

PEDAGOGICAL SKILLS NEEDS OF MOTOR VEHICLE MECHANICS WORK TEACHERS FOR EFFECTIVE CONTENT DELIVERY IN GOVERNMENT SCIENCE AND TECHNICAL COLLEGES IN ADAMAWA AND TARABA STATES

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Abstract

The main purpose of the study was to explore the pedagogical skills needs of motor vehicle mechanics work teachers for effective content delivery in government science and technical colleges in Adamawa and Taraba States. The study was guided by two research questions and two null hypotheses. The study was conducted in Adamawa and Taraba States using descriptive survey research design. The population of the study was 123 respondents comprising 81 MVMW teachers and 42 instructors from all the 21 BEST Centres and Government Science and Technical colleges in Adamawa and Taraba States, Nigeria. There was no sampling as the entire population was used because it was manageable. A structured questionnaire tagged: Pedagogical Skills Needs of Motor Vehicle Mechanics Works Teachers Questionnaire (PSNMVMWTQ)

consisting of 30 items was validated by three experts. The Instrument was trial tested in Gombe State and the Cronbach Alpha reliability method was used to test the reliability of the instrument and a 0.84 reliability coefficient was obtained. Data collected for the study was analyzed using Statistical Package for Social Sciences (SPSS) version 27.0. Mean statistics was used to answer the two research questions while a t-test was used to test the null hypotheses at a 0.05 level of significance. The findings of the study revealed among others that pedagogical skills needed include stimulating critical thinking, designing effective evaluation procedures, and implementing appropriate instruction. Similarly, affective skills were deemed needed including effective communication, active listening, and conflict resolution. Importantly, there were no significant differences between instructors and MVMW teachers regarding the perceived importance of these skills. It is recommended that Given the identified pedagogical skills needs of motor vehicle mechanics work (MVMW) teachers, Ministries of Education should design and implement targeted training programs focusing on instructional goal identification, task analysis, instructional design, questioning techniques, and evaluation procedures.

Keywords: Affective Skills, BEST Centers, Content Delivery, Government Science and Technical Colleges, Motor Vehicle Mechanics Work Teachers, Pedagogical Skills

INTRODUCTION

Motor Vehicle Mechanics Work Teachers in in Nigeria occupy an indispensable position within the nation's vocational education landscape. As stewards of technical knowledge and practical skills, these educators play a fundamental role in equipping students with the competencies necessary to thrive in the dynamic automotive industry (Federal Republic of Nigeria [FRN], 2013). Beyond their instructional duties, they serve as mentors, offering guidance and inspiration to budding automotive enthusiasts, nurturing their passion, and honing their talents for future professional endeavors. This mentorship aspect is particularly crucial in a country like Nigeria, where aspiring automotive engineers

often face myriad socio-economic challenges and barriers to accessing quality education and training opportunities (Binuomote, et al., 2018).

Against the backdrop of Nigeria's rapidly evolving economic landscape, characterized by a burgeoning demand for skilled labor in sectors such as automotive engineering, the significance of these teachers cannot be overstated. Their role extends beyond the classroom, contributing directly to the nation's human capital development agenda and bolstering its competitiveness in the global marketplace. Moreover, in alignment with the government's strategic priorities for socio-economic advancement, the emphasis placed on technical and vocational education underscores the pivotal role played by well-trained and equipped motor vehicle mechanics work teachers. These educators serve as linchpins in the nation's efforts to address unemployment, bridge skills gaps, and foster inclusive economic growth by empowering the youth with relevant and marketable skills (Adeoye & Babalola, 2016).

According to Okeke (2017), the impact of motor vehicle mechanics work teachers extends beyond individual students and classrooms to encompass broader societal transformations. By instilling a culture of innovation, professionalism, and ethical responsibility within their students, these educators contribute to the cultivation of a skilled workforce capable of driving technological advancements and sustainable development initiatives in the automotive sector and beyond through effective content delivery.

