in Southwestern Nigeria. Nigeria's quest for global relevance through economic, scientific, technological, socio-cultural and other means must be backed up by deliberate policies and proactive measures targeted at undergraduates whose performance in the workplace would determine the future of this pursuit. All stakeholders in the education of undergraduates namely; parents, teachers, policymakers, governments at all levels, regulatory bodies such as the Nigeria Universities Commission (NUC) should make deliberate efforts to foster creative behavior in undergraduates while in the university by promoting those factors found to significantly predict their creativity. Such concerted efforts would help the individual undergraduate to nurture their creative potentials before joining the labour market. Such attempts will not only benefit the nation but also assist Nigeria to export some of the creative graduates into the global economy.

References

Akinboye, J. O. (2003). *Creativity in human development: University of Ibadan Postgraduate School Interdisciplinary Discourse*. Ibadan: Post Graduate School University of Ibadan.

Andersson, E., Berg, S., Lawenius, M., & Ruth, J.-E. (2013). Creativity in old age: A longitudinal study. *Aging Clinical and Experimental Research, 1*, 159-164. Retrieved February 12, 2019, from https://link.springer.com/article/10.1007/BF03323887 (Originally published 1989)

Bagwell, C. I., Newcomb, A. F., & Bukowski, W. M. (1998). Preadolescent friendship and peer rejection as predictors of adult adjustment. *Child Development, 69*, 140-153. https://doi.org/10.1111/j.1467-8624.1998.tb06139.x

Beaudin, R. H. (2005). "And God created…" Creativity in Islam. *International Journal of Kurdish Studies.* Retrieved December 22, 2009, from http:/findarticles.com/p/articles/mi_mOSBL/is_1-2_19/ai_n16057705/

Beetlestone, F. (1998). *Creative children, imaginative teaching*. Buckingham, UK: Open University Press.

Bollag, B. (2002). Nigerian universities start to recover from years of violence, corruption and neglect. *The Chronicle of Higher Education*, *2*(1), A40-A42.

Bowkett, S. (2007). *100+ Ideas for teaching creativity*. London, UK: Continuum International Publishing Group.

Dacey, J. S. (1989). *Fundamentals of creative thinking*. Lexington: Lexington books.

Dacey, J. S. (2007). Peak periods of creative growth cross the lifespan. In G. J. Puccio, & M. C. Murdock (Eds.), *Creativity assessment: Readings and resources* (pp. 323-345). Massachusetts: Creative Education Foundation.

Dawson, P., & Andriopoulos, C. (2014). *Managing Change, Creativity and Innovation* (2nd ed.). Los Angeles: Sage.

Dekovic, M., Engels, R. C. M. E., Shirai, T., De Kort, G., & Anker, A. L. (2002). The role of peer relations in adolescent development in two cultures: The Netherlands and Japan. *Journal of Cross-Cultural Psychology*, *33*(6). https://doi.org/10.1177/022022102238270

Elen, I. M., D'Heer, E., & Vermeir, I. (2013). The influence of mood on attitude-behavior consistency. *Journal of Business Research*, *66*(7), 917-923. Retrieved June 20, 2018, from https://doi.org/10.1016/j.jbusres.2011.12.011

Erikson, E. H. (1992). *The life cycle completed: A review*. New York, NY: Norton.

Federal Republic of Nigeria (FRN). (2004). *The Nigerian national policy on education*.

Feist, J., & Feist, G. J. (2002). *Theories of Personality* (5th ed.). Boston, MA: McGraw-Hill.

Gable, S. (2000). *Creativity in young children*. Retrieved February 15, 2009, from http://extension.missouri.edu/explore/hesguide/humanrel/gh6041.htm

Gould, R. (1978). *Transformations*. New York, NY: Simon and Schuster.

