



MODELS FOR EFFECTIVE SERVICE DELIVERY IN VOCATIONAL INDUSTRIAL AND TECHNICAL EDUCATION: A SUGGESTED NEW APPROACH

WURITKA, Enoch Gotring
Department of Industrial Design,
Faculty of Environmental Technology,
Abubakar Tafawa Balewa University
P. M. B. 0248, Bauchi, Nigeria

Email of author: wuritkagotringnock@gmail.com

ABSTRACT

Models are replicas of the real objects. Models remain the most favourable and popular medium of instruction in Vocational and Technical Education. Models provide direct experience through symbolic conceptualization feeling. This study provides an insight into how models can be used to promote accurate and fair understanding of the theories and practices of the old and newly emerging scientific innovations in vocational and technical education. Models bridge the wide gap between theory and practice and inform learners on how to position instructions to gain better from the principle and practices, processes and products giving users opportunities to be heard and seen at work. Models make learning attractive and interesting, easy to understand and long last in memory. Models can be used for both formal and non-formal education in individual and group activities. The use of models in various contexts in Vocational and Technical Education has revealed that models are vital tools in concept formation, attention sustenance, increase in the meaningfulness of abstract concepts, encouraging deeper processing of knowledge theory boosting class performance

Key: Models, Vocational, Technical Education, Learning, Conceptualization

INTRODUCTION

There are three key interactive components that work together to quicken and to enhance the rate of teaching and meaningful learning experience in technical and vocational education. These components, according to Onoja (2006) include dialogue for communication, structures for designs and autonomy for creativity (innovation). A model, in all ramifications is best suited for instructions in technical and vocational education. The use of models has opened wider opportunities for educators to integrate technical and vocational education supportive materials in the teaching learning-process and to improve upon the achievements of the students. According to Ema (2004) there are numerous factors that determine the selection and use of models for instructional purpose, they include the needs factor, the status of the learner, the environment and the curriculum of studies.

Training in Vocational and Technical Education

Nations over the years have model progress through technical and vocational training, having recognized the important roles of technical and vocational education in every sphere of endeavors. Technical and Vocational Education according to Edward (2009) are not ends nor goals, but opportunities for students to realizing their dreams.

With the increasing demand for technical education in Nigeria, there is an urgent need for a better channel of educating. The use of models is one such channel and perhaps the most effective at that. Models are replicas of the real things (items). Models have all it takes to reach out to individual, small and large group of audiences in different themes and perspectives. Models can be slide, sectional, working and build-up.

Advancement in Technology and Research

Advancement in technology and research has greatly determined and influenced the choice and use of various media of communication in teaching and learning situation. According to Baker (2011) this has made it possible for the development of instructional networking system for teaching and learning activities. Models, at all levels make the teachers and students to effectively interact intellectually, attitudinally and physically while at the same time learning is going on.

Having assessed the qualities, relevance and nature of models, Simon (2010) in his analysis and categorization of models further classifies and defines models into the following units:

- Solid models, which enables the learner to examine the external structures of the object.
- Sectional models enable the learner to critically examine both external and internal structures of the object.
- Working models exemplify the functional (operational) form and processes of an object or objects, simulating the real thing.
- The build-up model provides adequate information on the step by arrangement of the components of the object or system leading to a holistic nature of the object or system of operation.

Models have far reaching potentials for supplementing educational facilities and improving the qualities of teaching and learning particularly at a higher stage. Models build up educational theories for effective teaching and learning and lay scientific foundations to educational concepts development and analysis. Models develop new initiatives, practices and strategies to ensure possible solutions to an array of problems. Models can effectively address individual and group differences and activities in effective ways. Models can improve instructional processes and make them more effective and purposive. The use of models involves application as well as system approach, which address the input pattern, the teaching process, output and evaluation.

Management Process and Application

The management process is the effective use of models in teaching and learning should not be restricted to the systematic identification, organization, development and utilization of learning resources. The management process should also address the nature of studies, the age and experience of the learners, relevance and appropriate conditions of the system and skills of the teachers or instructors, thereby addressing the capacity of those who execute the process.

