Effect of Painting Series Package on the Performances of Junior Secondary Cultural and Creative Arts in Ogbomoso Nigeria

Michael Olubunmi Odewumi & Ivan Emeka Okonkwo *http://dx.doi.org//10.4314/ujah.v17i3.15

Abstract

The study investigated the effect of Painting Series Package on the performance of Junior Secondary School Cultural and Creative Arts in Ogbomoso, Nigeria. Gender influence on the students' performances was also examined. Sample comprised 60 students drawn purposively from two secondary schools. The researcher's designed Painting Series Package and Painting Series Performing Test (PASEPET) were used as treatment and Test instruments. Two hypotheses were tested using Analysis of covariance. Finding indicated that there is no significant differences between the performances of students taught with Painting Series Package and those taught using the conventional method. Gender was also not a factor in students' performance. It was recommended that Painting Series Package should be developed for teaching Cultural and Creative Arts topics within the context of Junior Secondary Schools in Nigeria

Key words: Cultural and Creative Arts, Painting Series Package, Gender, Nigeria.

Introduction

Art is a very wide human activity involving the use of skills. Art is imaginative, creative, and aesthetics in nature. It is a purely individual expression, which shows in all our ways of life. Art is the act of making skilful use of materials to produce things for human use and pleasure, a means of self expression of various feeling or ideas in different ways

(Odewumi, 2009). Otonye, (2003) defined arts as an entrance into a world of sensation and experience. Art is an important part of child education, aims at enriching the personal world of emotion and consideration, showing the ways of expressing, opinions, and dreams. Art introduces children to their culture, history and natural environment (Peşkersoy, 2010). Art is a universal medium of expression that provides the child with the opportunity to demonstrate the extent of their aesthetic awareness, emotional and usual development through perceptual and creative activities (Zwirn, & Graham 2010).

Cultural and Creative Arts is bore out of the mandate given to Nigerian Educational Research and Development Council (NERDC) by the Federal Government of Nigeria to develop, review and restructure school curricula to be in line with the new National Policy on Education. This in line with Government adoption of the 9-year Universal Basic Education (UBE) programme. The curriculum accommodates fundamentals the of both the National Economic Empowerment and Development Strategies (NEEDS) and the Millennium Development Goals (Rufai 2010).

Cultural and Creative Arts is therefore a synthesis of Dance, Drama, Fine and Applied arts, Music, Media arts, which are altogether product of human creativity in the context of a particular culture within an environment (N.T.I. 2000). Cultural and Creative Arts is one of the compulsory subject taught in Junior Secondary Schools in Nigeria, with the importance as developing the child knowledge and appreciation of child own cultural heritage in relation to other culture, promoting intellectual development of the child through knowledge and skill acquisition, imbibe in every child social interaction and vocational skills and ability to maintain tools and equipments.

Painting is an aspect of Fine Arts a branch of Cultural and Creative Arts, which is categorised as nonverbal. At the primitive time, until at present, painting (art) has been a powerful media for communication. The oldest known symbols created with the purpose of communication through time are the cave paintings. In null shell, Painting is an act of applying colour or colours on to a surface, with the aid of a brush or any object. It is also evenly spreading of colour to the walls, prepared canvas and coated board. Moreover, it is a technique of spreading of colour, on surfaces of drawings and sketches purposely to change the colour and elicit response (Ibrahim-Banjoko 2009). Painting makes the objects drawn to be real and meaningful, crates depth, shows solidity, beautifies and creates values (Odewumi, Obotuke, Apolola, & Ogunyinka, 2014).

Paintings has the branches of still life, nature, figure, landscape or seascape and imaginative, which are mostly done in painting style; impasto, wash, monochrome, and mixed media. These are manifest in the topics of the study. The aforementioned categories of the painting were used for making the package for effective teaching and learning. The Painting Series Package are the programme of instruction developed in sequence with different painting media and different materials, with the aim of communicating content and to elicit positive response from the learners. Painting Series Package has been developed and make more responsive to student's learning in a more flexible way.

The uniqueness of painting and its importance to teaching and learning are numerous, it incorporating reality into pictorial world. The various two or three dimensional imaginations of instructional material for effective teaching and learning materials are built in painting. The uses of pictorial psychology and concepts, addresses strangeness, beauty, familiarity, unfamiliarity, darkness, silence, solitude,

and ambiguity which painting depicted in picture and objects relevance to learning (Elufadejin, 2009).