Han, Q., Hu, W., Liu., J., Jia, X., & Adey, P. (2013). The influence of peer interaction on students' creative problem-finding ability. *Creativity Research Journal*, *25*(3), 248-258. Retrieved May 31, 2018, from https://doi.org/10.1080/10400419.2013.813754

Hill, G. T. (2000). *Sex and gender differences in humor, creativity, and their correlations* (Unpublished PhD Thesis). The University of Texas at Austin, Austin, Texas.

IBM 2010 Global CEO Study. (2010). *Creativity selected as most crucial factor for future success*. Retrieved May 8, 2018, from https://www-_03.ibm.com/press/us/en/pressrelease/31670.wss

Idaka, I. I., & Joshua, M. T. (2009). Attitude of academic staff in Nigerian eertiary Educational institutions to Student Evaluation of Instruction(SEI): A case study of Cross River State University. *Educational Research and Review*, *4*(10), 470-74. Retrieved November 27, 2009, from http://academicjournals.org/ERR2/PDF/Pdf%202009/Oct/Idaka%20and%20Joshua.pdf

Inegbedion, H. E., Obadiaru, D. E., & Bello, V. D. (2016). Factors that influence consumers' attitudes toward internet buying in Nigeria. *Journal of Internet Commerce*, *15*(4). https://doi.org/10.1080/15332861.2016.1252646

Jaquish, G., & Ripple, R. E. (1980). Divergent thinking and self-esteem in pre-adolescents and adolescents. *Journal of Youth and Adolescence*, *9*, 143-152. https://doi.org/10.1007/BF02087932

Karwowski, M. (2015). Peer effect on students' creative self-concept. *Journal of Creative Behavior*, *49*(3). 211-225. Special issue on connecting theory, research, and practice in the psychology of creativity. Retrieved May 3, 2018, from https://doi.org/10.1002/jocb.102

Kenawy, E. M. (2006). University education and its relevance to development in Egypt. *Journal of Applied Sciences Research*, *2*(12), 1270-1284.

Keong, L. C., & Soon, L. G. (1996). Factors affecting managers and executives' attitude towards creativity training. *Research and Practice in Human Resource Management*, *4*(1), 67-88. Retrieved December 1, 2009, from http://file:///C:/Documents%20and%20Settings/User/My%20Documents/CREATIVITY%20TRAIING%20AND%20ATTITUDE.htm

Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of Behavioural Research* (4th ed.). London, UK: Wadsworth Thomson Learning.

Kerr, B., & Gagliardi, C. (2003). Measuring creativity in research and practice. In S. J. Lopez, & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures*. Washington, DC: American Psychological Association. https://doi.org/10.1037/10612-010

Lebler, D., & McWilliams, E. (2008). *Aligning curriculum, pedagogy and assessment for building creative capacity in undergraduate students: A case study from the conservatorium*. Retrieved September 26, 2008, from http://www.cci.edu.au/sites/default/files/alawrence/Lebler_McWilliam_Aligning_Curriculum.pdf

Martisen, O. (1995). Cognitive styles and experience in solving insight problems: Replication and extension. *Creativity Research Journal*, *8*, 291-298. https://doi.org/10.1207/s15326934crj0803_8

McWilliams, E., & Dawson, S. (2007). *Understanding creativity: A survey of "creative" academic teachers*. Retrieved September 26, 2008, from http:www.alte.edu.au/carrick/webdav/site/carricksite/users/siteadmin/public/fellowships_associatefellow_report_ericamewilliam_may07.pdf

Mischel, W. (1999). Implications of person-situation interaction: Getting over the field's borderline personality disorder. *European Journal of Personality*, *13*, 455-461. https://doi.org/10.1002/(SICI)1099-0984(199909/10)13:5%3C455::AID-PER357%3E3.0.CO;2-5

Mostert, N. M., & Frijling, L. H. (2001). Creativity in organizations can be measured and acquired. *Chemical Innovation*, *31*(11), 50-53. Retrieved December 8, 2009, from http://pubs.acs.org/subscribe/archive/ci/31/i11/html/11manage.html

