Towards Achieving Sustainable Development in the 21st Century: Relevance of Innovative Instruction on Performance of Students

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Abstract: This paper attempts to find how to achieve Sustainable Development Goals (SDGs) in the 21st Century: through Relevance of Innovative Instruction. The new well established approach of Education for Sustainable Development (ESD) empowers learners to take right and informed decision and responsible action for environment integrity, economic viability and society for present and future generations. The following are innovative instructions that will help teachers reinvent their teaching methods and make the classes interesting towards achieving Sustainable Development Goals at 21st century these are: creative teaching, audio-visual tools, real world learning, brainstorm, lesson outside the classroom, role-play, storyboard teaching, stimulating classroom environment etc. based on the findings, it is true that regular poor performance by the majority students is fundamentally linked to application of ineffective teaching methods by teachers to impact knowledge to learners. The following are some of the research recommendations: teachers should increase their knowledge of their various strategies in order to keep students, teachers good professional quality is basis for teaching innovation in schools, teacher innovation of teaching methods is the ultimate goal of teaching innovation in school. Therefore, government should organize workshop/seminars for teachers.

Keywords: Sustainable Development, Innovation, Performance.

I. INTRODUCTION

The Sustainable Development Goals (SDGs) are built in addition to other goals of the eight Millennium Development Goals. The MDG were time-bound goals agreed on by World leaders at a UN Summit in September, 2000 on a deadline of 2015 with specific targets on poverty alleviation, education, gender equality, child and mental health, environmental stability, combat malaria and HIV/AIDS reduction, and a Global Partnership for Development. With the transition to SDG as launched and approved by the World Leaders at United Nations General Assembly in September, 2015, the goals are No poverty, Zero Hunger, Good Health and Well-being, quality education, gender equality, cleanness and sanitation, affordable and clean energy, decent work and economic growth and industry.

The central focus of this paper is the Sustainable Development Goal number 4 which is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. According to UNESCO (2017) education for sustainable development is a key instrument for achieving the Sustainable Development Goals. As a holistic approach to education, education for sustainable development does not only refer to learning contents. It is also about transforming teaching strategies and learning environment students can acquire attitude and values that, in addition to their professional knowledge enable them to contribute to a more sustainable and peaceful future as required by the sustainable development.

Education, therefore, is crucial for the achievement of sustainable development. However, not all kinds of education support sustainable development. Education that promotes economic growth alone may well also lead to an increase in unsustainable consumption patterns. The new well-established approach of Education for Sustainable Development (ESD) empowers learners to take informed decision and responsible actions for environmental integrity, economic viability and a just society for present and future generations. Education for Sustainable Development aims at developing competencies that empowers individual to reflect on their own actions, taking into account their current and future social, cultural, economic and environmental impacts, from a local and a global perspective. Individuals should also be empowered to act in complex situation in a sustainable manner, which may require them to strike out in new direction, and to participate in socio-political processes, moving their societies towards sustainable development. However, this paper examined the impact of innovative instructions on the performance towards achieving sustainable development in the 21st century. The innovation instruction and the current classroom model most often operate as antagonists and quickly enough to get young people ready for the new world. So it follows that education should focus on fostering innovation by putting curiosity, critical thinking, deep understanding, the rules and tools of inquiry, and creative brainstorming at the centre of the curriculum.
II. CONCEPT OF INNOVATION

Faced with a rapidly changing society, innovation has become a necessary catalyst in life. When new things, new ideas, new concepts, new technology, new knowledge are introduced, innovation is considered to have taken place (Olufemi, 2016). Developing talents in innovation has become an important goal of education towards achieving sustainable development in the 21st century.

III. NEW INNOVATION IN TEACHING

The most serious challenges any teacher faces is to take control of the students attempting and putting across ideas in such away as to retain with them long after they have left the classroom. For this to take place, classroom experience should be redefined and new innovative ideas that make teaching methods be more effective and implemented. Innovation enhances teaching quality and effectiveness. Having rich and diverse teaching content and methods, having diversified students’ assessment and achieving educational goals and ideas all rely on teachers’ innovation.

The following are some innovative instruction that will help teachers reinvent their teaching methods and make the classes interesting towards achieving sustainable development goal at 21st century.