Spring, (2007) submitted that paintings stressed the imagination of learners and the visual perception coupled with learning activities in turns reinforce learning in various ways. Painting demonstrates metaphoric capacity to activate imagination in individual, and this is alive with movement of strokes of brushes and especially with effect of colours. The painting power of metaphor enact, engage cognition and imagination has been widely conceptualized (Hornbacher, 2009). Painting in education has the aims of developing creative behaviours that they can be use in every area; bringing them in cooperation, sharing, taking responsibility, respecting others, self and improving artistic skills (Tataroğlu Moreover, paintings education accepts that every child had a different perception, information, intuition, emotion and experience, more importantly that every child is creative (Peskersoy E., Yıldırım O. (2010)

Painting was adopted during Japanese colonial period as a means of education, it is a research to influence historic background, changes the folk art and used as the record reference to historic context. Traditional paintings, ink and wash were used in education because it contained hidden and metaphorical teachings which made use of various modern symbols that directly give impressions (Min-Fu, 2013). A painting creates the object of light and tensions of shadow, in which the viewer is subconsciously able to discover qualities of the images in movement, thus retain memories. It is important to recognise that idea's origin lies in a painter, the entire sense of colour in the moving image from painting and what the colours can expresses. Paintings are exposes to diverse significances in fantasy, aura, and reality but also experienced as being enveloped in a subjective embodied experience (Weng, 2010).

Marble painting in education provided the meaningful content, with the powerful lines of paintings that showed where the marble lines had travelled and could eventually interesting learners (Katz. communicate to Specifically, Painting influence perceptions and responses to objects, since perception is a primary process of cognition, it assists in the makeup of such higher order processes as problem solving, reasoning, and thinking in relates to arts (Marschaiek, 1983). The relationship between different painting concept on academic and organizations are examined, painting exhibits either natural or abstract, were learning interactions between in disciplines and importance in art education (Yucel, 2012). In essence, painting is more than educating a child, it is a therapy and it has a magical power that creates evidence of healing benefits (creative arts-as-healing). This was true whether the painting forms used were traditional or Western, and many people confirmed the healing benefits of drawing and painting were great (Archibald 2012).

Researchers on gender and painting submitted that painting promotes positive communication between male and female children and developed the relationship between the peers thus encourages mutual cooperation in teaching and learning like others aspect of creativity (Setara, 2012). Painting promotes aesthetic awareness, it is also an avenue for gender self - expression, experience and the joy of achieving certain goal and it creates imagery and response in the power of representation through visuals. (Kirk, Gallagher, Coleman, & Anastasiow 2009).

In conclusion, the Painting Series Package is an instructional materials that put up to elicit response from the learner, it was developed in line with a pattern of systematic approach of instructional development model of instruction put forward by Dick and Carrey. The Model which addresses

instructional, focusing in the interrelationship between context, content, learning and instruction. The components such as the instructor, learners, instructional activities, delivery systems and learning and performance environments interact with each other, and work together to bring about the desired students learning (Dick Crey & Carey, 2005).

Theoretical framework for the study was based on Skinner reinforcement theory. Learning can be described as a change in behaviour. Kharbach (2013) submitted that learning is a set of concept on how people learn. It is otherwise an investigation of the strategies and underlying cognitive process that are involved in learning. The Learning theories described how learning absorb, process and retain information during learning. Anther, (2013) identified three set of learning theories which are generally used in education circle named behaviourists, humanistic and cognitive. There are many education psychologists who had made great contribution in the three set of learning.

The study was based on theories of training and learning of Burrhus Frederic Skinner reinforcement theory. Skinner, (1953) identified two categories of behaviour in man, the respondent and operant behaviour. Respondents' behaviour is involuntary (reflex) behaviour and result from special environment stimuli. Skinner further posits that in order for behaviour to occur, it is first necessary that a stimulus be applied to the organism. Only a few of human behaviour are respondent behaviours. Painting Series Package can be applied as a stimulus to the students' responses of interest, motivation and consequently achievement in Cultural and Creative Arts. In the same vein. the Painting Series Package makes immediate feedback as response to the Cultural and Creative Arts students to stimulate his/her to generate commitment to the learning using his /her present status as a basis. This skinner stimulus - response and the response- stimuli theory provide a strong frame work for Painting Series Package.