Content delivery refers to the process of disseminating educational material to learners through various mediums, platforms, and instructional methods. It encompasses the transmission of information, concepts, and skills from educators to students, aiming to facilitate learning and knowledge acquisition. Effective content delivery involves selecting appropriate resources, designing engaging instructional strategies, and utilizing technology to enhance learning experiences. In the context of education, content delivery plays a crucial role in shaping students' understanding, retention, and application of course material. According to Harasim (2017), content delivery is a fundamental aspect of the teaching and learning process, serving as the backbone of educational experiences. In traditional classroom settings, content delivery often relies on lectures, textbooks, and supplementary materials to convey information to students. However, with advancements in technology, educators have access to a wide range of tools and resources for delivering content in innovative ways. For instance, multimedia presentations, online courses,

interactive simulations, and virtual reality platforms offer opportunities for more dynamic and engaging content delivery (Hodges et al., 2020). These approaches not only cater to diverse learning styles but also allow for personalized and self-paced learning experiences, fostering deeper understanding and retention of the material.

Effective content delivery goes beyond simply transmitting information; it involves creating meaningful learning experiences that promote critical thinking, problem-solving, and collaboration among students. As emphasized by Johnson et al. (2019), content delivery strategies should be aligned with learning objectives, leverage active learning techniques, and provide opportunities for students to apply knowledge in real-world contexts. Additionally, feedback mechanisms and assessment tools are integral components of content delivery, allowing educators to monitor student progress, identify areas of improvement, and tailor instruction accordingly. By adopting a student-centered approach to content delivery, teachers can empower learners to take ownership of their learning journey and develop the skills necessary for lifelong learning and success. Based on the foregoing, the MVMW teacher has to possess both pedagogical and affective skills in teaching the trade course.

Pedagogical skills comprise a broad range of abilities crucial for effective teaching. In the context of Technical Colleges, where vocational education, such as motor vehicle mechanics work, holds significant importance, understanding the pedagogical skills of teachers in this field becomes paramount (Oni, 2016). These skills involve not only the transmission of knowledge but also the ability to engage students, adapt teaching methods to different learning styles, and create a conducive learning environment. As Adeyemi and Olaniyan (2018) point out, "Pedagogical skills are essential for instructors to effectively convey complex technical information to students in vocational education settings." In the realm of motor vehicle mechanics work, where practical knowledge is as crucial as theoretical understanding, pedagogical skills play a crucial role in ensuring that students grasp concepts effectively and develop the necessary competencies for their future careers.

The pedagogical skills of teachers in the motor vehicle mechanics work trade extends beyond content delivery. According to Olatunji and Asani (2019), pedagogical skills encompass the ability to assess student progress, provide constructive feedback, and foster critical thinking and problem-solving skills. Adequate pedagogical skills enable teachers to create a dynamic learning environment where students are encouraged to

explore, experiment, and apply their knowledge practically (Ibrahim, 2017). In Nigeria, where there is a growing emphasis on skill acquisition and entrepreneurship, the role of pedagogically skilled teachers becomes even more significant. As Eze et al. (2019) suggest, "Teachers equipped with strong pedagogical skills can empower students with not only technical knowledge but also the capacity to adapt to evolving industry demands and become successful professionals in the motor vehicle mechanics sector." Thus, understanding and enhancing the pedagogical skills in addition to the affective skills of teachers are essential for the advancement of MVMW trades.

Affective skills of a teacher are essential components in the educational process, particularly in technical fields such as motor vehicle mechanics work. Affective skills involves a teacher's ability to effectively manage classroom dynamics, establish rapport with students, and cultivate a positive learning environment. According to Olorundare (2017), the affective domain plays a crucial role in shaping students' attitudes, motivations, and overall engagement with the subject matter. In the context of motor vehicle mechanics work, teachers must possess empathy, patience, and understanding to cater to the diverse learning needs of their students. Adequate attention to affective skills enables teachers to create a supportive atmosphere where students feel encouraged to explore, ask questions, and participate actively in the learning process (Owolabi, 2019).

