Development and Validation of Career Path Inventory

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Abstract

In recent years, increasing importance has been placed on enhancing the knowledge, entrepreneurial skills, attitudes, competencies of students especially in Nigeria. Attention is now drawn towards empowering people with skills for all-round national development. This study therefore established the psychometric properties of Career Path Inventory (CPI) designed for that purpose. The study adopted an internal methodology of validation which includes measures of internal consistencies (Cronbach Alpha), Split-half method, convergence construct validity, discriminant validity and Stanine Analysis. The researcher sampled two thousand SS I students selected through stratified random sampling across ethnic groups in Nigeria. The instrument was divided into four sections: Science, Arts/Humanities, Business and Technology. Findings revealed that the items on SCIENCE yielded a reliability coefficient of 0.90. The items on ARTS yielded a reliability coefficient of 0.90. The items on BUSINESS yielded a reliability coefficient of 0.89. The items on TECHNOLOGY yielded a reliability coefficient of 0.90. Convergent Construct Validity between Bakare's Vocational Interest Inventory and Career Path Inventory yielded rtt= 0.84 using Pearson Product Moment Correlation Coefficient. CPI did not deviate from measure of career interest. Its Discriminant Validity was found at rtt= -0.027. Based on these findings, the inventory is recommended for diagnosing career related challenges.

Introduction

Career research is quite broad. According to Olorungbemi (2011), Career can mean an activity that gives a person satisfaction, fulfillment or opportunity to express his innate potential. Sometimes it does not yield financial benefits, but most often it can. For example, football, table-tennis, decoration, catering, farming and many others are activities many engage in for pleasure while some people turn it to their occupations which fetch some financial gains. Career is a sequence of roles or positions including work, leisure and educational pursuit (Okon, 1984). It is a chosen pursuit, profession or occupation. According to Arthur et al (1989), career is defined as a sequence of life experiences over time. A career is more than just a job, or working or occupation, it includes one's progress, growth and development throughout life in all areas of life. Olorungbemi (2011), highlighted some facts about career, viz: career is dynamic, not static, that career complements one another and so none is superior, career gives an individual an identity like teacher, counselor, pharmacist , nurse etc; Career gives lifestyle like way of dressing, manner of viewing issues and the like. One can be suited for more than one career. Career guidance is one of the activities necessary to ensure total or all-round education of a child in all institutions of learning.

Career assessment is a necessary tool in career guidance. It is pertinent to note that individuals' interests, in most cases, are latent, and so there is need for career test to discover these innate potentials. This is often regarded as career assessment tools. One may ask what is career assessment? According to Alison (2014), it is a tool which can give an indication of what jobs are a match for one's interest and abilities and which career one may have aptitude for. Career assessment are tools that are designed to help individuals understand how a variety of personal attributes(i.e interests, values, preferences, motivations, aptitudes and skills) impact their potential success and satisfaction with different career options and work environment. They are tools that are designed to help individuals gain a better understanding of oneself**,** expand career options, find a good match with employers and identify strengths for the ever shifting work place (Columbia University; Centre for Career Education). Career assessment comes in many forms. The assessment selected by individuals or administrators vary depending on their personal beliefs regarding the most important criteria when considering career choices, as well as the unique needs of the individual considering a career decision.

Holland (1999) is of the opinion that as individuals are different so they have different views, feelings, passions, likes, dislikes. This makes each individual unique. Career interest differs too. Holland argued that each personality has its work environment that he can thrive if placed in such compatible work – environment. He classified six personality groups where individual may belong. They are Realistic, Investigative, Artistic, Social, Enterprising and Conventional (RIASEC). Bakare (1977) grouped vocational interests into ten (10) groups. They are Outdoor, Mechanical, Computational, Scientific, Artistic, Persuasive, Literary, Musical, Social Service and Clerical. Columbia University Centre for Career Education (2013-2014) described the Myers –Briggs Type Indicator (MBTI) and Strong Interest Inventory as assessment tools that identify personality preferences and exploring and identifying careers related to one's interests. In consonance with Holland's theory, Onoyase and Onoyase (2005) investigated the relationship between Personality types and Career Choice of secondary school students in Nigeria. The researchers employed both cluster and random sampling methods to draw a sample size of six hundred and sixteen (616) S.S2 students. The instruments used were Student Personality Questionnaire (SPQ) and Student Career Choice Questionnaire (SCCQ). The results showed that there were significant relationships between the Artistic, Social, Enterprising and Investigative Personality types on one hand and career choice on the other. Based on the findings, it was recommended among others, that practicing counsellors should give priority to career guidance in schools and emphasis should be placed on the importance of psychological testing in counsellor-training programmes in Nigeria's institutions.