Statement of problem

The world is not static, technologically different innovations are being employed in delivery of curriculum content to students. Studies have shown that technology devices like Computer Assisted Instructional Package could bring about improvement in students' achievement, speeds up learning rate, enhances better retention, and encourages the development of better attitude. However, epilepsy and non power supply for the usage of this technology especially in rural area was a contributing problem. Likewise the poor performances in Cultural and Creative Arts year in and out of the Basic Education Certificate Examination reporting by the Examiner. Against these backdrops the research intended to fill the gap, since paintings arouses, stimulates learning and brings positive response in learners, it has been a means of generating richer visual presentation, bring vividness and accurate information about any object, also painting in different colours presentations provide learners with more information cues and more stimulation. Based on the above, the researcher generated a richer visual instructional package in painting series, and consequently to enhanced learning.

Purpose of the Study

The study developed Painting Series Package that was employed to assist students and thereafter check its effectiveness on their performances. Therefore, the study investigated the effect of Painting Series Package on the performances of Junior Secondary School Cultural and Creative Arts in Ogbomoso, specifically, the study examined:

- (I) The difference in performance of students that they are exposed to painting series and those exposed to conventional instruction.
- (2) The influence of gender on their performances when they exposed to Painting Series Package.

Research Questions

The following questions were answered in the course of study

- Will there be any difference in the performance of students exposed to painting series and those taught using conventional method?
- 2. Does the gender of students influence their performance of students exposed to Painting Series Package?

Research Hypotheses

The following research hypotheses were tested in the study.

- H0₁ There is no significant difference between the performances of junior secondary school students when they are exposed to Painting Series Package.
- HO₂ There is no significant difference between the performance of male and female students exposed to Painting Series Package.

Research Design

This study was a quasi-experimental type of the pretest, post-test, non-randornized, control group design. The design is a 2×2 factorial design.

Sample

The targeted population of this study was the Junior Secondary students in Ogbomoso town, Nigeria. The sample for the study was drawn from two purposively secondary

schools offering Cultural and Creative Arts as a subject, with stabled teacher and standard arts studio. Sixty students were sampled: thirty three girls and twenty seven boys. They were grouping into experimental and control group through simple random sampling technique.

Validity and reliability of research instrument

The Painting Series Package (PASEPA), and the test instrument that is Painting Series Performance Test (PASEPET) items were pilot tested and found to satisfy face, content and construct validity by two experts in department of Educational Technology, University of Ilorin and the department of Fine and Applied arts, Ladoke Akintola University of Technology, Ogbomoso. Item analysis of the instrument was also carried out to determine the facility and discrimination indices. The Painting Series Package was trial tested on a schools in Ogbomoso. The schools used for testing of the package falls within the population of the study but not part of the schools sampled for the study. The useful comments and contributions from the selected students about the package was later put in place for further modification in order to get the final package useful. The final items for the instrument were selected and the reliability coefficient computer computed using the split-half approach and the Richard Kuderson formula 21CKR-2. The value obtained for the reliability coefficient was 0. 74 and was considered to be adequate for this study.

Research Instruments

The instruments for this study were the Painting Series Package (PASEPA), and the test instrument that is Painting Series Performance Test (PASEPET)" The instrument was validated for the face and content validity and it was further subjected to pilot study, and reliability test (0.74)

before using them as a research instrument. A stem is followed by five (5) options lettered (A-E) out of which only "one" was correct. Students were instructed to select only one option as answer for each item. All the options were plausible answers to the item. The treatment instrument, Painting Series Package (PASEPA), was an interesting package that lasted for 7 hours (80minutes per week for 6 weeks). It contained five lessons structured into modules. The topics covered in the package are: Materials and tools used in painting, the study of colour, Techniques of Painting, Types of painting, Colour Terminologies. All were from the painting aspect of the Cultural and Creative arts Curriculum for Junior Secondary Two. The instrument was developed by the researchers, with the assistance of a Professor of Visual arts specialised in painting.

The test instrument, "Painting Series Performance Test (PASEPET)" was made up of 20 items multiple-choice objective test with five option each, selected from validated Junior National Examination Council (NECO), cultural and creative arts question papers. The Painting Series Performance Test (PASEPET) was used to measure the performances of students in the experimental and control groups for both the pre-test (covariate) and post test. For the experiment group, the researcher handles the teaching of the lesson with the Painting Series Package (PASEPET). While a Cultural and Creative Arts teacher was employed to teach the conventional group with appropriate instructional materials. The Analysis of Covariance (ANCOVA) statistic was employed to calculate the means scores of the students pre-test and post-test scores of each student.

