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# Managing innovative education at junior secondary school level: A sure poverty tackling measure for the attainment of sustainable development goals in Rivers State

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**Abstract**
This study investigated, the Management of Innovative Education at Junior Secondary School Level: A Sure Poverty Tackling Measure for the attainment of Sustainable Development Goals (SDG) in Rivers State. Descriptive survey design was used for the study. A 20-Item opinion survey instrument titled, "Managing Innovative Education to tackling Poverty for the attainment of Sustainable Development Goals" was developed and used. The instrument was validated by three experts from the department of educational management. Test-retest was conducted to obtain the needed data. From the data, relative coefficient index of 76% (reliability) was calculated by the use of Pearson relative correlation coefficient statistical tool. The instrument was then administered on a population of 60 teachers. The results were analyzed using averages and percentages to answer the research questions while the hypotheses were tested by the use of t-test. The analyses of the results revealed that innovative education is highly needed at the junior secondary (JSS 1- 3).Students at this point are of average age 12 and above and are in their transitional period from late childhood into teenagers. They are also experiencing promotion from middle to upper basic education. At age 12, students are becoming conscious to realities. It was discovered that students' formal involvements in skills development education would create awareness for self-reliance economy. Based on these findings, it was recommended that economic yielding subject (Agric & Creative Arts) should be compulsory in the schools and center for skill acquisition programmes be opened in every local Government Headquarters for students. Industrial attachment to tackling poverty should be made available.

**Keywords:** innovative education, tackling poverty, sustainable development goals, need curriculum, innovation configuration (IC)

## Introduction

Education is a vehicle that conveys innovative ideas. It is an instrument that provides positive constructs that manifest changes in real life situation as one keeps to its goals' bits and objectives of the educational content (Curriculum). Innovation in educational practice has its mandate from the events that are taking place in the society. It is the solutions to societal needs consciously reviewed to service: Educational, Economic, Social, Political, set goals with a view to improving the people's ways of life. The functions of Primary, Secondary and Tertiary Institutions in any society as the center for training, destruction of illiteracy and ignorance for cognitive and physical developments, are acts to sustain attained development levels. Therefore, administrating Junior Secondary education practices is a sure way to tackling poverty for the attainment of Sustainable Developmental Goals in Rivers State.

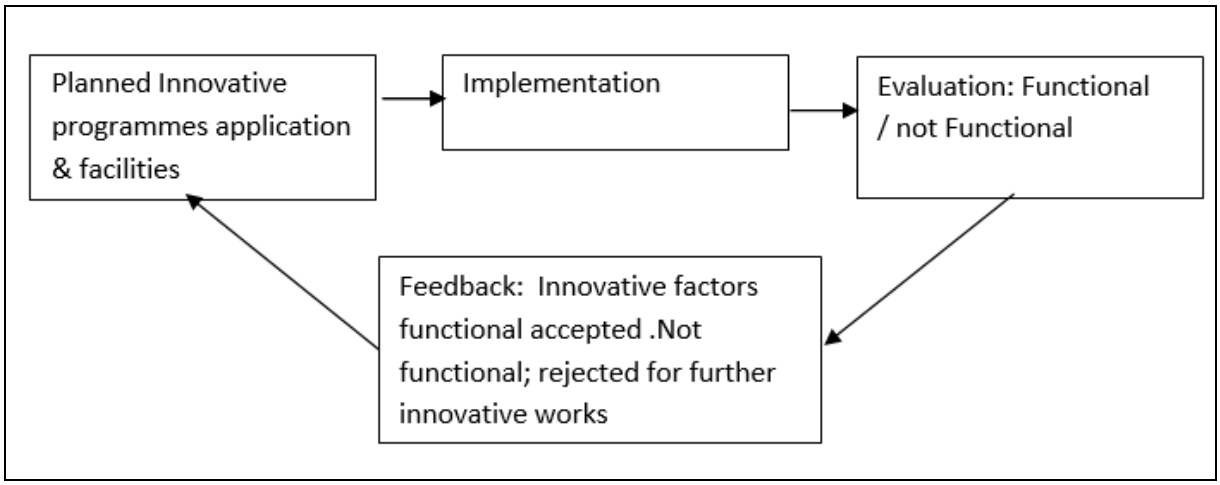
Education as a tool uses teaches' based instructional power to bring about the development of knowledge and skills which benefits; are not restricted to an individual who engages it, but has it spreads to the generality of the people. A community; in which there are academic, medical doctors, engineers, magistrates, barristers etc; people do accord them with some measures of respects. Generally, in conversations on styles of life, people from such community are always imitated and accepted as models to be followed because of the influence of the caliber of human beings that are found among them due to the well of knowledge and experiences they are generating to influence the society educationally, economically, politically and otherwise. The implication is that innovative education in our today's society needs be viewed and directed towards tacking poverty from the grass root. This can be possible by the use of the existing educational delivery approaches that can support the development of improved self-reliance economic practices in the formal schooling stand point. This can be done by laying emphases on practical economic yielding subjects such as Agriculture, Creative Arts and Home Economy from JSS1-3. This is because JSS1-3 are transitional positions JSS1-3 in the school system. JSS1-3 unit is a transit from Middle Basic into gaining advance knowledge and preparations to transit into SSS 1-3, for subject specialization. Involving JSS 1-3 in economic yielding (subjects) activities of crafts and agriculture would create an earlier awareness for the development of legal self-employed practices in students at these transitional academic level. Students in JSS1-3 are of average age range 12-15years. This age range is characterized by excessive consumption of food for energies, secretion of hormones for growths and physical