1. Creative Teaching
2. Audio and Video Tools
3. Real-World Learning
4. Brainstorm
5. Classes outside the classroom
6. Role play
7. Story board teaching
8. Stimulating classroom environment
9. Welcome new ideas
10. Think about a new hobby
11. Work together as a team
12. Puzzles and games
13. Start school club or groups
14. Refer books on creativity
15. Love what you do
16. Introduce lesson like a story

Innovative and the current classroom model most often operate as antagonists. The system is evolving, but not quickly enough to get young people ready for the 21st century. But there are a number of ways that teacher can bypass the system and offer students the tool and experience that spur an innovation mindset (Thom, 2016). Here are as follows:

1. Move from project to project based learning: these method include developing a focused question, using solid, well-crafted performance assessment, allowing for multiple solutions, enlisting committee resources, and choosing engaging, meaningful themes for project
2. Teach concepts not facts: concept based instruction overcomes the fact-based, rote-oriented nature of standardized curriculum.

If your curriculum is not organized conceptually, use your own knowledge and resources to teach ideas and deep under strong not test.

IV. DISTINGUISH CONCEPT FROM CRITICAL INFORMATION

To innovate, they need to know something, the craft precedes the art, find the right blend between open-ended inquiry and direct instruction.

V. MAKE SKILLS AS IMPORTANT AS KNOWLEDGE

Innovation and 21st century skill are closely related. Choose several 21st century skills, such as collaboration or critical use detailed rubrics and grade the skills.

Form Teams, Not Groups: Innovation now emerges from teams, use specific methods to form teams, assess team work and work ethic, facilitate high quality interaction through protocols and critique, teach the cycle of revision, and expect students to reflect critically on both ongoing work and final products.

Use Thinking Tools: Hundred of interesting, thought provoking tools exist for thinking through problems, sharing insights, finding solutions, and encouraging divergent solution.

Use Creativity Tools: The tools include playful games and visual exercises that can easily be used in the classroom.

Reward Discovery: Step up the reward system by using rubrics with a blank column to acknowledge and reward innovation and creativity.

Make Reflection Part of The Lesson: Reflection is necessary anchor learning and stimulate deeper thinking and understanding.

Be Innovative Yourself: This is the kicker, because innovation requires the willingness to fail, a focus on fuzzy outcomes rather than standardized measures, and the bravery to resist the system emphasis on strict accountability.

VI. INSTRUCTIONAL STRATEGIES

Instructional strategies are teaching methods used to help students understand a particular concept which they develop and practice in a specific life skill (Herndon, 1994 in Mustapha, 2012). These strategies become learning strategies when learners independently choice the appropriate instruction and use them effectively to meet goals. Yu-Jelec (2011) define teaching innovation strategies as teacher having creative in the preparation before teaching in the process of teaching and student assessment, being able to reflect on, to design and apply new, diverse teaching method or activities, understanding individual differences of students, stimulating
students learning motivation and interest, and enhancing the effect of learning.

Instruction strategies can motivate learners and help them focus attention, organize information for understanding and remembering, monitor and assess learning for sustainable development (Albert, T., 2012). To become successful strategies teacher students need:

- Involve step-by-step strategy instruction.
- A variety of instructional approaches and learning materials.
- Appropriate support that includes modeling, guide practice and independent practice.
- Meaningful connection between skills and ideas, and real-life situations.
- Opportunities to be independent and show what they know.

Effective innovative instructional and learning strategies can be used across grade levels and subject areas, and can accommodate a range of learner differences as well as exploring the best suited environments in which the students can enhance their self-abilities and become strategic learner for the 21st century.

VII. IMPACT OF INNOVATIVE INSTRUCTIONAL STRATEGIES ON PERFORMANCE

Today is the era of science and technology and there is a great need to improve quality of education specifically of science education. This can be possible by bringing fundamental changes through innovative techniques in which teachers can provide stimulating student learning motivation and interest, and enhancing the effect of learning that gear towards achieving sustainable development goal vision of 2030.

Today’s teachers all need to be creative and use innovative teaching methods and strategies. These strategies help students/learners to walk on the path of independent learning and become strategies learners.