Procedure for Data Collection

Both the experimental and control groups were exposed to Panting Series Performing Test (PASEPET) as pretest. Then, the students in the experimental group were exposed to Panting Series Package (PASEPA), while the control group students were exposed to the conventional teaching method on the same topics of instruction used for the experimental groups, they were taught using conventional classroom format with appropriate instructional materials which lasted for Six weeks. After the treatment the two groups were exposed to the PASEPET which had been rearranged as post test for the both groups

Result Hypothesis One

There is no significant difference between the performances of Junior

Secondary School students when they are exposed to Painting Series Package.

Table 1: To test this hypothesis, the ANCOVA statics was used on the post test scores of students in the experimental and the control group using pre-test scores as covariates

| Source | | | sum of Square | Df | Means |
|---------------------|----------|------|---------------|----|-------|
| square | F | Sig | | | |
| Correct | ed Model | | .334 | 2 | |
| .167 | .152 | .859 | | | |
| Intercep | t | | 85.402 | | |
| 85. 4 02 | 77.837 | .000 | | | |

| Pre test | | | .005 | I | |
|-----------------|------|----------|--------|----|--|
| .005 | .004 | .949 | | | |
| Treat | | | .099 | I | |
| .099 | .090 | .767 | | | |
| Error | | | 26.332 | 24 | |
| 1.987 | | | | | |
| Total | | 4283.000 | | 27 | |
| Corrected total | | 26.667 | | 26 | |
| - | | | | | |
| | | | | | |
| | | | | _ | |

Table I indicates that the calculated F value of 0.90 is not significant because the significant value of .767 is greater than 0.05 alpha levels. The result implies that there is no significant difference between post-test mean scores of the experimental and control group. Therefore, the null hypothesis is accepted.

Hypothesis Two

There is no significant difference between the performance of male and female students exposed to Painting Series Package.

This hypothesis was tested using the ANCOVA statistic methods to compare the means scores of student in experimental group (stratified into male and female) with the pre-test scores serving as covariates, the result is as reflected in table 2.

Table 2: Analysis of Covariance (ANCOVA) on the Posttest Scores of Male and female in the Experimental Group.

| Source | Type I | II sum of | Square | Df | Means |
|--------------------|---------------------|-----------|----------|--------|-------|
| square | | F | | | Sig |
| | | | | | |
| Corrected N | | | | 10.074 | 2 |
| 5. 4 87 | 2 . 4 90 | .104 | | | |
| Intercept | | | | 13.898 | I |
| 113.898 | 51.696 | .000 | | | |
| Pre test | | | 7.983 | 1 | |
| 7.983 | 3.623 | .069 | | | |
| Gender | | | | 10.882 | I |
| 10.882 | 4.939 | .036 | | | |
| Error | | | ! | 52.878 | 24 |
| 2.203 | | | | | |
| Total | | | 4679.000 | 27 | • |
| Corrected t | otal | | 63.8 | 52 | 26 |
| _ | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Table 2 indicates that the calculated F value of 4.939 is significant because the significant value of .036 is greater than 0.05 alpha levels. The result implies that there is no significant difference between post-test mean scores of male and female students. That is, male students' score did not differ significantly from the female students' scores when both were taught using painting - series. Therefore, the null hypothesis is accepted.

Discussion of findings

The result of the analysis of covariance on the performance of students taught using Painting Series Package

and those taught with conventional method indicated no significant difference, in that students taught using Painting Package did not perform better than those taught with conventional method. The research is in line with Winner and Hetland (2007) which stressed that painting improve the learning and standardized test scores. regarding the comparative research is inconclusive effectiveness of conventional instruction and Painting Series Package, and that Painting Series Package in art education produce higher achievement than conventional instruction alone. In addition, students learn instructional content faster with Painting Series Package than with conventional instruction alone through the images of work, the dark and bright colours: the movement of colour and tones varied from one to the other which brings forth an unlimited virtual world (Hatch & and Yanow 2008).

The Painting Series Package could be compared with interactive video Package of (Anulobi 2009), Computer Assisted Instructional Package (Yusuf and Afolabi 2010) and other technology invented instructional Package that influence teaching positively.