A review of the major literature about attitudes towards Science and its implication was undertaken (Osborne, 2003). The review discovered a continuing decline in numbers choosing Science at the point of choice. It was discovered that interest in Science is low and gender is a strong factor influencing attitude towards Science; that boys have a consistently more positive attitude to School Science than girls.,

One of the purposes of career assessment is placement. Shertzer and Stone(1981) define placement as the selective assignment of a person to a position. According to them, it involves both in-school(curriculum, subjects, school activities)and out of school(part-time and full-time work)activities. They also contend further that a secondary school's programme must be student-oriented rather than being institution-oriented. Good placement, they say, results in opportunities for the individual to develop and achieve consonance with objectives.

The transition between JSS 3 and SS1 in Nigerian context particularly, needs serious career planning. SS1 is the starting point of a senior secondary school where a child needs to make a career choice. Making a career choice practically involves three major steps as highlighted by Olorungbemi (2011). First, the individual needs self – knowledge/identity i.e his likes , dislikes, passions, weaknesses, strengths and the likes. He should identify tasks he does with relative ease and gives him satisfaction and fulfillment. Secondly, he should have information about the world of works; the subject and personality requirements of the particular career he wants to pursue, the duration of study, nature of the job, prospects and hazards of the career. These two steps will lead him to the third step. The student matches the knowledge of himself to the demands of the career, if they tally, then, he goes for it and if it does not, then he will reconsider other career options that match his person so that he can have career fulfillment later in life.

The first step in making career choice as mentioned earlier may not be easy unless an expert comes in**.** Guidance counsellor's expertise is demanded at this point. He needs to present to the child a standardized inventory that will, at the end of the filling of the inventory, will enable him to have an understanding of abilities and interest.(of the child.) The counsellor then places him accordingly.

Career Path Inventory (CPI) was developed to provide the service of placing a senior secondary students into Sciences, Humanities, Business or Technology as designed by the new curriculum for senior secondary school by Nigerian Educational Research and Development Council(NERDC) according to their interest and ability. The inventory tries to improve on the existing inventories by

- Grouping the interest areas into four as these are the major streams of learning in any institution
- Making use of 4 Likert response scale ranging from like very much, like a little, dislike a little to dislike very much having 4,3,2,1 as their scores respectively.
- Helping counsellors to make easy diagnosis. A student that scores highest in any of the fields is placed accordingly.
- Indicating the scores of the responses at the last page making it difficult for any student to be biased in ticking his response

• Having four (4) distinct groups without an overlap i.e Science, Humanities, Business and Technology.

The inventory (CPI) is an effort made in helping guidance counsellors place students appropriately so that the students, all things being equal, will have career satisfaction and fulfillment in life. This is believed will help in national economic, political and social development.

Placement is both in-school and out-of-school (Shertzer and Stone, 1981). They assert that both the students and those who assist them must be able to relate placement opportunities to their projected life goals. In –School-Placement as explained consists of helping students to select an appropriate curriculum, subjects within a curriculum, extra-curricular activities, special groupings or special classes, etc. Such placement service helps students avoid tendencies to make wrong choices or it helps those with limited academic ability to deal with over-ambitious parents who wish to force their children to choose subject combinations leading to careers for which those students do not have the requisite intellectual ability for. Out –of –School Placement includes assisting youth to secure part-time and long vacation employment, full-time employment after graduation from senior secondary school and placement in tertiary institutions (Shetzer and Stone, 1981).