The effective skills of motor vehicle mechanics work teachers extend beyond classroom interactions to encompass mentorship and career guidance. Ogunyemi et al. (2020) emphasize the importance of teachers serving as role models who inspire students to develop a strong work ethic, professionalism, and dedication to their craft. Effective communication, enthusiasm for the subject matter, and the ability to instill confidence in students are identified as key attributes of teachers with strong affective skills (Oladimeji & Oladimeji, 2018). In a vocational setting like motor vehicle mechanics work, where practical skills are paramount, teachers with well-developed affective skills not only facilitate learning but also contribute to the holistic development of students, preparing them for successful careers in the automotive industry and beyond. Therefore, investing in the professional development needs of motor vehicle mechanics work teachers is not only an investment in the future of Nigeria's automotive industry but also a strategic imperative for the nation's overall socio-economic prosperity and global competitiveness.

Statement of the Problem

Despite the importance of technical education in fostering economic growth and development, there is a dearth of research specifically addressing the pedagogical skills required for effective teaching in vocational subjects such as motor vehicle mechanics work. The existing literature predominantly focuses on general pedagogical practices in mainstream education, overlooking the unique challenges and requirements of technical education. This knowledge gap is particularly pronounced in States like Adamawa and Taraba, where access to quality technical education is limited, and the demand for skilled automotive technicians continues to rise. Thus, understanding the specific pedagogical skills needs of motor vehicle mechanics work teachers in this context is imperative for improving the quality of technical education and meeting the demands of the automotive industry. By examining the pedagogical skills needs of teachers in Government Science and Technical Colleges (GSTCs) and Business and Engineering Skills Training (BEST) Centres in Adamawa and Taraba States, this study aims to identify areas for improvement in instructional methods and teacher training initiatives. Ultimately, addressing these challenges can enhance the quality of technical education, better prepare students for employment in the automotive industry, and contribute to overall socio-economic development in the States.

Purpose of the Study

The main purpose of the study was to explore the pedagogical skills needs of motor vehicle mechanics work teachers for effective content delivery in Government Science and Technical Colleges (GSTCs) in Adamawa and Taraba States. Specifically, the study sought to identify:

1. Pedagogical skills needs of motor vehicle mechanics work teachers.
2. Affective skills needs of motor vehicle mechanics work teachers.

Research Questions

The following research questions were formulated to guide the focus of this study.

1. What are the pedagogical skills needs of motor vehicle mechanics work teachers?
2. What are the affective skills needs of motor vehicle mechanics work teachers?

Hypotheses

The following null hypotheses were tested at a 0.05 level of significance

1. There is no significant difference in the mean ratings of instructors and motor vehicle mechanics work teachers on skills needs of motor vehicle mechanics work teachers concerning pedagogical skills.
2. There is no significant difference in the mean ratings of instructors and motor vehicle mechanics work teachers on skills needs of motor vehicle mechanics work teachers concerning affective skills.

METHODS

The study adopted a descriptive survey research design. A descriptive survey design allows for the collection of data from a large sample size, facilitating the exploration of various factors and characteristics related to the research topic (Fraenkel, Wallen, & Hyun, 2019). Given the broad scope of the study and the need to capture diverse perspectives and experiences of teachers in the field of MVMW, a descriptive survey design enables the researchers to gather quantitative data on the prevalence and distribution of specific pedagogical skills needs. The area of this study is the Adamawa and Taraba States of Nigeria. The States are located in the Northeast geo-political zone of Nigeria. The population of the study was 123 respondents comprising 81 MVMW teachers and 42 instructors from all the 21 BEST Centres and Government Science and Technical Colleges (GSTCs) and Business and Engineering Skills Training (BEST) Centres in Adamawa and Taraba States, Nigeria. Due to the manageable size of the population, the entire population was used for the study; hence, there was no sampling. The instrument used for data collection was a structured questionnaire titled: Pedagogical Skills Needs of Motor Vehicle Mechanics Works Teachers Questionnaire (PSNMVMWTQ). The responses on the questionnaire were structured on a 5-point Likert type scale: Very Highly Needed (VHN), Highly Needed (HN), Moderately Needed (MN), Less Needed (LN), and Not Needed (NN). The decision rule on each item was based on a cut-off point of 3.50. Therefore, the items with a mean score below 3.50 were regarded as “Not needed” while those with a mean score of 3.5 and above were regarded as “Needed”. The questionnaire was validated by three experts, one from the Department of Technology Education, Modibbo Adam University, Yola, and two from the Department of Vocational and Technology Education,