developments. These energies not directed and used meaningfully, sometimes are converted into wrongful activities and vices. Meaningful usurpations of the energies in them would destroy "age-12- into teenagers" idleness some parents create in their children, in compromise that they are still small and should not be over worked the way they were treated when they were small. This mentality is wrong. What the students need at this age are installations of creativeness for the society gain the caliber of youths that occupied their life with meaningful activities that avert/work against the tendencies of going into violence and the energy in them, converted into meaningful ventures of self- actualized economic practices. It is this type of development that the researcher called "Operative innovation." Consequently, a consideration for innovative education should be the one that would address the present and future challenges, to reducing poverty.

An innovation is operational when its installation solves the existing problems without working against future developments. This, therefore requires a review of "what and how" of the education already in practice for the establishment of the practice that supports academic excellence as well as self-reliance economy. This can only be achieved if the innovation is configured and the methodologies well defined to combat or undo the prevailing challenges that are working against sustainable development to curbing societal ills. It aim should be to identify issues that are working against the economic developments of the people. The purpose for the innovation should be to give attention to the treatment of existing educational problems and at the same time, efforts targeted at ensuring the achievement of pre-determined outcome and attendance given to critical issues without compromise.

**Concept Clarification**

Innovation in concept is the practical engagement of new ideas in a system where things are not meeting the needed standard for improvement in an organization for the system to start receiving the needed attention. For instance, in 1979, concerned Nigerians for the first time, met from all trades of life to contribute ideas that gave rise to the articulation of the 1979 National Policy on Education. This new development added to the existed 3Rs curriculum content approach to the emergence of the present broad base curriculum education delivery that is in operation today**.** The three (3Rs) was an approach that laid emphases on writing, reading and numeracy, including History and Geography. The newly introduced broad base curriculum emphasized literacy, numeracy, sciences, craft and the involvement of vocational subjects in the primary and junior secondary education systems. This is an example of some changes/ innovations that have taken place in Nigerians' educational system. They are innovations because they were not there in the system before. The processes involved in effecting the concept of innovation in the school system are as shown in the frame work shown below.




**Source**: Nath. M. A in (Ogar, G. Agabi & Ngozi, C.Okorie. Ed, 2006). The Teaching Task General Model; Modified.

**Fig 1**

In any organization, for an innovation to take place, has to be planned and provided with the necessary innovative factors (human, knowledge, material resources, time and the needed technology – training) as inputs to smoothening for implementation to make it functional. The programme after then should be evaluated to get the feedback. At feedback, it becomes rejected and recycled if not functional but accepted and continues in application if found functional (American Institute for Research (AIR). (2010).