This inventory is concerned more with in –school placement. It is to determine if a child has aptitude for Science, Humanities, Business or Technology. Each of these fields, having clusters of careers that a student can easily choose from. Science for instance, consists of Earth and Space Science, Physical Science and Life Science; Humanities/Art has about six main branches: Art and Music, Literature, Religious Studies, History, Philosophy and Languages. A child placed In Science class for instance, can choose to study Medicine, Agriculture, B**ioche**mistry et**c** in higher institution.

In this study, Reliability (internal consistency analysis, Cronbach Alpha, Split-Half Reliability consisting of Guttman Spearman Brown, Alphas for Part 1 and 2, test –retest using Pearson Product –Moment Correlation), Convergence –Validity, Discriminant Validity and Stanine Analysis were examined.

Description of CPI

Career Path Inventory (CPI) is a career assessment tool developed to facilitate proper placement of senior secondary students into classes according to their interest and ability.

Important features of Career Path Inventory (CPI)

Career Path Inventory (CPI) requests for testee s biodata like name, class, age, school, sex, state, tribe and the type of course/career he likes to go into and reasons for the choice.

The inventory was developed based on the new senior school curriculum designed by the Nigerian Educational Research and Development Council (NERDC) (The NERDC grouped secondary school subjects into four viz : Science, Humanities, Business and Technology. This is in addition to the compulsory four cross- cutting subjects namely English Language, Mathematics, Civic Education and a Trade subject- there are 34 trade subjects as listed out by the Council and every child must take one.) This makes the inventory an indigenous one.

The Career Path Inventory (CPI) has four sections. Each section has 31 items with each item representing each of the streams (Science, Humanities, Business and Technology). All the items on section 1 are on Science while items on section 2 are on Arts/Humanities. All the items on section 3 are on Business and items on section 4 are on Technology.

Method

Design

The study adopted the internal methodology of validation involving the establishment of coefficient alphas (internal consistency), ensuring the construct validity which includes the face validity, content validity, convergence validity and discriminant validity.

Participants

The population of this study consists of secondary school students in south-western part of Nigeria. The sample for the study was 2000 students which were carefully selected for the study. The mean age of the participants was 13.12 (SD = 4.12). From observation, 50.3% of the participants were males while 49.7% were females.

Sampling Technique

Stratified random sampling was used to select the participants from the population of the study. The population of the study is homogeneous and was broken into strata according to the socio-demographic characteristics of the participants.

Instrumentation

The instrument of this study was Career Path Inventory (CPI).The inventory consists of four sections: Science, Arts/Humanities, Business and Technology.

Science Based Section (item 1s)

Section 1 describes the items that are based on science career. It is believed that students who score high on these items are science based students. This section consists of 31 items measuring science based career choice. The scale has response format ranging from "Like Very Much" (4) to "Dislike Very Much" (1). Construct validity was developed for the test, and this was done by establishing face validity, content validity, convergence validity, discriminant validity, internal consistency reliability and Stanine Analysis. Science section yielded a high reliability coefficient alpha of 0.90.

Art/Humanity Based Section (item 2s)

Section 2 describes the items that are based on Arts/Humanities. It is believed that students who score high on these items are Arts/Humanities based students. This section consists of 31 items measuring Arts based career choice. The scale has response format ranging from "Like Very Much" (4) to "Dislike Very Much" (1). Construct validity was developed for the test, and this was done by establishing face validity, content validity, convergence validity, discriminant validity, internal consistency reliability and Stanine Analysis. Section 2 yielded a high reliability coefficient alpha of 0.90.

Business Based Section (item 3s)

Section 3 describes the items that are based on Business career. It is believed that students who score high on these items are Business based students. This section consists of 31 items measuring Business based career choice. The scale has response format ranging from "Like Very Much" (4) to "Dislike Very Much" (1). Construct validity was developed for the test, and this was done by establishing face validity, content validity, convergence validity, discriminant validity, internal consistency reliability and Stanine Analysis. Section 3 yielded a high reliability coefficient alpha of 0.89.