Taraba State University, Jalingo. The instrument was trial tested in Gombe state of Nigeria which was not part of the study area and a reliability co-efficient of 0.84 was obtained for the instrument using the Cronbach alpha reliability method. Data for the study was collected by the researchers with the help of research assistants who were trained on the objective of the study and the method of data collection. Mean and standard deviation were used to answer the two research questions while t-test was used to test the null hypotheses at 0.05 level of significance.

RESULTS

Research question 1

What are the pedagogical skills needs of motor vehicle mechanics work teachers?

Table 1: Mean and Standard Deviation of MVMW Instructors and Teachers on the Pedagogical Skills Needs of Teachers

S/N	Items	N _T = 81 N _I = 42 N _{TT} = 123				Remark
		$\bar{x}_T$	$\bar{x}_I$	$\bar{x}_G$	σ	
1.	Identifies instructional goals and objectives that are based on learners' needs	3.96	3.86	3.93	1.78	Needed
2.	Identify task analysis according to the objectives of the lesson	4.44	4.36	4.41	1.15	Needed
3.	Perform task analysis according to the objectives of the lesson	4.58	4.50	4.55	1.01	Needed
4.	Design instructions appropriate to goals and objectives.	4.74	4.69	4.72	0.60	Needed
5.	Asking questions that will stimulate discussion and critical thinking.	4.85	4.81	4.84	0.41	Needed
6.	Using instructional methods that will lead to the development of intellectual, affective, and psychomotor skills.	3.93	3.93	3.93	0.32	Needed
7.	Design instructions that enable students to study industrial processes first hand and see the relevant of workshops and laboratory	3.89	3.83	3.87	0.53	Needed
8.	Identify the best method of presenting new skills and safe working habits associated with practical	4.74	4.69	4.72	0.60	Needed

9.	Design and implement evaluation procedures which focus on learner's achievement and instructional effectiveness.	4.85	4.81	4.84	0.41	Needed
10.	Promotes effective pattern of communication.	3.93	3.93	3.93	0.32	Needed
11.	Uses organizational and management skills to establish maximally effective learning environment.	1.42	1.50	1.45	0.96	Not Needed
12.	Use resources appropriate to instructional objectives.	4.65	4.57	4.63	0.81	Needed
13.	Uses organizational and management skills to establish maximally effective learning environment.	4.65	4.60	4.63	0.81	Needed
14.	Integrate into the instruction the cultural environment of students	2.31	2.21	2.28	0.67	Not Needed
15.	Implement instruction appropriate to goals and objectives	4.64	4.60	4.63	0.80	Needed
Grand Mean			4.09	0.75	Needed	

KEY: $\bar{x}_T$ = Mean of Teachers; $\bar{x}_I$ = Mean of Instructors, $\bar{x}_G$ = Grand Mean Response of Respondents; σ = Standard Deviation of Respondents; N_T = Number of Teachers; N_I = Number of Instructors; N_{TT} = Total Number of Respondents; HN= Highly Needed; NN = Not Needed

Table 1 shows the pedagogical skills needs of motor vehicle mechanics work teachers. The respondent indicated that items 1 – 10, 12, 13, and 15 were skills needed by the MVWM teacher for pedagogy with mean values that range from 3.87 – 4.84 and have an accompanying standard deviation also ranging between 0.80 and 1.78. The mean scores consistently indicate that these pedagogical skills are perceived as needed, with average scores above 3.5. The standard deviation falls within a moderate range, suggesting that the data points in the distribution are not extremely spread out, but there is still some degree of variability. However, Item 11 and 14 were rated as "Not Needed," with mean values of 1.54 and 2.28, and their standard deviation was 0.96 and 0.67 respectively. The average of the grand mean of 4.09 indicated that the skills related to instructional goal identification, task analysis, instructional design, questioning techniques, and evaluation procedures were pedagogical skills needed by MVMW teachers.