Planned innovative programmes are needful in Rivers State (Nigeria) for the people to be able to adjust to changes within an environment for survival. As was earlier mentioned, innovation involves the introduction of new ideas, methods, concepts or complete change in a system/organization for the purpose of improvements and developments. Innovations are always carried out with the addition of new ideas to the existing one or to do away with the ones that existed but are neither functional nor supportive to sustainable development. In almost all the world conversations today are issues on climate change, insurgency, poverty alleviation and cries for the establishment of sustainable economic system. These are issues calling for innovations in the educational system

as a factor that effects changes. In Rivers State (Nigerians), the case would be to identify the factors that are supportive to the establishment of innovative education that would help to tackling poverty: thereby bringing in sustainable development into the economy, starting from the grass root (JSS1-3) for which this work stands.

**The Concept of Sustainable Development Goals**

The term sustains; means "to provide enough of what somebody needs to survive or exist. A sustainable situation involves the use of natural products and energy in a way that does not harm the environment. Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Nevin, 2016). Developmental goals are sometime short or long term planned activities/programmes, when executed would improve the people's way of life positively. The UN, new sustainable agenda focuses on climatic change which also specifically addresses topics such as economics, agriculture, education and gender equity; found in draft post-2015; agenda- UN proposed 17 developmental goals.

This draft post-2015; agenda proposed 17 developmental goals; included:

1. Ending of poverty in all its forms everywhere.
2. Ending hunger, achievement of food security, improved nutrition, and promotion of sustainable agriculture.
3. Ensured healthy life and the promotion of the wellbeing of all at all age.
4. Ensured inclusive and equitable quality education to promote lifelong learning opportunities for all.
5. Achievement of gender equality and the empowerment of all women and girls.
6. Ensured availability and sustainable management of water sanitation for all.
7. Ensured access to affordable, reliable, sustainable and modern energy for all.
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all.
9. Build resilient infrastructure, promotion of inclusive and sustainable industrialization, and fostered innovations.
10. Reduction of inequality within and among countries.
11. Make cities and human settlements inclusive, safe, resilient and sustainable.
12. Ensured sustainable consumption and production pattern.
13. Take urgent action to combat climate change and its impacts, taking note of agreement made by the United Nations Framework Convention (UNFC-cc) forum on climate change.
14. Conservations and sustainability use of the ocean and marine resources for sustainable development.
15. Protection, restoration and the promotion of sustainable use of terrestrial ecosystems, management of forests, to combat desertification and halt of reversed land degradation and halt of biodiversity losses.
16. The promotion of peaceful and inclusive societies; for sustainable development, provided access to justice for all and built effective, accountable inclusive institutions at all level.
17. Strengthened means of implementing and revitalizing global partnership for sustainable development (The Guardian, May 19, 2015: 13).

The items listed above are developmental goals which are to be implemented in the 21st century. The explanations for the understanding of the items, rest with the activities that must be carried out in the educational system to get the expected manifestations. In this respect, Junior Secondary School (JSS1-3) Education Delivery); is here selected as an agent for the development of the needed innovation models; more importantly, the present educational practice is done on sub-units bases of Lower Basic, Middle Basic and Upper Basic. The system suggests and supports the pattern into which the process of innovation can be implemented systematically as enshrined in innovation configuration as shall be discovered in the theoretical frame work shown in figure 2 below. The frame work explains the systematic pattern to be followed to effect an innovation scientifically for sustainable developments.

JSS1-3 is the upper level (the terminal point) of Basic Education delivery. It is the unit that prepares students who are moved into subject specialization areas of: Arts, Science and technology, Mathematics and Language as they enter into SS1- 3 level. Children in JSS1-3 are mostly (12-15year) age-range. This age-range is critical in the development of a child and should be properly planned and managed for them to be involved in practical academic tasks than mere theoretical approaches to teaching learning activities. The practical teaching-learning needed, involves the teaching and learning of ACAHEEMS-CP Academic. ACAHEEMS-CP Academic involves: the teaching of economic enhancing subjects such as: Agriculture, Creative – Art, Home Economics, English, Mathematics, Science (ACAHEEMS) & Computer Programming studies. The practice of "ACAHEEMS-CP Academy would servessss as a stepping stone into the establishment of sustainable development and self-reliance economy.