Technology Based Section (item 4s)

Section 4 describes the items that are based on Technology career. It is believed that students who score high on these items are Technology based students. This section consists of 31 items measuring Technology based career choice. The scale has response format ranging from "Like Very Much" (4) to "Dislike Very Much" (1). Construct validity was developed for the test, and this was done by establishing face validity, content validity, convergence validity, discriminant validity, internal consistency reliability and Stanine Analysis. Section 4 yielded a high reliability coefficient alpha of 0.90.

Method of Data Analysis

Method of data analysis includes Cronbach alpha, convergence construct validity, convergence validity, discriminant validity and internal consistency analysis.

Results

Reliability (Cronbach Alpha)

This section presents reliability result using Cronbach Alpha method. All the first items of each section measuring SCIENCE were entered in the equation. The analysis used Cronbach method to find the reliability on the items. The following result was observed.

Table 1: Summary of Cronbach Coefficient

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.900	.896	31

Table 2 shows that all the items on SCIENCE yielded a reliability coefficient of 0.90. There were 31 items on SCIENCE. The reliability coefficient of 0.90 implies that the items on SCIENCE were highly reliable. The coefficient of the items based on standardized items was 0.896, approximately 0.90, meaning that the items were highly reliable. The implication is that these items can be used for any further research on career studies.

Table 2: Descriptive Analysis of items on Science

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
90.54	253.761	15.930	31

Table 2 shows the mean and standard deviation of items on SCIENCE. The table shows that participants scored above average on SCIENCE. The individual mean value revealed that quite more than half of the total participants liked other class category like Technology, Business and Arts than Science.

Internal Consistency Analysis

The findings show the inter-item correlation of the responses on Science. This implies the correlation of items that made up the overall coefficient. It was revealed that the items ranged from 0.311 to 0.613. This implies that all the items on SCIENCE have sufficient correlation coefficients to boost the overall Cronbach Alpha of 0.90. It also implies that all the items are true representatives of SCIENCE. It also implies that these items are internally consistent enough to describe SCIENCE. Please note that for an item not to be internally consistent, such an item should be less than 0.20

Split-Half Reliability Consisting of Guttman, Spearman Brown, Alphas for part 1 and 2

This section presents the split-half reliability. Method includes splitting the items into two halves: odd and even. The analysis will then be carried out on findings the coefficient of odd and even numbers. This method is powerful as it explains the Guttman Coefficient and Spearman Brown Coefficient.

Table 3: Split-half Reliability Technique showing Guttman Method and Alphas for Part 1 and 2

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.805
		N of Items	16
	Part 2	Value	.863
		N of Items	15
	Total N of Items		31
Correlation Between Forms			.695
Spearman-Brown Coefficient	Equal Length		.820
	Unequal Length		.820
Guttman Split-Half Coefficient			.817

Data were also subjected to split-half reliability method. This was done by splitting the items on SCIENCE into two halves: odd and even numbers. It was observed from table 5 that Guttman Coefficient was 0.82, Spearman-Brown Coefficient for equal length was 0.82 and unequal length 0.82, correlation between form of 0.70. This implies that SCIENCE section was highly reliable when subjected to split-half reliability method. However, alpha for part 1: Odd numbers was 0.81 while alpha for part 2: even numbers was 0.86. This implies that the section on SCIENCE was highly reliable.