Naderi, H., & Abdullah, R. (2010). Intelligence as a predictor of creativity among undergraduate students. *Journal of American Science*, *6*(5), 86-90. Retrieved September 1, 2010, from http://www.americanscience.org/journals/amsci/am0605/13_1230_Intelligence_am0605_86_90.pdf

Noraini, I. (2006). The impact of using handheld technology on students' attitude and creativity in mathematics. *Jurnal Pendidikan Universiti Malaya*. Retrieved December 1, 2009, from http://myais.fsktm.um.edu.my/5384/1/12.pd

NUC. (2004). *Labour earket Expectations of Nigerian graduates: Report of national needs assessment surveys*. Draft.

Nwazuoke, A. I. (1994). Effect of age on creativity in two distinct groups of Nigerian children. *Journal of Issues in Special Education*, *2*(3), 76-81.

Nwazuoke, U. G., Osiki, J. O., & Nwazuoke, I. A. (2000). A study of the creativity profile of selected JSS111 students in Ibadan North Local Government Area. *African Journal of Educational Planning and Policy Studies* (AJEPPS), *I*(1), 103-112.

Obialo, F.-K. (2011). *Psychosocial factors as correlates of creativity among undergraduates in selected Southwestern Nigerian universities* (Unpublished PhD Thesis). Institute of education, University of Ibadan, Ibadan, Nigeria.

Obialo, F.-K. (2017). *The transformative power of deliberate creativity: Reflections of a priest creativity practitioner* (Unpublished Master's Project). International center for the study of creativity, State University of New York at Buffalo State College, Buffalo, New York. Retrieved May 3, 2018, from http://digitalcommons.buffalostate.edu/creativeprojects/265/

Patten, M. L. (2001). *Questionnaire research: A Practical Guide* (2nd ed.). Pyrezak Publishing.

Piirto, J. (2004). Creativity as personal transformation: A postmodern view of creativity with emphasis on what creators do. *Keynote Speech at Australia Association for the Gifted Conference, August 15, 2004*. Retrieved July 19, 2007, from http://personal.ashland.edu/~jpiirto/Australia%20keynote%202%20creativity.htm

Puccio, G. J., Cabra, J., & Schwagler, N. (2017). *Organizational creativity: A practical guide for innovators and entrepreneurs*. Los Angeles, CA: Sage Books.

Puccio, G. J., & Murdock, M. C. (2007). Creativity assessment: An introduction and overview. In G. J. Puccio, & M. C. Murdock (Eds.), *Creativity Assessment: Readings and Resources* (pp. 5-24). Massachusetts: Creative Education Foundation.

Rowson, J. (2014). *Carl Rogers, creativity and the RSA*. Retrieved May 31, 2018, from https://www.thersa.org/discover/publications-and-articles/rsa-blogs/2014/09/carl-rogers-creativity-and-the-rsa

Runco, M. A. (2007). *Creativity: Theories and themes: Research, development and practice*. Amsterdam, Netherlands: Academy Press.

Sawyer, R. K. (2006). *Explaining creativity: The science of human innovation*. Oxford, UK: Oxford University Press.

Scholastic. (2018). *Peer pressure: Its influence on teens and decision making*. Retrieved May 31, 2018, from http://headsup.scholastic.com/students/peer-pressure-itsinfluence-on-teens-and-decision-making

Shriki, A. (2010). Working like real mathematicians: Developing prospective teachers' awareness of mathematical creativity through generating new concepts. *Educational Studies in Mathematics*, *73*(2), 159-719. https://doi.org/10.1007/s10649-009-9212-2

Wells, K. R. (2006). Creativity. *Children's Health Encyclopedia*. Retrieved September 12, 2009, from http://www.answers.com/topic/creativity

Williams, F. (1993). *Creativity Assessment Manual*. Austin, TX: Pro-ed.

Yoloye, E. A. (2009). *Educational wisdom*. Ibadan, Nigeria: Mosuro Publishers.