In practice "ACAHEEMS-CP" is an acronym where A=Agriculture, C=Creative-A=art, H=Home, E=economy, E=English, M=mathematics, S=science. The attachment of C=Computer and P=Programming". CSSomputer education is new in Nigeria educational system and its application has grown beyond appreciation. Therefore, "ACAHEEMS-CP Academy" should be emphasized as an innovation and made compulsory in the schools. This is because it is activity oriented and serves as a formal introduction to committed practical economic oriented education. This understanding been created in students, would give the vision for self-reliance economy from the grass root would be quickened into creative economic activities. Judging on the needs to implement

sustainable development goals listed above "ACAHEEMS-CP" Academy model would instandly provides for the implementation of sustainable development goals numbered 1, 2, 8 and 17 stated above and is very relevant for the education of children at JSS 1-3 level viewing from observed economic practices internet application is going today.

This has becomes necessary because children at this level of the educational system are endowed with much energy in compliment for the excess hormones they secrete at their age for the smooth functioning of their body system. For sustenance and effectiveness, observation on one's tables at meal would inform an individual of the truth that children in the average age range of (12-15) years consume more food than the adults. This calls for one to ask why? The truth is that human beings at the above age range secrete excess hormones for growths and therefore needs nourishments for the development of the entire body system. In the acronym above, English is needed because it is the medium of communication, mathematics for measurement, estimation and critical thinking; while science provides room for test, experiment and observations to protect, restore and promote sustainable use of terrestrial ecosystems for sustainable reversibility of land degradation and the halt of biodiversity losses of natural resources. The above can be possible by working out the apply functions of the acronym (innovation) the researcher called "ACAHEEMS-CP" Academy. Computer Programming Academic is here attached because computer studies are recent in this part of the world. Computer itself is an instrument for creativities. More so, the computer knowledge needed today has grown beyond appreciation; the world is into creativities to be economically sustained.

On the basis of the inclusion of Creative–Arts in "ACAHEEMS-C P Academy model; permit me to comfier the reality of scientific and economic empowerment index of Creative-Art manifestation in a Nigerian woman. Nike Okundaye's success story, in correlation with the age she started to interact with the practical knowledge of Creative Arts. At 6years of age, Nike Okundaye never had formal education but learnt the skills in crafts such as cloths weaving and basket-making from her parents and grandparents who were farmers. She observed her great grandmother in the art of Adire textile processing and practically participated in helping them out. Nike is today an expert in Adire making dyeing, weaving, painting, and embroidery. Her designs are exhibited in countries like, USA, Belgium, Germany, Japan and Italy among others. Today she is a lecturer in Harvard university teaching masters' and doctorate students (The Guardian, 2015 ). The implication is that from age 6-15 education delivery should be more practical and functional without compromise. At age 12-15 deliberate economic and education for sustainable financial development of students should be initiated to catch them young. Provision for self-reliance economy curriculum delivery is an existing gap today needing emphases from the grass root to advance better understanding of same at the tertiary level of education system in Nigeria. The present economic and unemployment situation is suggesting that curricularists' jobs are needed to provide **"need curriculum"** at all the levels of education in Nigeria) to establish sustainable economic development. Macson, (2016), in his contribution on innovation and planning maintained that what constitutes gap in a system hinders and should be the knowledge storage to be made up for currency sake.

Curriculum is the people's articulated demands which keep improving with time depending on the need of the people (citizens and governments'). It is a document articulated with a view to providing answers to present, future and lifelong quests for self-reliance-economic, political growths and developmental contents. It contents are provided for dissemination by teachers in to producing the elites that would benefits the society in their execution existing job opportunities. Elites are the educated in a society. The bringing together of deferent subject areas to form a whole in other to answer economic, political, social, security or scientific problems of a people is what the researcher called "Need Curriculum (NC). Nigeria needs to develop "need curriculum" for her to solve the existing problems of unemployment and insurgency. Need Curriculum; provides students with meaningful activities of economic, political or security interest, must destroy idleness. Planned and implemented NC would avert the wise saying that states, "An idle man is the workshop of the devil". Youths' idleness in a Nation is dangerous to peace and sanity of characters in a society.