Table 4: Summary of Cronbach Alpha on ARTS section

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.904	.905	31

Table 4 shows that all the items on ARTS yielded a reliability coefficient of 0.90. There were 31 items on ARTS. The reliability coefficient of 0.90 implies that the items on ARTS were highly reliable. The coefficient of the items based on standardized items was 0.91, meaning that the items were highly reliable. The implication is that these items can be used for any further research on career studies.The items ranged from 0.224 to 0.538. This implies that all the items on ARTS have sufficient correlation coefficients to boost the overall Cronbach Alpha of 0.90. It also implies that all the items are true representatives of ARTS. It also implies that these items are internally consistent enough to describe ARTS. Please note that for an item not to be internally consistent, such an item should be less than 0.20

Split-Half Reliability Consisting of Guttman, Spearman Brown, Alphas for part 1 and 2

This section presents the split-half reliability. Method includes splitting the items into two halves: odd and even. The analysis will then be carried out on findings the coefficient of odd and even numbers. This method is powerful as it explains the Guttman coefficient and Spearman Brown Coefficient.

Table 5: Summary of Split-half Method showing Guttman and Alphas for part 1 and 2

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.806
		N of Items	16
	Part 2	Value	.866
		N of Items	15
	Total N of Items		31
Correlation Between Forms			.728
Spearman-Brown Coefficient	Equal Length		.843
	Unequal Length		.843
Guttman Split-Half Coefficient			.840

Data were also subjected to split-half reliability method. This was done by splitting the items on ARTS into two halves: odd and even numbers. It was observed from table 11 that Guttman Coefficient was 0.84, Spearman-Brown Coefficient for equal length was 0.84 and unequal length 0.84, correlation between form of 0.73. This implies that ARTS section was highly reliable when subjected to split-half reliability method. However, alpha for part 1: Odd numbers was 0.81 while alpha for part 2: even numbers was 0.87. This implies that the section on ARTS was highly reliable.

Table 6: Summary of Cronbach Alpha of Business section

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.892	.892	31

Table 6 shows that all the items on BUSINESS yielded a reliability coefficient of 0.89. There were 31 items on BUSINESS. The reliability coefficient of 0.89 implies that the items on BUSINESS were highly reliable. The coefficient of the items based on standardized items was 0.89, meaning that the items were highly reliable.

The implication is that these items can be used for any further research on career studies.The inter-item correlation of the responses on BUSINESS. This implies the correlation of items that made up the overall coefficient. It was revealed that the items ranged from 0.222 to 0.567. This implies that all the items on BUSINESS have sufficient correlation coefficients to boost the overall Cronbach Alpha of 0.89. It also implies that all the items are true representatives of BUSINESS. It also implies that these items are internally consistent enough to describe BUSINESS. Please note that for an item not to be internally consistent, such an item should be less than 0.20

Split-Half Reliability Consisting of Guttman, Spearman Brown, Alphas for part 1 and 2

This section presents the split-half reliability. Method includes splitting the items into two halves: odd and even. The analysis will then be carried out on findings the coefficient of odd and even numbers. This method is powerful as it explains the Guttman coefficient and Spearman Brown Coefficient.

Table 7: Summary of Split-half Reliability Analysis showing Guttman and Alphas for part 1 and 2

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.759
		N of Items	16
	Part 2	Value	.867
		N of Items	15
		Total N of Items	31
Correlation Between Forms			.685
Spearman-Brown Coefficient	Equal Length		.813
	Unequal Length		.813
Guttman Split-Half Coefficient			.795

Data were also subjected to split-half reliability method. This was done by splitting the items on BUSINESS into two halves: odd and even numbers. It was observed from table 17 that Guttman Coefficient was 0.80, Spearman-Brown Coefficient for equal length was 0.81 and unequal length 0.81, correlation between form of 0.69. This implies that BUSINESS section was highly reliable when subjected to split-half reliability method. However, alpha for part 1: Odd numbers was 0.76 while alpha for part 2: even numbers was 0.87. This implies that the section on BUSINESS was highly reliable.

Table 8: Summary of Cronbach Alpha on Technology section

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.901	.900	31

Table 8 shows that all the items on TECHNOLOGY yielded a reliability coefficient of 0.90. There were 31 items on TECHNOLOGY section. The reliability coefficient of 0.90 implies that the items on TECHNOLOGY were highly reliable. The coefficient of the items based on standardized items was 0.90, meaning that the items were highly reliable. The implication is that these items can be used for any further research on career studies.

