

STAKEHOLDERS' PERCEPTION ON BARRIERS TO AND ENABLERS OF INNOVATIONS IN MOTOR VEHICLE MECHANIC WORK CURRICULUM IN NIGERIA

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Abstract

The paper identified stakeholders' perception on barriers to, and enablers of innovations in MVM work curriculum in Nigeria. Two research questions were raised to guide the study and two hypotheses were formulated and tested at 0.05 level of significant. Descriptive survey research design was used for the study. The study was conducted in Federal Capital Territory, Abuja and Kaduna State, Nigeria. The population of the study consisted of 15 stakeholders from Technology and Science Department, Federal Ministry of Education, Abuja, Nigeria and 12 stakeholders from curriculum development department, National Board for Technical Education, Kaduna, Nigeria. The instrument for data collection was a structured questionnaire. The instrument was content validated by three Industrial and Technology Education experts from Federal University of Technology, Minna. Cronbach Alpha was used to determine the reliability of the instrument and yielded .88 and .89 coefficients. The study employed the use of median test to answer the research questions and Mann Whitney U test to test the null hypotheses. Findings revealed among others that, adequacy of facilities, financial resources, time for planning the requirements of the curriculum innovation and curriculum professional support for staff are enablers for innovation in MVM work curriculum in Nigeria. The study recommended among others that, Federal Ministry of Education should create a delicate balance between the identified barriers to and enablers of innovations in MVM work curriculum.

Key words: Motor Vehicle Mechanic Work, Curriculum, Curriculum Innovation, Barriers and Enablers

Introduction

Motor Vehicle Mechanics (MVM) work is one of the trade programmes obtainable in technical colleges in Nigeria. According to the National Board for Technical Education (NBTE, 2001), the goal of MVM work programme is to produce skilled craftsmen with quality knowledge of the working principles of motor vehicles, the techniques and safety practices involve in the maintenance and repairs of vehicles. The achievement of this goal largely depends on the implementation of the contents of MVM work curriculum.

Curriculum is the combination of all instructional practices and learning experiences designed to bring out and evaluate the target learning outcomes of a particular course. Gatawa (2009)

defined curriculum as a framework that sets expectations for student learning and serves as a guide for teachers that establishes standards for student performance. Curriculum for MVM work programme could be seen as a structured series of intended learning outcomes that prescribes the results of instruction in training craftsmen capable of carrying out maintenance and repairs of vehicles. Mathew and Ede (2010) disclosed that, the current curriculum for MVM work programme cannot guarantee the production of craftsmen capable of carrying out maintenance and repairs of modern vehicles due to obsolescence. Ndawi and Maravanyika (2011) postulated that, in order to remedy this ugly situation, curriculum innovation become inevitable.

Curriculum innovation is the application of new objectives, contents, resource or approach that changes social practice of teaching and learning and creates new value in educational system. Chinelo (2018) noted that, Curriculum innovation is a process through which new programmes or practices, techniques and approaches are put in or injected into the existing curriculum. Curriculum innovation according to Ajibola (2008), implies the introduction of ideas or practices that are relatively new such as the recent technological advancements on modern vehicles. Nicholas and Boadu (2013) observes that in every educational system, the need for innovation and innovation must arise from time to time. Effective implementation of curriculum innovation requires to identify and proactively act on both the barriers to and enablers of the curriculum innovations process.

Barriers to curriculum innovation could be seen as the conditions or situations within and outside organizational setup that truncate the actualization of curriculum innovation. Bromme, *et al.* (2005) referred barriers to curriculum innovations as the challenges which have to be overcome in order to attain the goal successful curriculum innovations process. These challenges include lack of sufficient time, facilities and financial resources required to implement curriculum innovation. Ndou (2018) noted that, poor attitudes and interest of the Government towards curriculum innovation, unrealistic expectations set by the educational administrators and comfort with the status quo are the common barriers to curriculum innovations. Nevertheless, these barriers could be overcome with enablers of curriculum innovation.

Enablers of curriculum innovation could be seen as the conditions or situations within and outside organizational setup that facilitate the actualization of curriculum innovation. Norman (2015) defined enablers of curriculum innovations as the factors that promote, enhance and ensure curriculum innovations process is achieved. These factors include, Government attitude and interest as well as leadership style. Fink (2016) revealed that, enablers of curriculum innovation process include adequacy of resources, time, institutional philosophy, professional support, professional adequacy and knowledge. These offer conducive atmosphere to stakeholders in curriculum innovation.