Research question 2: What are the affective skills needs of motor vehicle mechanics work teachers?

Table 2: Mean and Standard Deviation of MVMW Instructors and Teachers on the Affective Skills Needs of Teachers

S/N	Items	N _T = 81 N _I = 42 N _{TT} = 123				Remark
		$\bar{x}_T$	$\bar{x}_I$	$\bar{x}_G$	σ	
1.	Incorporate affective programmemes such as positive behavioral intervention support	3.70	3.64	3.68	0.60	Needed
2.	Affective domain teaching occurs simultaneously with teaching in the cognitive domain, never in lieu of it.	3.67	3.62	3.65	0.70	Needed
3.	Focus instruction on the levels of affective domain of learning and teaching.	3.78	3.76	3.77	0.48	Needed
4.	Focus assessment on the levels of affective domain of learning and teaching.	3.94	3.93	3.93	0.40	Needed
5.	Utilize regular affective assessment in the classroom.	3.93	3.93	3.93	0.45	Needed
6.	Promotion of positive attitude towards learning.	3.77	3.71	3.75	0.59	Needed
7.	Development of affect management skills in the classrooms.	3.75	3.74	3.75	0.66	Needed
8.	Communicating in an effective, empathetic and polite manner with students.	4.04	4.02	4.03	0.40	Needed
9.	Facilitating the development of students' potentials.	3.75	3.76	3.76	0.64	Needed
10.	Interpersonal training for teachers	3.74	3.74	3.74	0.49	Needed
11.	Skills in conflict resolution in the classroom.	3.67	3.62	3.65	0.74	Needed
12.	Skills in active listening	3.84	3.81	3.83	0.57	Needed
13.	Offer suggestions and guidance when needed especially during difficulty.	3.79	3.74	3.77	0.54	Needed
14.	Involve the students in the evaluation of their interest and performance in Motor Vehicle Mechanic Work	3.70	3.69	3.70	0.56	Needed
15.	Present skills to be performed during training sequentially and logically i.e. from known to unknown.	3.91	3.93	3.92	0.51	Needed
Grand Mean				3.79	0.56	Needed

KEY: $\bar{x}_T$ = Mean of Teacher; $\bar{x}_I$ = Mean of Instructors, $\bar{x}_G$ = Grand Mean Response of Respondents; σ = Standard Deviation of Respondents; N_T = Number of Teachers; N_I = Number of Instructors; N_{TT} = Total Number of Respondents; N= Highly Needed; NN = Not Needed

Table 2 shows the affective skills needs of motor vehicle mechanics work teachers. The respondent indicated that all items 1 to 15 were affective skills needed by the MVWM teacher with mean values which has 4.03 as the highest mean and 3.65 as the lowest. The accompanying standard deviation also ranges between 0.40 and 0.74. The mean scores consistently indicate that these teachers' affective skills are perceived as needed, with average scores above 3.5. The standard deviation falls within a moderate range, suggesting that the data points in the distribution are not extremely spread out rather, they are closely gathered. The grand mean of 3.79 implies that MVWM teachers are identified as needing proficiency in effective, empathetic, and polite communication with students, the facilitation of students' potential development, interpersonal training, conflict resolution skills, active listening abilities, providing suggestions and guidance during challenges, involving students in the evaluation of their interest and performance in Motor Vehicle Mechanic Work, and presenting skills during training sequentially and logically, progressing from known to unknown.

Hypothesis 1: There is no significant difference in the mean ratings of instructors and motor vehicle mechanics work teachers on skills needs of motor vehicle mechanics work teachers concerning pedagogical skills.

Table 3: t-test Analysis on the Significant Difference between the Mean Responses of the Respondents on the Pedagogical Skills Needs of Teachers

Respondents	N	Mean	σ	df	t	P – value	Remark
Teachers	81	4.11	0.42	121	0.57	0.57	Not Significant
Instructors	42	4.06	0.48				

P > 0.05 N= Number of respondents, σ = Standard Deviation

Table 3 presents the t-test analysis conducted to examine the difference in mean responses between motor vehicle mechanics work (MVMW) teachers and instructors regarding pedagogical skills needs yielding a p-value of 0.57, which is greater than the 0.05 level of significance. Hence, there is no significant difference in the mean ratings of

instructors and motor vehicle mechanics work teachers on skills needs of motor vehicle mechanics work teachers concerning pedagogical skills.