The inter-item correlation of the responses on TECHNOLOGY was also presented. This implies the correlation of items that made up the overall coefficient. It was revealed that the items ranged between 0.218 and 0.551. This implies that all the items on TECHNOLOGY have sufficient correlation coefficients to boost the overall Cronbach Alpha of 0.90. It also implies that all the items are true representatives of TECHNOLOGY. It also implies that these items are internally consistent enough to describe TECHNOLOGY. Please note that for an item not to be internally consistent, such an item should be less than 0.20

Split-Half Reliability Consisting of Guttman, Spearman Brown, Alphas for Part 1 and 2

This section presents the split-half reliability. Method includes splitting the items into two halves: odd and even. The analysis will then be carried out on findings the coefficient of odd and even numbers. This method is powerful as it explains the Guttman coefficient and Spearman Brown Coefficient.

Table 9: Summary of Split-half Reliability Method on Technology Section

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.810
		N of Items	16
	Part 2	Value	.863
		N of Items	15
		Total N of Items	31
Correlation Between Forms			.677
Spearman-Brown Coefficient	Equal Length		.807
	Unequal Length		.807
Guttman Split-Half Coefficient			.803

Data were also subjected to split-half reliability method. This was done by splitting the items on TECHNOLOGY into two halves: odd and even numbers. It was observed from table 9 that Guttman Coefficient was 0.80, Spearman-Brown Coefficient for equal length was 0.81 and unequal length 0.81, correlation between form of 0.68 This implies that TECHNOLOGY section was highly reliable when subjected to split-half reliability method. However, alpha for part 1: Odd numbers was 0.81 while alpha for part 2: even numbers was 0.86. This implies that the section on TECHNOLOGY was highly reliable.

Test Retest Analysis

The researcher tried to find test-retest method of reliability. Summary of the findings was shown in table 10 below:

Table 10: Pearson Product Moment Correlation on Test and Retest

Variable	N	Mean	Std.dev	r	Df	P
Test	1000	374.62	58.49	.803	998	<.05
Retest	1000	375.80	59.77			

Table 10 shows that the relationship between test and retest yielded r = 0.80. This implies that when the test was subjected to test retest analysis, it was highly reliable.

Convergence Validity Analysis

This section was based on convergence validity of the inventory. Summary of the findings was shown in the table below:

Table 11: Summary table of Pearson Product Moment Correlation Showing Convergence Validity

Variable	N	Mean	Std.dev	Rtt	Df	P
Career path	200	56.21	6.51	.840	998	<.05
Vocational Interest	200	64.09	7.03			

Table 11 shows that the relationship between Career Path Inventory and Vocational Interest Inventory yielded rtt = 0.84. This implies that career path inventory converged with vocational inventory. In other words, Career Path Inventory did not deviate from measure of career interest.

Discriminant Validity Analysis

This section was based on discriminant validity of the inventory. Summary of the findings was shown in the table below:

Table 12: Summary Table of Pearson Product Moment Correlation Showing Discriminant Validity

Variable	N	Mean	Std.dev	Rtt	Df	P
Career path	200	87.62	8.33	-.027	998	ns
Academic performance	200	75.80	9.43			

Table 12 shows that there was no relationship between career path inventory and academic performance inventory; rtt = -0.027. This implies that career path inventory discriminates from opposite inventory. In other words, career path inventory is not measuring other thing else than what it is intended to measure.

Table 13

INTEREST AREAS	MEAN	STANDARD DEVIATION
SCIENCE	90.54	17.29
HUMANITIES/ARTS	95.48	17.24
BUSINESS	98.42	15.62
TECHNOLOGY	96.07	16.58

Table 13 indicates that Business has the highest number of students having interest in it while Science has the lowest.