The result of the analysis of covariance (ANCOVA) showed no significant difference in gender differences for students exposed to Painting Series Package. The study also showed that there is no significant difference in the performance of the boys and girls in the use of Painting Series Package on teaching and learning of Cultural and Creative Arts. In other words, gender does not affect the use of Painting Series Package in the learning process. This finding agrees with that of Anulobi (2009). In his study of Fine Arts with Video Compact Disc Instructional Package (VCDIP), he submitted that gender did not have any impact because both the boys and girls performed the same. This also agrees with the findings of Yusuf and Afolabi (2010) on effect of gender

on use of Computer Assisted Instruction. It, however, alienated from the findings by Achuonye and Olele (2009) which indicated male dominance in use of technological enhance learning tools.

Conclusions

It can be deduced that the use of Painting Series Package enhanced and promotes effective instructional delivery in respect of gender in the junior secondary schools. However, if Painting Series Package can be well developed and planed it can be useful to teach difficult topics in cultural and creative arts within the Nigerian school setting.

Recommendations

From the findings of the present study, the following recommendations are made:

- I. Curriculum planners should encourage the use of Painting in teaching/ learning in our educational systems.
- 2. Seminal and in-service training should be given to teachers on the production and the use of Painting Series Package and other instructional media so that they can appropriately use the modern instructional technology.
- 3. School should be equipped with Paintings of different form and other necessary instructional Package for teaching and learning.

Michael Olubunmi Odewumi

Department of Educational Technology, University of Ilorin, Ilorin, Nigera

Ω

Ivan Emeka Okonkwo

Department of Fine and Applied Arts, Nnamdi Azikiwe University, Awka, Nigeria

References

- Achuonye, K. A., Olele, C. N. (2009). Internet Using Patterns of Nigerian Teacher-Trainees: Implications for Teacher Education in Nigeria. *J.Sci. Teach. Assoc. Nig.*, 44(1&2): 103-108.
- Anulobi, J. C. (2009). Effect of the Use of Video Compact Disc Instructional Package VCDIP) on Academic Performance of Junior Secondary School Fine Arts Students in Owerri. J. Educ. Technol. Instr. (JETI), I(I): 31-36.
- Archibald, L. (2012). Dancing, Singing, Painting, and Speaking the Healing Story: Healing through Creative Arts.

 Aboriginal Healing Foundation, Ottawa, Ontario
- Antherton, J. S. (2013). Learning and teaching Theories of learning;http//www.learningand teaching.info/learning/theories.htm.
- Dick W. & Carey, J.O (2005). The systematic design instruction (6th ed.) New York NJ: Harper Collins Publishers.

- Elin, S. (2012). Drawing and Painting as a Tool for Communication. (Unpublished M. Ph. Thesis) Faculty of Educational Sciences. University of Oslo.
- Elufadejin M. O. (2009). Arts and Exhibitions, (Unpublished Paper) at the fist combined Art Exhibition in Collaboration of Visual and Creative Arts teachers in Ogbomoso, and Society for Nigeria Artist, (SNA), LAUTECH, Ogbomoso. July 2009.
- Ibrahim Banjoko (2009). Cultural and Creative Arts, Made Easy Text Book for Junior Secondary Schools (UBE7-9). Movic Publishing Company Limited Lagos.
- Hatch, M.J., and Yanow, D. (2008). Methodology by metaphor: Ways of seeing in painting and research, *Organization Studies*, 29 (1), 23-44.
- Hornbacher, J. (2009) Research Review, Teaching Artist Journal, 7(3), 182-191
- Katz, L. G. (2003). State of the Art of Early Childhood Education. (Unpublished lecture) at University of Louisian, Lafayette, Louisian.
- Kirk, S., Gallagher, J. J., Coleman, R. M., Anastasiow, N. (2009). Educating Exceptional Children (12thEd). Belmount: Wadsworth
- Kharbach, M. (2013). Learning theories every teacher should know about. www.eductorstechnology.com/2013/03...