Stakeholders in curriculum innovation are individuals who participates in the welfare and success of curriculum innovation process. Babalola and Ayeni (2009) defined stakeholders in curriculum innovations as group of persons that affects or be affected by curriculum innovation process. In the context of this study, stakeholders in curriculum innovation are key informers and drivers of change in the content, method of delivery, evaluation requirements and scope of MVM work curriculum. These group of persons include students, teachers, school administrators, employers of labour, policy makers in education and curriculum innovators among others. Fadipe and Adepoju (2016) revealed that, policy makers in education (Federal Ministry of Education (FME)) and curriculum innovators (National Board for Technical Education (NBTE))

have a broader interest in the professional attributes of technical college graduates, their work capabilities and career development. Hence, the perception of stakeholders from FME and NBTE can offer insights on the barriers to and enablers of innovations in MVM work curriculum in Nigeria.

Statement of the Problem

The goal of MVM work programme is to produce skilled craftsmen with quality knowledge of the working principles of motor vehicles, the techniques and safety practices involve in the maintenance and repairs of vehicles. It is sad to note that, the goal of the programme is not achieved. Michael (2018) confirmed that, MVM work graduates lack the requisite competencies in the maintenance and repairs of modern vehicles. This could be due to the lack of recent technological advancement contents in the curriculum used for training MVM work students. The situation necessitated urgent implementation of innovation in MVM work curriculum. Hence, this study sought to identify stakeholders' perception on barriers to and enablers of innovations in MVM work curriculum in Nigeria.

Aim and Objectives of the Study

The aim of the study was to identify stakeholders' perception on barriers to and enablers of innovations in MVM work curriculum in Nigeria. Specifically, the study sought to identify stakeholders' perception on:

1. Barriers to innovations in Motor Vehicle Mechanic work curriculum in Nigeria
2. Enablers of innovations in Motor Vehicle Mechanic work curriculum in Nigeria

Research Questions

The following research questions were raised to guide the study:

1. What are the stakeholders' perception on barriers to innovations in Motor Vehicle Mechanic work curriculum in Nigeria?
2. What are the stakeholders' perception on enablers of innovations in Motor Vehicle Mechanic work curriculum innovations in Nigeria?

Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance:

Ho₁: There is no significant difference between the median responses of stakeholders from Federal Ministry of Education and National Board for Technical Education on barriers to innovations in Motor Vehicle Mechanic work curriculum in Nigeria.

Ho₂: There is no significant difference between the median responses of stakeholders from Federal Ministry of Education and National Board for Technical Education on enablers for innovations in Motor Vehicle Mechanic work curriculum innovations in Nigeria.

Methodology

Descriptive survey research design was adopted for this study. Mulki *et al.* (2016) defined descriptive survey research as design aimed at casting light on current issues or problem through a process of data collection. The study was carried out in Federal Capital Territory, Abuja and Kaduna State, Nigeria. The population of the study consisted of 15 stakeholders (administrators) from technology and science department, Federal Ministry of Education, Abuja, Nigeria and 12 stakeholders (administrators) from curriculum development department, National Board for Technical Education, Kaduna, Nigeria. Total population sampling technique was used to select all the respondents. The instrument for data collection was a structured questionnaire developed by the researcher and designed on five-points Likert's scale of Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) and Strongly Disagree (SD) with

numerical values of 5, 4, 3, 2, and 1, respectively was used to collect data for the study. The instrument contained two sections, A, and B. Section A comprises of stakeholders’ perception on barriers to Motor Vehicle Mechanic work curriculum innovations and section B comprises of stakeholders’ perception on enablers of Motor Vehicle Mechanic work curriculum innovations. The instrument was content validated by three Industrial and Technology Education experts from Federal University of Technology, Minna. Cronbach Alpha method was used to determine the reliability of the instrument and yielded .88 and .89 coefficients. Data were collected for the study through hand delivery by two research assistants from the duo organizations involve in the study. The study employed the use of median test to answer the research questions and Mann Whitney U test to test the null hypotheses. Decision on research questions was based on real limit of numbers and decision on the hypotheses was based on comparing U-value with P-value. The choice of median and Mann Whitney U tests for data analysis was due to the simplest fact that, they are the most suitable statistical techniques to analyze ordinal data (data collected using Likert’s scale). All analysis were carried out using Statistical Package for Social Sciences version 22.

Results

Research Question One

What are the stakeholders’ perception on barriers to innovations in Motor Vehicle Mechanic work curriculum in Nigeria?