The use of models in acquiring knowledge and skills has become an essential element in vocational and technical education. According to Crowder (2011) the use of models in teaching and in learning has significantly changed the face and enhanced the face of teaching and learning process. These can only be achieved with compliance with the following guidelines on the choice and use of models.

- The vision and mission statements of the curriculum.
- Clear identification of problems to be solved.
- Understand the audience and its needs.
- Clearly stating the statement of the objectives and the analysis of the needs.
- Specification of the conditions for the achievement of the objectives.
- Mapping out how best to achieve the objectives using models.
- Designing means of evaluating the extent of achievement of objectives for purposes of improvement.
- Re-thinking and modification of approaches to ensure successful solutions to the problems.

System Approach to Learning

When models were originally introduced into the teaching – learning situation, they were, according to Ndukwe (2012) indeed a means of dramatically improving the ways in which people communicate, simulate situations and socialized while acquiring knowledge and competency. As teachers and learners encountered new challenges through the use of models they build up their intellectual, attitudinal and motor skills, mastering new and more complex abilities. They also build upon their social understanding and relationships, and as they make these encounters they discover which social approaches work and which don't.

Models allow students to practice and to externalize what they already know by sharing, talking, taking turns, exercising self-control, working in groups and along with others. Models, according to Onoja (2006) help learners build self-esteem as they gain a sense of their own powers and abilities. Models help the students' find an understanding of shapes and sizes, space and numbers, figures and forms, textures, shades and colours which are very essential for the arts, scientific and mathematical development. Models make learners become creative thinkers, problem solvers and risk takers. Models will make learners find endless ways to develop their symbolic capabilities by using materials in interesting and useful ways that are meaningful to them.

Fine motor skills are developed through exploration and experimentation with models, building upon their speed, endurance, balance and strengths, these enable the learners develop effective eye and hand co-ordination.

Role and Impact of Innovations

The role and impact of innovation in education have been of keen interest to scholars and attracting the attention of other stakeholders in recent times. These concerns rise from the need to train the learners by using innovative means. The crux of this matter is keeping abreast with recent developments in instructional technology. Certain innovations have over the years been added to the process of teaching. Models, certainly innovations, use scientific principles to address instructional problems in education. They offer richer and greater possibilities for people to connect, share ideals and participate in learning activities that previously were unattainable. The use of models as described by Enakrire (2006) is an excellent way to build up skill and confidence, to experience a range of instructional styles, practice and acquire constructive feedback.

CONCLUSION

Models provide good communication skills and good communication skills enhance positive participation in the activities, positive participation makes for better social and intellectual interactions and enhances effective feedback. Interactions eliminate the feelings of notation and alienation and emphasize the importance of social presence. Without social presence the learners feel disconnected and the dynamics of learning becomes weak and the learning environment becomes less engaging.

As a matter of fact and urgency, we must not forget that dialogue enhances collaborative learning. Dialogue and the use models must go hand in hand if we are to provide new possibilities. for extending and enriching the learning experience. These will reduce isolation utilizing the power of immediacy to support the core learning process based on reflections, collaboration, knowledge creation, creativity, discussions and social networking.

REFERENCES

- Baker, C.K (2011). Models for differentiate techniques and provisions for special needs. P. New Guinea; Brendan Communications.
- Crowder, J. P (2011). Challenges of models for Teaching – Learning as perceived by Vocational and Technical Education Teachers. Freetown; Fairfax Publications
- Edward, O. (2009). Learning means nothing without models. Manilla Tarner and Tarner Inc.
- Ema. E. (2004). Instructional models: and assessment of availability and utilization in Vocational and Technical Education. Calabar; Palmer Publications.
- Ndukwe, A. (2012). Sensitizing Nigerian Teachers on available tools Suitable for Instructional delivery. Aba; Ndukwe Publishers
- Onoja, E.O. (2006). Modes and Models for learning tasks in Vocational and Technical Education Lagos; Hills Inc.
- Simon, S. (2010). Models for research purposes Ibadan; Horsefall Press