**Theoretical Review**

The fact that instruction delivery in educational environments has its traditional "top-down" (from teacher- to students) transmition approach to effecting character change, prompted Hall in 1979, to develop the Concerns-Based Adoption Model (CBAM) - theory. CBAM, approach to effecting innovation and adoption, concerns itself with the perspective of those impacting the innovation and are also charged with the responsibility to implementing the needed change. Teachers are those charged with the responsibility to transform character; therefore are the vessels that conveyed information to clients, in the formal system. Critical in this direction is the fact that teachers are agents of innovation, therefore, they should be given concerns before any system can effectively adopts innovative practices. The idea here is that by addressing the concerns of teachers during the adoption processes of an innovation, the challenges that may arise during the change processes must have been lessened. (Hall, 1979); CABM (theory) authenticates six assumptions; which are: (i) Change (Innovation). This is a process and not an event. (ii) Innovation is accomplished by individuals. (Practical participation by all to experience the change) (iii)The use of Innovation is highly personal experience. (iv) Innovation involves developmental growths (Results oriented) (v) Innovation is best understood in operational terms (vi) The focus of facilitation must be on individual innovation and context. (Straub, 2009)

This theory is relevant to this study because it gives guides on the stages planners should consider when planning for the implementation of innovation to attain sustainable development. These stages include: (i) Stage of

concerns (SoC) for implementers (ii) level of use (LoU) of the innovation (iii) the use of innovation configuration (IC). The Soc refers to individual character towards teachers's concerns (implementers) and students' concerns during the adoption (delivery) process which is the main premises on which the CBAM model theory operates. The truth is that teachers must be enthusiastic to see the practical manifestation of the innovation in their students even while they are still in school. Planners should provide managerial concerns to identify possible threats that may constitute challenges to smooth operations of the innovation in the system. This truth should be conscientiously identified and attended to. Teaches should be able to inform users of the best practice in using the innovation (Straub, 2009). Innovation configuration (IC) provides the processes to be engaged in a planned programme of activities required for its implementation for the manifestation of the needed innovation. [Americans' Institute for Research (AIR)], (2010). IC will always be successfully implemented when articulated and presented in a "Scientific Programmed Innovation Configuration Map (SPICM)", in components as are shown in figure 2 below.

**Table 1:** Science Programme Innovation Configuration Map (SPICM)

| **Component 1: The teacher groups students for learning** | | | |
|---|---|---|---|
| a. Assign students to group that vary overtime based on Instructional objectives and Students' ability | b. Assign students in small group for for lab assignment and other group work | c. Assign students to group during lab activity only | d. Provide whole group instruction exclusively. |
| Component 2: The teacher emphasizes science process and programme content | | | |
| a. Emphasizes science of process and programme content equally | b. Emphasizes for science programme content exclusively | c. Emphasizes for science content exclusively of sources | d. Emphasizes science recall and memorization of facts from variety | e. Emphasizes recall science facts from previous science textbooks |

Figure 2: American Institute for Research (2010) adopted and modified. Figure 2 is an example of innovation configuration programme (ICP). It shows the individual components needing to be addressed. These are separated, then broken down into (a) ideal state of adoption (a) (b) (c)(d) and (e) components. This measure, systematically, describes and reveals the last ideal stages for adoption, based on the programme's content, instructional objectives and students' ability to adopt (learn) . In this context, teachers are able to see the IC Map development process to be valuable because it provides for more professional learning for research-based practices and on their own practices (Hall, G. E & Hord S. M., (2015)

**Statement of the problem**

Education provides the pathway to helping individuals escape the claws of poverty in a society. It supports people's chances to living a healthy life for socio-political and sustainable economic growths. However, a week visit to the Secondary Schools in the host communities of University of Port Harcourt and a study into their records of works uncovered subject content delivery void of practical "Economic Empowering Subjects content such as: Agriculture, Creative-Arts and Home Economy.

These are taught in JSS1-3 theoretically than practical. Creative-Arts which introduce self-reliance economy initiatives in school children discovered monetized. This denied the students the needed knowledge for economic oriented production and creativities; thereby creating innovative gap in JSS1-3 education content delivery. The bridging up of this gap would support the state's attainment of sustainable development for reliance economy in the shortest possible time; due to the peculiarity that characterized the students in this unit as energy carriers and the transitional position they occupy in the education system worldwide. It is the peculiarity of the position students in JSS 1-3, occupy in the education system worldwide and the compromised gap created for them due to parents' care-free attitudes that they are still small and should not be engaged in physical tasks that informed this work.