Table 14: Stanine Table for Career Path Inventory

INTEREST AREAS				
STANINE	SCIENCE	HUMANITIES	BUSINESS	TECHNOLOGY
1. Low	31-59	34-64	34-69	34-66
2. Below	60- 67	65 -73	70-77	67-74
3. Average	68- 76	74- 81	78-85	75-82
4.	77-84	82-90	86-93	83-90
5. Average	85-93	91-98	94-100	91-98
6 .	94-101	99-107	101-108	99 -106
7. Above	102-110	108-115	109-116	107-114
8 .Average	111-117	116-124	117-124	115-122
9. Outstanding	118-124	-	-	123-124

Discussion

The findings of this study, as indicated in the reliability and validity analyses, have shown that Career Path Inventory (CPI) can be used for career – related issues. The study adopted an internal methodology of validation which includes measures of internal consistencies (Cronbach Alpha), Split-half method, convergence construct validity, discriminant validity and Stanine Analysis. The researcher sampled two thousand SS I students selected through stratified random sampling across ethnic groups in Nigeria. The instrument was divided into four sections: Science, Arts/Humanities, Business and Technology. Findings revealed that the items on SCIENCE yielded a reliability coefficient of 0.90. The items on ARTS yielded a reliability coefficient of 0.90. The items on BUSINESS yielded a reliability coefficient of 0.89. The items on TECHNOLOGY yielded a reliability coefficient of 0.90. Convergent Construct Validity between Bakare's Vocational Interest Inventory and Career Path Inventory yielded rtt= 0.84 using Pearson Product Moment Correlation Coefficient. CPI did not deviate from measure of career interest. Its Discriminant Validity was found at rtt= -0.027 when compared with academic performance inventory. Based on these findings, the inventory is recommended for diagnosing career related challenges.

The present study revealed the interest of students in different fields which are indicators of their personalities. This study agreed with Holland's Personality theory (1999) and Onoyase & Onoyase's study (2005) that there is a relationship between personality and career choice.
The low mean in Science as revealed in table 13 confirms the low interest Osborne discovered in his review of literatures of study of ' Attitude Towards Science'.

The low interest in Science by students may be attributed to difficulty of some of the science subjects e.g Physics or poor teaching methodology by the science teachers, or unconducive class environment or imaginary 'phobia' for science by students. Though Campbell et el(2004) in the book on " Teaching and Learning through Multiple Intelligence" suggested ways of improving students' interest in Science; that when students use deductive and inductive logic study patterns and use technology, their interest in Mathematics and Science can increase. It is further suggested that educators should seek ways of incorporating these concepts in informal educational settings and incorporate more hands on activities that encourage students' participation; that by bringing science teaching to informal settings(e,g taking them out on field trips) , students are able to further develop their logical mathematical intelligence and other intelligences as well. Another suggestion in the book is that there should be more collaboration amongst the Science, Maths and Technology teachers and schools should create more summer classes in the field.

Table 13 of this study presented Business as having the highest percentage of students' interest. This confirms further that interest in Science is declining and majority of students prefer Business related careers as easier ones to Science- inclined ones.

The reliability and validity of this study is high and very good probably because of the face validity which was first carried out on the test items before it was administered on the students. The face validity carried out restructured the language of the test items to the level of the age of the students it is meant for.

Conclusion

The study found a high reliability coefficient in Career Path Inventory (CPI) using Cronbach Alpha, Internal consistency analysis, Split-Half reliability consisting of Guttman, Spearman Brown, Alphas for part 1 and 2 for all the sections. The inventory was subjected to various validity techniques and was proven valid through an empirical and proper methodological approach. The test yielded high validity coefficients. This inventory and the findings it has generated will help in no small measure place senior secondary school students into classes where they can adequately fit in and have career fulfillment in future. Guidance –counsellors will benefit maximally from the use of this inventory as they do not have to think too much about where a child should be placed. Administrators will equally find it useful in determining the suitability of their workers in various departments of their organizations. Finally, students and researchers can use the inventory for counseling, practicum and research works.

Recommendation

Based on these findings, following recommendations were made:

Career Path Inventory (CPI) is recommended for practicing guidance counsellors' use in senior secondary schools It is equally recommended for research purposes

Educational administrators can use the inventory for planning and policy making purposes.

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