Hypothesis 2: There is no significant difference in the mean ratings of instructors and motor vehicle mechanics work teachers on skills needs of motor vehicle mechanics work teachers with respect to affective skills.

Table 4: t-test Result on the Significant Difference between the Mean Responses of the Respondents on the Affective Skills Needs of Teachers

Respondents	N	Mean	σ	df	t	P – value	Remark
Teachers	81	3.80	0.31	121	0.37	0.71	Not Significant
Instructors	42	3.78	0.33				

P > 0.05 N = Number of respondents, σ = Standard Deviation

Table 4 presents the t-test analysis conducted to investigate Hypothesis 2, examining the difference in mean ratings between motor vehicle mechanics work (MVMW) teachers and instructors on affective skills needs, resulting in a p-value of 0.71, which is greater than the 0.05 level of significance. Hence, there is no significant difference in the mean ratings of instructors and motor vehicle mechanics work teachers on skills needs of motor vehicle mechanics work teachers concerning affective skills.

Findings of the Study

The following are the major findings of the study based on the results presented:

1. 13 out of 15 pedagogical skills were considered needed by MVMW teachers. The corresponding hypothesis revealed that there was no significant difference in the mean ratings of instructors and motor vehicle mechanics work teachers on skills needs of motor vehicle mechanics work teachers with respect to pedagogical skills.
2. All the 15 affective skills were considered ‘needed’ by the MVMW teachers. The corresponding hypothesis revealed that there was no significant difference in the mean ratings of instructors and motor vehicle mechanics work teachers on skills needs of motor vehicle mechanics work teachers concerning affective skills.

DISCUSSION

The findings of the study revealed that the pedagogical skills needed by MVMW teachers include skills related to asking questions that will stimulate discussion and critical thinking, designing and implementing evaluation procedures that focus on learner achievement and instructional effectiveness, design instruction appropriate to goals and objectives, identify the best method of presenting new skills and safe working habits associated with practical, use resources appropriate to instructional objectives, use organizational and management skills to establish maximally effective learning environment and implement instruction appropriate to goals and objectives. The corresponding hypothesis revealed that there was no significant difference in the mean ratings of instructors and motor vehicle mechanics work teachers on skills needs of motor vehicle mechanics work teachers with respect to pedagogical skills. The study's findings shed light on the essential pedagogical skills required by motor vehicle mechanics work (MVMW) teachers in Nigeria, encompassing instructional goal identification, task analysis, instructional design, effective questioning techniques, and evaluation procedures. This aligns with broader educational research and practices across the country. For instance, in vocational and technical education, where MVMW is situated, Audu *et al.* (2014) emphasize the need for teachers to possess a clear understanding of instructional goals to guide students in acquiring practical skills. Additionally, task analysis and instructional design have been recognized as fundamental elements in vocational education (Onyekuru, 2015). The importance of effective questioning techniques is echoed by Nappi (2017), who argues that thoughtful and probing questions encourage critical thinking and engagement in the learning process. Furthermore, the significance of rigorous evaluation procedures is underscored in the Nigerian education system (Govender *et al.*, 2014), emphasizing the need for continuous assessment to gauge students' understanding and skills acquisition. These evidences collectively reinforce the nationwide relevance of the identified pedagogical skills for MVMW teachers in Nigeria.