**Aim and Objectives of the study**

The study aimed management of Innovative Education at Junior Secondary School Level: to attain Sustainable Development goals in Rivers State with specific objectives to:

1. Identify the factors that support JSS 1-3 unit: assured innovative poverty tackling unit; for the attainment of sustainable economic development goal in Rivers State.
2. Identify Poverty Tackling Measures that can help the attainment of Sustainable Development (Economic) Goals, in Rivers State
3. Identify strategies, if put together would provide a model for the attainment of sustainable economic development goals in Rivers State

**Research Questions 1:** What identified Junior Secondary Education Delivery (JSED) an assured innovative poverty tackling forum for the attainment of sustainable economic development goals?

**Research Questions 2:** What challenges would possibly work against innovation for the attainment of Sustainable economic development goals in Junior Secondary Education delivery?

**Research Questions 3:** What are the strategies, if put in place would elicit practices for the attainment of sustainable economic development goals?

**Hypothesis 1:** There is no identified significant opinion on Junior Secondary Education Delivery (JSED) being an assured innovative poverty tackling medium for the attainment of sustainable economic development goals

**Hypothesis 2:** There is no significant difference between males' and females' staff responses on challenges that would possibly work against the attainment of Sustainable economic development goal using Junior Secondary Education delivery as an innovation medium.

**Hypothesis 3:** There is no significant difference between the males' and females' staff responses on the strategies, if put in place would elicit practices for the attainment of sustainable economic development goal using Junior Secondary Education delivery as an innovation medium.

**Methodology**

Descriptive survey design was used for the study. A population of 110 secondary school teaching-staffs were purposefully sampled and used. A-20 item opinion survey instrument titled, "Managing Innovative Education to tackling Poverty for Sustainable Development Goals" was developed and used. Three specialists validated the instrument and test retest was conducted with which a correlated co-efficient index of 78.5% was obtained from the generated data using Pearson relative correlation co-efficient statistical tool. Three research questions and two hypotheses were drawn from the research topic to guide the study. Mean, percentages and standard deviation were used to answer the research questions and the hypotheses were tested using t-Test and ANOVA statistical tools

**Findings**

**Data Analysis**

Responses to the questions were presented on tables and analyzed by the use of descriptive statistics technique of means, standard deviation and percentages to obtain

**Table 2:** Distribution of Respondents by Sex

| Sex Description | Frequency | Percentage | Cumulative % |
|---|---|---|---|
| Male | 60 | 54.45% | 54.45% |
| Female | 50 | 45.55% | 45.55% |
| Total | 110 | 100.00 | 100.00 |

**Results:** Table 1 shows that 120 questionnaires were distributed, one hundred and ten (110), which is equivalent to 92% of the population, were answered and returned. 8.33% were not answered and returned.

**Table 3:** Distribution of Respondents by age

| Age Categories | Frequency | Percentage | Cumulative |
|---|---|---|---|
| Less than or 30years | 3 | 2.73 % | 2. 73% |
| 31 – 40years | 40 | 36. 36 % | 36.36% |
| 40 ad above | 67 | 60.91 % | 60. 91% |
| Total | 110 | 100.00 % | 100.00 % |

**Results:** Table 2 shows that 60.91% of the respondents were of the age bracket 41 and above, 36.36% were of age bracket 31-40years. Those of the age group less or 30years were only 2.75%.

**Research Questions 1**

What identified Junior Secondary Education Delivery (JSED) an assured innovative poverty tackling medium for the attainment of sustainable economic development goals?

**Table 4:** JSS1-3 Assured Identities as Medium through which to Tackle Poverty for the Attainment of Sustainable Economic Development Goal, Challenges and Strategies

| S/N | Items | Sum | Mean Weight | Std. Deviation |
|---|---|---|---|---|
| 1 | 12-16years formal exposure to economic practice is Capturing | 319 | 2.9000, | .72883 |
| 2 | JSS1-3 is a neutral age group naturally capacitated with energies needing directions for growths (financial, academy, social etc). | 327 | 2.9727 | .72262 |

| | | | | |
|---|---|---|---|---|
| 3 | JSS1-3 relative position it occupies as the terminal (Upper Basic)in the school system as the terminal of Basic Education suggests needs to develop in them self-reliance economic venture or continuation into senior secondary | 327 | 2.9727 | .84004 |
| 4 | Its position as the unit that prepares students to choose their subject areas of specialization as they enter into Senior Secondary | 292 | 2.6545 | 1.0171 |
| 5 | Existing provision for general scientific practices that characterized JSS1-3 educational studies. | 292 | 2.6545 | .9994 |
| Aggregate Mean Weight | | 2.831 | | |