Table 1: Median Responses of Stakeholders on Barriers to Innovations in Motor Vehicle Mechanic Work Curriculum in Nigeria

		N1=15,			
		N2=12			
S/N	Items	\tilde{x}_1	\tilde{x}_2	Decision1	Decision2
1	Lack of sufficient time for planning the requirements of the curriculum innovation	4.00	3.50	Agreed	Agreed
2	Lack of facilities required to implement curriculum innovation	1.50	1.50	Disagreed	Disagreed
3	Lack of financial resources required to implement curriculum innovation	4.00	4.00	Agreed	Agreed
4	Poor attitudes and interest of the Government towards curriculum innovation	4.00	3.50	Agreed	Agreed
5	Inadequate curriculum professional support for staff	4.00	4.00	Agreed	Agreed
6	Staff’s inability and competency to implement curriculum innovation with confidence	2.00	3.50	Disagreed	Agreed
7	Comfort with the status quo of the current curriculum	1.50	1.50	Disagreed	Disagreed
8	High workloads faced by curriculum innovators	4.00	4.00	Agreed	Agreed
9	Students’ inability to comprehend new technological contents	1.50	1.50	Disagreed	Disagreed

Key: \tilde{x}_1 = Median score of stakeholders from Federal Ministry of Education, \tilde{x}_2 = Median score of stakeholders from National Board for Technical Education, N1= Numbers of stakeholders from Federal Ministry of Education, N2= Numbers of stakeholders from National Board for Technical Education.

Table 1 revealed from the responses of stakeholders from Federal Ministry of Education, five items had median score between 3.50-4.00 and four had median score between 1.50-2.00. The table also revealed from the responses of stakeholders from National Board for Technical Education, six items had median score between 3.50-4.00 and three items had median score of 1.50. This simply implies that, stakeholders from Federal Ministry of Education agreed with five items and disagreed with four and also, stakeholders from National Board for Technical Education agreed with six items and disagreed with three on the barriers to innovations in Motor Vehicle Mechanic work curriculum in Nigeria.

Research Question Two

What are the stakeholders’ perception on enablers of innovations in Motor Vehicle Mechanic work curriculum in Nigeria?

Table 2: Median Responses of Stakeholders on Enablers of Innovations in Motor Vehicle Mechanic Work Curriculum in Nigeria

		N1=15,			
		N2=12			
S/N	Items	\tilde{x}_1	\tilde{x}_2	Decision1	Decision2
10	Adequacy of facilities required to implement curriculum innovation	4.00	4.00	Agreed	Agreed
11	Adequacy of financial resources required to implement curriculum innovation	4.50	4.00	Strongly Agreed	Agreed
12	Adequate time for planning the requirements of the curriculum innovation	4.00	4.00	Agreed	Agreed
13	Institutional philosophy towards curriculum innovation	4.00	3.50	Agreed	Agreed
14	Adequate curriculum professional support for staff	4.00	4.00	Agreed	Agreed
15	Staff’s ability and competency to implement curriculum innovation with confidence	3.50	4.00	Agreed	Agreed
16	Teachers’ knowledge and understandings regarding curriculum innovation	2.00	1.50	Disagreed	Disagreed
17	Attitudes and interest of the Government towards curriculum innovation	4.00	4.00	Agreed	Agreed
18	Leadership style that facilitates a collaborative approach to curriculum innovation	4.00	4.00	Agreed	Agreed

Table 2 revealed from the responses of stakeholders from Federal Ministry of Education, one item had median score of 4.50, seven items had median score between 3.50-4.00 and one had median score of 2.00. The table also revealed from the responses of stakeholders from National Board for Technical Education, eight items had median score between 3.50-4.00 and one item had median score of 1.50. This simply implies that, stakeholders from Federal Ministry of Education strongly agreed with one item, agreed with seven and disagreed with one and also, stakeholders from National Board for Technical Education agreed with eight items and disagreed with one on the enablers of innovations in Motor Vehicle Mechanic work curriculum in Nigeria.

Hypothesis One

Ho₁: There is no significant difference between the median responses of stakeholders from Federal Ministry of Education and National Board for Technical Education on barriers to innovations in Motor Vehicle Mechanic work curriculum in Nigeria.

Table 3: Mann Whitney U Test of Significant Difference Between the Median Responses of Stakeholders on Barriers to Innovations in Motor Vehicle Mechanic Work Curriculum in Nigeria

Respondents	N	U-value	P-value	Remark
Stakeholders from Federal Ministry of Education	15	3.65	0.96	Not Significant
Stakeholders from National Board for Technical Education	12			

Table 3 revealed p-value > 0.5. This implies that, there is no significant difference between the median responses of stakeholders from Federal Ministry of Education and National Board for Technical Education on barriers to innovations in Motor Vehicle Mechanic work curriculum in Nigeria. Hence, hypothesis one was retained.