Among the impacts of innovative instructions make on teaching and learning outcomes are:

1. Instructional strategies enable students to focus their attention, organize their learning materials for better understanding and help teachers to provide a suitable platform for strategic learning.
2. Instructional strategies are the techniques that a teacher can adopt to meet the various learning objectives. These strategies help students to developed level, of interest and experience are considered while choosing a particular teaching strategy so that they can self-accomplish their goals.
3. Innovation instruction strategies also, enhancing teaching quality, and effectiveness, having rich and diverse teaching contents and methods, in order to diversified students assessment as well as achieving educational sustainable development goal of the 21st century.
4. More so, innovation instruction strategies enable the teachers to have creativity and showing vivid and lively teaching methods to make students interest in learning and enhancing students learning ability, tapping student potential in creativity and problem-solving as well as knowledge and wisdom (Khurshid, 2012). Therefore, innovation provide valuable knowledge for school students to accurate knowledge and to meets the needs of social development, bring modern cloud technology into action, use online teaching, whiteboards to solve teaching problems and be able to bring teachers creativity into play so that the students learning effectiveness can be enhanced.

VIII. LEARNING OBJECTIVES FOR SUSTAINABLE DEVELOPMENT GOALS (SDGs)

1. Cognitive Learning Objectives

   a. The learner understands the important role of education and lifelong learning opportunities for all (formal, non-formal and informal learning) as main drivers of sustainable development, for improving people’s lives and in achieving the SDGs.
   b. The learner understands education as a public good, a global common good, a fundamental human right and a basis for guaranteeing the realization of other rights.
   c. The learner knows about inequality in access to an attainment of education, particularly between girls and boys and in rural areas, and about reasons for a lack of equitable access to quality education and lifelong learning opportunities.
   d. The learner understands the important role of culture in achieving sustainability.
   e. The learner understands that education can help create a more sustainable, equitable and peaceful world.

2. Socio-emotional Learning Objectives

   a. The learner is able to raise awareness of the importance of quality education for all, a humanistic and holistic approach to education, Education for Sustainable Development (ESD) and related approaches.
   b. The learner is able through participatory methods to motivate and empower others to demand and use educational opportunities.
   c. The learner is able to recognize the intrinsic value of education and to analyse and identify their own learning needs in their personal development.
   d. The learner is able to recognize the importance of their own skills for improving their life, in particular for employment and entrepreneurship.
   e. The learner is able to engage personally with Education for Sustainable Development (ESD).
3. **Behavioural Learning Objectives**

a. The learner is able to contribute to facilitating and implementing quality education for Education for Sustainable Development (ESD) and related approaches at different levels.
b. The learner is able to promote gender equality in education.
c. The learner is able to publicly demand and support the development of policies promoting free, equitable and quality education for all, Education for Sustainable Development and related approaches as well as aiming at safe, accessible and inclusive educational facilities.
d. The learner is able to promote the empowerment of young people.
e. The learner is able to use all opportunities for their own education throughout their life, and to apply the acquired knowledge in everyday situations to promote sustainable development.

**IX. RECOMMENDATION**

The purpose of teaching innovation is to enhance students’ knowledge and wisdom. That is, it is meant to create knowledge to activate a flexible and intelligent high-quality learning process. Therefore, innovation provides valuable knowledge for school students to accumulate knowledge so that the students learning effectiveness can be enhanced. Therefore, the following innovative instruction strategies are recommended:

i. Teachers should increase their knowledge of various instructional strategies in order to keep students.

ii. Teachers’ good professional quality is the basis for teaching innovation in school. In the teaching process, teachers should carefully study and fully explore the rich content of teaching materials.

iii. Teacher innovation of teaching methods is the ultimate goals of teaching innovation in school. Therefore, government should organize workshop/seminars for teacher.

iv. To increase students’ interest and enhance learning effectiveness, the teaching methods must be innovative to broaden the student thinking space as much as possible.

v. The innovation of teaching capability is the key to teaching innovation in school. The teaching content continues to change according to the change in modern development. Education most continue to enrich and enhance their teaching ability, so that they can constantly adapt to the requirements raised by changing educational development, thereby satisfying the needs of the client of teaching.

**X. CONCLUSION**

It is true that, regular poor performance by the majority students is fundamentally linked to application of ineffective teaching methods by teachers to impact knowledge to learner (Adunola, 2011 in Elvis, 2013). Today is the area of science and technology and there is a great need to improve quality of education in order to achieve the stated goals of sustainable development. This can be possible by bringing fundamental changes through innovates instructional strategies through which teachers can provide students learning environment that can make learning process interesting and understandable to the young learner. To make education a learning process that generates interest in the students and motivate them to stay back in the institution than to run away from it, therefore, teachers need to be conversant with numerous innovative instructions strategies that take recognition of the magnitude of complexity of the concepts to be covered.

**REFERENCES**