Table 3: Takes care of questions 1, 2, 3. For question 1, it shows JSS 1-3 deliveries assured identities as a medium through which Poverty can be tackled for the Attainment calculate of Sustainable Development Goal (Economic), to be items 1-5. The weighted means calculated to be 2.9000, 2. 9727, 2.9727, 2.6545 and 2.6545. The aggregate mean weight calculated 2.831.

**Research Question 2**

What challenges would possibly work against innovation for the attainment of Sustainable economic development goals in Junior Secondary Education delivery?

**Table 5:** Challenges identified with innovation in Junior Secondary Education delivery for the attainment of Sustainable economic development goals

| | | | | |
|---|---|---|---|---|
| 6 | Stages of Concerns (SoC) for implementers | 322 | 2.9275 | 1.01103 |
| 7 | Beneficiaries' Level of concern (LOC) | 333 | 3.0273 | .65608 |
| 8 | Not to guide Implementation | 322 | 2.8455 | .97406 |
| 9 | No Innovation Configuration (IC) Map to guide implementation | 313 | 3.1000 | .85870 |
| 10 | Not understanding the utility level of the innovation | 341 | 3.2818 | .71613 |
| 11 | Acceptance | 361 | 3.1364 | .93976 |
| 12 | Students' and teachers attitude to changes | 345 | 3.0273 | .86180 |
| 13 | Not creating Need Curriculum (NC) | 333 | 2.7545 | .77174 |
| Aggregate Mean Weight | | 3.013 | | |

Table 4 for question 2, items 6- 13; talks on challenges with mean weights of 3.0273, 2.8454, 2.8455, 31000, 3.2818 3.1364, 3.0273, 2.7545 respectively. The calculated aggregate mean weights stood at 3.013.

**Research Questions 3**

What are the strategies, if put in place would elicit practices for the attainment of sustainable economic development goals?

**Table 6:** Suggested Poverty Tackling Strategies, for the Attainment of Sustainable Economic Development goals.

| | | | | |
|---|---|---|---|---|
| 14 | Development of Computer Programming Academy | 303 | 3.2000 | .93049 |
| 15 | The use of Acaheems & Computer Programming Academy | 352 | 2.6818 | .76386 |
| 16 | Compulsory agric gardens establishment in the schools for immediate result oriented for self- reliance economy. | 295 | 2.9636 | .76386 |
| 17 | Demonetization of Monetized Creative Art activities in the schools | 326 | 3.2273 | .63436 |
| 18 | Excursions to demonstration farms nearest in the Local Government Education Area | 355 | 2.8455 | .61568 |
| 19 | Friendly collaborative attachment to production industries for skills acquisition | 313 | 3.0818 | .76849 |
| 20 | Baking, needle work etc. should be compulsory Economic enhancing practical for all JSS 3 year students in Home Economy. | 339 | 3.0818 | .82542 |

Table 5: for questions 3; items 14-20 provided the strategies; with mean weights of 3.2000, 2.6818, 2.9636, 3.2273, 2.8455, 3.0818 and 3.0818. A closed looked at the results also revealed item 1-20 weighted mean not below 2.50. This 2.25 is the decision index of the opinions.

**$Ho_1$ Hypothesis 1:** There is no significant difference between the males' and females' staff responses on challenges that would possibly work against the attainment of Sustainable economic development goal using Junior Secondary Education delivery as an innovation agent.

**Table 7:** Mean, SD and t-test of Difference between Males' and Females' staff Respondents on the Challenges against the Attainment of Sustainable Development (Economy)

| Sex of Respondents | N | Mean | SD | Cal.v t-test | t-test level | df | t-critical value | 2-tail sig. | Rem-ark |
|---|---|---|---|---|---|---|---|---|---|
| Male | 20 | 160.1500 | 13.3033 | | 0.05 | 19 | 2.098 | .024 | very |
| | | | | -2.458 | | 19 | 2.098 | .024 | sig. |
| Female | 20 | 164. 7500 | 11.3084 | | | | | | |

In table 6, at alpha level of .05 and degree freedom of 19, the calculated value of t-test is less than the critical table value of 2.098. The null hypothesis is accepted.