- Marschalek, D. G. (1983). The influence of viewing time upon the recognition of colour and subject matter placement in paintings for elementary and high school students. Studies in Art Education, 25, (1), 58-65.
- Ms, Winner and Ms. Hetland (2007). Art Education: Book Tackles old Debates. Role of Art in Schools. New York Times Company. New York.
- National Teachers Institute, N.T.I. (2000) . NCE/DLS Course Book on Cultural and Creative Arts. Cycle 1, 2, 3 & 4. Pes. 1, 2, 3 & 4.
- Otonye, A. (2003). Leadership in Community. Arts and Exhibitions (Unpublished Paper) at the Art Exhibition Oganised by Ogbomoso Community in collaboration with the fine and applied arts department LAUTEC Ogbomoso. 22-25 October, 2003.
- Odewumi, M. O. (2009). Arts Exhibitions (Unpublished Paper)
 Combined Arts Exhibitions in Collaboration of
 Visual and Creative Arts Teachers in Ogbomoso and
 Society for Nigeria Artist, (SNA). LINCO,
 Ogbomoso. July 2009.
- Peşkersoy, E., Yıldırım, O. (2010). Görsel Sanatlar Dersi (1-8. Sınıflar) Öğretmen Kılavuz Kitabı, Kelebek Matbaacılık, İstanbul. Recent experimental moving images. *Procedia Computer Science* 3 (2011) 706–713.
- Rufai, R. A. (2010). Honourable Minister of Education, Abuja Nigeria. In Junior Secondary Education Curriculum, Cultural and Creative Arts JSS I-3. Nigerian

- Educational Research and Development Council (NERDC). A Millennium Development Goal (MDGs) Support Project.
- Spring, Dee (ed.) (2007). Art in Treatment: Transatlantic Dialogue. Springfield, IL: Charles C. Thomas Publisher, Ltd.
- Skinner, B. F. 'Science and Human Behaviour' Macmillan, New York,
- Tataroğlu, E. (2013). A Special Experience In Art Education: Autism and Painting. European Journal of Business and Social Science. 1, (11) 63-68.
- Usman, A., Odewumi, O., Obotuke, E., Apolola, O and Ogunyinka, C. O. (2014). *Cultural and Creative Arts Book One for Junior Secondary Schools*. Spectrum Books Limited, Ring road Ibadan.
- Weng, V. M. (2010). Re-imagining painting in digital fiction time, colour, and space in
- Ya-Hui Tsai, Min-Fu Hsu (2013). The Influence of Painting Education on Taiwan Folk Art during Japanese Colonial Period. Taking Landscape Painting of Coloured Drawing for Building as Example, The Asian Conference on Arts & Humanities 2013. Official Conference Proceedings 2013
- Yucel, B. (2012). The interaction of painting and music. Gazi University, Vocational Education Faculty, Department of Applied Arts Training, Division of

Painting Training, Ankara, Vocational Procedia - Social and Behavioral Sciences 51 (2012) 198 - 203 0350. Official Conference Proceedings of The Asian Conference on Arts & Humanities 2013

- Yusuf, M. O. & Afolabi, A. O. (2010). Effects of Computer Assisted Instruction (CAI) on Secondary School Students' Performance in Biology. J. Educ. Technolongy, 9(1), 62-69.
- Zwirn, S. & Graham, M. A. (2010). How being a Teaching Artist can Influence K-12 Education, Studies in Art Education, 51(3), 219-232.

ODEWUMI Michael Olubunmi is a graduate student of department of Educational Technology, Faculty of Education. University of Ilorin. He can be reached through this e-mail address: agbegilerebunmi@yahoo.com.;

Telephone: +2347034355363.

APPENDIX I

TABLE OF SPECIFICATION

| Topic | Kn | owled | ge Com | prehe | ension Anal | ysis |
|----------------|-----------|--------|--------|-------|-------------|------|
| Application S | ynthesis | Evalua | tion | | | |
| Painting tools | 5. | I | | - | | - |
| I | 1 | I | | | | |
| Colour. | | | I | | 1 | - |
| - 1 | | 1 | | | | |
| Techniques of | f Paintin | g. I | | I | | - |
| I | - | | | | | |
| Types of pain | ting. | | | - | | 1 |
| 1 | 1 | - | | | | |
| Colour Term | inologies | s. I | | - | | - |
| | 1 | 1 | | | | |
| | | | 5 | | 2 | - 1 |
| 4 | 4 | 4 | | | | |
| | | | | | | |
| | | | | | | |