Hypothesis Two

Ho₂: There is no significant difference between the median responses of stakeholders from Federal Ministry of Education and National Board for Technical Education on enablers for innovations in Motor Vehicle Mechanic work curriculum in Nigeria.

Table 4: Mann Whitney U Test of Significant Difference Between the Median Responses of Stakeholders on Enablers for Innovations in Motor Vehicle Mechanic Work Curriculum in Nigeria

Respondents	N	U-value	P-value	Remark
Stakeholders from Federal Ministry of Education	15	4.10	0.84	Not Significant
Stakeholders from National Board for Technical Education	12			

Table 4 revealed p-value > 0.5. This implies that, there is no significant difference between the median responses of stakeholders from Federal Ministry of Education and National Board for Technical Education on enablers for innovations in Motor Vehicle Mechanic work curriculum in Nigeria. Hence, hypothesis two was retained.

Findings

1. Lack of sufficient time and financial resources required to implement curriculum innovation, poor attitudes and interest of the Government towards curriculum innovation, inadequate curriculum professional support for staff and high workloads faced by curriculum innovators were found to be barriers to innovations in Motor Vehicle Mechanic work curriculum in Nigeria.
2. Adequacy of facilities, financial resources, time for planning the requirements of the curriculum innovation and curriculum professional support for staff, institutional philosophy towards curriculum innovation, staff's ability and competency, attitudes and interest of the Government and leadership style were found to be enablers for innovations in Motor Vehicle Mechanic work curriculum in Nigeria.
3. There is no significant difference between the median responses of stakeholders from Federal Ministry of Education and National Board for Technical Education on barriers to innovations in Motor Vehicle Mechanic work curriculum in Nigeria.
4. There is no significant difference between the median responses of stakeholders from Federal Ministry of Education and National Board for Technical Education on enablers for innovations in Motor Vehicle Mechanic work curriculum in Nigeria.

Discussion of Findings

Lack of sufficient time and financial resources required to implement curriculum innovation, poor attitudes and interest of the Government towards curriculum innovation, inadequate curriculum professional support for staff and high workloads faced by curriculum innovators were found to be barriers to innovations in Motor Vehicle Mechanic work curriculum in Nigeria. These findings concur with the postulations of Ndou (2018) that revealed, poor attitudes and interest of the Government towards curriculum innovation, unrealistic expectations set by the educational administrators and comfort with the status quo are the common barriers to curriculum innovations.

Nevertheless, test for difference between the median responses of stakeholders from Federal Ministry of Education and National Board for Technical Education on barriers to innovations in Motor Vehicle Mechanic work curriculum in Nigeria revealed not significant. This finding is similar to the findings of Mafora, and Phorabatho (2013) that revealed no statistical significant difference between the responses of secondary school principals and manager on curriculum change implementation process. This implies that, both stakeholders share similar perception regarding barriers to innovations in Motor Vehicle Mechanic work curriculum in Nigeria.

Adequacy of facilities, financial resources, time for planning the requirements of the curriculum innovation and curriculum professional support for staff, institutional philosophy towards curriculum innovation, staff's ability and competency, attitudes and interest of the Government and leadership style were found to be enablers for innovations in Motor Vehicle Mechanic work curriculum in Nigeria. These findings are in agreement with the findings of Fink (2016) that revealed, adequacy of resources, time, institutional philosophy, professional support, professional adequacy and knowledge are enablers of curriculum innovation process.

Nevertheless, test for difference between the median responses of stakeholders from Federal Ministry of Education and National Board for Technical Education on enablers for innovations in Motor Vehicle Mechanic work curriculum in Nigeria revealed not significant. This finding corresponds with the findings of Rosser *et al.* (2003) that revealed no significant difference

between the responses of academic deans and directors on their perception on curriculum innovations. This implies that, both stakeholders share similar perception regarding enablers of innovations in Motor Vehicle Mechanic work curriculum in Nigeria.

Conclusion

The aim of the study was to identify stakeholders' perception on barriers to and enablers of innovations in MVM work curriculum in Nigeria. Based on the findings of the study, it is concluded that, perception of stakeholders on barriers to and enablers of innovations in Motor Vehicle Mechanic work curriculum were identified. The findings were limited to the perception of stakeholders from Federal Ministry of Education and National Board for Technical Education. Nevertheless, the presence of enablers of innovation in MVM work curriculum identified increases the likelihood of implementing curriculum innovations.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Federal Ministry of Education should create a delicate balance between the identified barriers to and enablers of innovations in MVM work curriculum.
2. National Board for Technical Education should not hesitate to implement innovations in MVM work curriculum as soon as balance between the identified barriers and enablers is created.

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