**$Ho_2$- Hypothesis 2:** There is no significant difference between the males' (M) and females'(F) staff age group responses on the strategies, if put in place would support the attainment of sustainable economic development goal using Junior Secondary Education delivery as an innovation agent against poverty

**Table 8:** Summary of Analysis of Variance among Respondents of Varied age Categories on strategies for the Attainment of Sustainable Development Economic Goals

| Age categories | Sum of squares | df | Mean square | Cal. F-val. | Crit. F-val. | Sig |
|---|---|---|---|---|---|---|
| Age≤30 | Between Groups (Combined) M &F | 26.450 | 14 | | 1.889 3.779 | 0.075 4.69 |
| Age ≥ 41 | within groups (combined)M&F | 2.500 | 5 | | 0.500 | |
| Total | | 28.950 | 19 | | | |
| Age 31≤ 40 | between Groups (Combined) | 1025.550 | 14 | 73.218 | 1.764 | 0.276 |
| Age ≥ 41 | within Groups | 207.500 | 5 | 41.500 | 4.69 | |
| | Total | 232.550 | 19 | | | |

Table 5: The calculated t-test value is 3.779 which is less than the table value of 4.69 for the less than or equal 30 and age group 41 and above. The value for age group 31-40 and that for 41 and above is also less than the table value of 4.69. In both cases the table values are the same. Therefore the null-hypothesis is accepted.

**Discussion of Findings**

Items in tables 3, 4 and 5 all have their weighted mean up to 2.50 and above. These are indications that items 1-5 in table 3 identities that classing JSS1-3, the medium through which innovative education for sustainable development can be delivered to the people is relevant due to the peculiarity position the unit occupies in the school system. As a unit from Middle Basic level into Upper Basic, it stands as a transitional and terminal unit for basic education to be prepared for SSS 1-3 subjects' specialization unit in readiness for tertiary education.

Table 4, are the items which must be considered before any innovation programme can be engaged in the school system. (See items 6-13 above). Table5. Identified the needs educational system must provide for, to assist the system to do the needful. These needs include: The use of ACAHEEMS & Computer Programming Academy Compulsory agric gardens establishment in the schools for immediate result oriented activities for self- reliance economy. Demonetization of the presently Monetized Creative Arts should be of great concerns in the schools .Students' excursions to demonstration farms, nearest in the Local Government Education Area be engaged to complement classroom view of ACAHEEMS & Computer Programming Academy concepts. The acceptance of the null hypotheses 1, 2 and 3 confirmed the establishment of the facts that items 1-20 support the choice of JSS 1-3 to be the starting point for innovative education for the attainment of sustainable developments and innovation in the school system a step in the right direction. Friendly collaborative attachment of students to production industries for skills acquisition is highly than mere industrial training to obtain an academic certificate. Table 4 confirmed the identified opinions 6 – 13 the challenges, while opinions 14- 20, talks of the needed strategies if put into use in the school system would assist the possibility of attaining sustainable development goals in Rivers State (Nigeria)

**Conclusion**

Compulsory use of ACAHEEMS & Computer Programming Academy and the establishment of Agric- Gardens in the schools as immediate economic result oriented activities for self- reliance economy and demonetization of the presently monetized Creative Arts would be of great benefit to the school system because it will help students to be economically responsible while in schools.

**Recommendations**

1. Self-reliance Economic practices on (Agric, Creative Arts, Home Economy etc.) as project for exhibition in the schools to emphasize students in JSS 3 involvement in production for survival
2. Friendly, collaborative attachment of students to production industries for skills acquisition be made compulsory since it will empower the students earlier to reason and provide means against poverty.

3. ACAHEEMS & Computer Programming Academy be introduced as an innovation in the school system at the Junior secondary level to enhance self-financing abilities
4. Demonetization of Creative Art in the schools for practical
5. Creation of Need Curriculum (NC) to solve economic, political, etc problems.
6. Innovation Configuration (IC) provision to guide and focus content delivery of anticipated innovation

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