APPENDIX II

RAW SCORES

| ===BOYS === | | | | ==== | GIRLS | ==== | |
|-------------|----------|-------|-------|-------|-------|-------|----|
| === A | LL STD . | === | | | | | |
| Pr.Te | I | PoTe | | Pr.Te | | PoTe | Pr |
| Te | I | PoTe | | | | | |
| 15.00 | | 19.00 | | 11.00 | | 18.00 | |
| | 15.00 | | 19.00 | | | | |

| 15.00 | 15.00 | 10.00 | 10.00 | 12.00 | 13.00 |
|-------|-------|-------|-------|-------|-------|
| 14.00 | 15.00 | 18.00 | 10.00 | 13.00 | 18.00 |
| 16.00 | 14.00 | 17.00 | 18.00 | 12.00 | 15.00 |
| 15.00 | 16.00 | 20.00 | 17.00 | 12.00 | 20.00 |
| 13.00 | 15.00 | 12.00 | 20.00 | 12.00 | 13.00 |
| 12.00 | 13.00 | 18.00 | 12.00 | 14.00 | 18.00 |
| 14.00 | 12.00 | 15.00 | 18.00 | 11.00 | 13.00 |
| 13.00 | 14.00 | 17.00 | 15.00 | 11.00 | 17.00 |
| 14.00 | 13.00 | 16.00 | 17.00 | | 16.00 |
| | 14.00 | | 16.00 | 13.00 | |
| 15.00 | 15.00 | 15.00 | 15.00 | 14.00 | 15.00 |
| 12.00 | 12.00 | 18.00 | 18.00 | 14.00 | 18.00 |
| 12.00 | 12.00 | 16.00 | 16.00 | 13.00 | 16.00 |
| 15.00 | 15.00 | 15.00 | 15.00 | 13.00 | 14.00 |
| 12.00 | 12.00 | 19.00 | 19.00 | 13.00 | 19.00 |
| 13.00 | 13.00 | 16.00 | 16.00 | 13.00 | 16.00 |
| 13.00 | 13.00 | 20.00 | 20.00 | 11.00 | 20.00 |
| 13.00 | 13.00 | 16.00 | 16.00 | 11.00 | 16.00 |
| | 13.00 | | 10.00 | | |

| 13.00 | | 14.00 | | 13.00 | 13.00 | | | | | | |
|-------|----------------------------------|--------------------------------------|---|---|----------------------------------|-------|-------|-------|----------------------------------|-------|-------|
| 13.00 | 13.00 | 18.00 | 14.00 18.00 15.00 17.00 18.00 17.00 20.00 | 13.00 | 18.00 | | | | | | |
| 14.00 | 13.00 | 15.00 | | 15.00 17.00 18.00 17.00 20.00 | 14.00 | 14.00 | | | | | |
| 13.00 | 13.00 | 17.00 | | | 17.00 | | 17.00 | | | | |
| 12.00 | 12.00 | 18.00 | | | 13.00 | 18.00 | | | | | |
| 11.00 | 11.00 | 20.00 | | | 20.00 | 20.00 | | 20.00 | 17.00 12.00 20.00 12.00 | | 20.00 |
| 10.00 | 11.00 | 13.00 | | | | | | | | 16.00 | |
| 10.00 | 10.00 | 14.00 0.00 14.00 11.00 3.00 | 14.00 | 14.00 | | | | | | | |
| | 18.00 | | 15.00 | 11.00 | | | | | | | |
| | 13.00 | 11.00 | | | 14.00 | 12.00 | | | | | |
| | 18.00 | 12.00 | | | 13.00 | 12.00 | | | | | |
| | 15.00 10.00 20.00 11.00 | | 19.00 | 12.00 | | | | | | | |
| | | | 18.00 | 12.00 | | | | | | | |
| | | | | 14.00 11.00 11.00 13.00 | 18.00 13.00 17.00 16.00 | | | | | | |
| | | | | 216 | | | | | | | |

| 14.00 | 15.00 |
|-------|-------|
| 14.00 | 18.00 |
| 13.00 | 16.00 |
| 13.00 | 14.00 |
| 13.00 | 19.00 |
| 13.00 | 16.00 |
| 11.00 | 20.00 |
| 11.00 | 16.00 |
| 13.00 | 13.00 |
| 13.00 | 18.00 |
| | |
| 14.00 | 14.00 |
| 13.00 | 17.00 |
| 13.00 | 18.00 |
| 12.00 | 17.00 |
| 12.00 | 20.00 |
| 12.00 | 16.00 |
| 14.00 | 14.00 |
| 11.00 | 15.00 |
| 11.00 | 14.00 |
| 12.00 | 13.00 |
| 12.00 | 13.00 |
| 10.00 | 19.00 |
| | |
| 11.00 | 18.00 |