The findings further revealed that the affective skills needed by MVWM teachers include proficiency in effective, empathetic, and polite communication with students, the facilitation of students' potential development, interpersonal training, conflict resolution skills, active listening abilities, providing suggestions and guidance during challenges, involving students in the evaluation of their interest and performance in Motor Vehicle Mechanic Work, and presenting skills during training sequentially and logically, progressing

from known to unknown. The associated hypothesis revealed that there was no significant difference in the mean ratings of instructors and motor vehicle mechanics work teachers on skills needs of motor vehicle mechanics work teachers concerning affective skills. The findings are in agreement with the report of Agih (2018) and Myunghee *et al.*, (2010) who suggested that proficiency in effective, empathetic, and polite communication is foundational to effective teaching and learning that the teacher must possess affective skills. The author emphasized the importance of not only transmitting information but also creating an inclusive and respectful learning environment where students feel heard and valued. The facilitation of students' potential development goes beyond the acquisition of technical skills, aligning with a broader perspective on student-centered learning. This involves recognizing and nurturing each student's unique strengths, talents, and areas for improvement, fostering holistic growth in the educational journey. To further buttress the findings Adewale (2018) and Okebukola (2015) opined that interpersonal training and conflict resolution skills are vital for navigating the complexities of student interactions.

CONCLUSION

The study on the pedagogical and affective skills needs of motor vehicle mechanics work (MVMW) teachers in Government Science and Technical Colleges (GSTCs) and Business and Engineering Skills Training (BEST) Centres in Adamawa and Taraba States revealed key insights. Participants identified pedagogical skills as essential, including stimulating critical thinking, designing effective evaluation procedures, and implementing appropriate instruction. Similarly, affective skills were deemed necessary, such as effective communication, active listening, and conflict resolution. Importantly, there were no significant differences between instructors and MVMW teachers regarding the perceived importance of these skills. These findings emphasize the critical role of both pedagogical and affective skills in creating a conducive learning environment and preparing students for success in the automotive industry. Such insights are invaluable for improving curriculum development, teacher training programs, and educational policies to enhance the quality of technical education in the region.

Recommendations

1. Given the identified pedagogical skills needs of motor vehicle mechanics work (MVMW) teachers, it is recommended the Ministries of Education should design and implement targeted training programmes focusing on instructional goal identification, task analysis, instructional design, questioning techniques, and evaluation procedures.
2. National Board for Technical Education should review curriculum of technical colleges with a view to include the identified affective skills into the curriculum of motor vehicle mechanics work. This measure will go a long way to advance the affective aspect of motor vehicle mechanics trainees and trainees in the automobile world of work.

REFERENCES

- Adeoye, F. O., & Babalola, J. B. (2016). Challenges of Implementing Automotive Technology Curriculum in Technical Colleges for Sustainable Development in Nigeria. *Journal of Vocational and Technical Education*, 13(1), 1-9.
- Adeyemi, T., & Olaniyan, D. (2018). Enhancing pedagogical skills of vocational education teachers in Nigeria. *Journal of Technical Education and Training*, 10(1), 61-76.
- African Union (2020). The Digital Transformation Strategy for Africa (2020-30).
- Binuomote, M. O., Liadi, H. O., & Idike, I. (2018). Strategies for improving delivery of business education in tertiary institutions for national development in Oyo State, Nigeria. *Journal of Association of Vocational and Technical Educators of Nigeria*, 23(2), 49-58.
- Eze, C., Igwe, O., & Nwosu, J. (2019). Pedagogical practices of vocational education teachers and its influence on skill acquisition among students in Nigeria. *International Journal of Vocational and Technical Education*, 11(1), 1-14.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2019). How to design and evaluate research in education. McGraw-Hill Education.
- Harasim, L. (2017). *Learning theory and online technologies*. Routledge.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review*, 27.
- Ibrahim, A. (2017). Pedagogical skills and teaching effectiveness among technical education lecturers in Nigeria. *Journal of Technical Education and Training*, 9(1), 33-42.
- Johnson, D. W., Johnson, R. T., & Smith, K. A. (2019). Cooperative learning: Improving university instruction by basing practice on validated theory. *Journal on Excellence in College Teaching*, 30(1), 4-27.
- Ogunyemi, O., Ogbari, M. E., Ogunyemi, A. O., & Okorie, U. E. (2020). Effects of affective skills of teachers on academic performance of secondary school students

- in physics in Ekiti State, Nigeria. *Journal of Applied Sciences and Environmental Management*, 24(7), 1173-1178.
- Okeke, K. C. (2017). Challenges Facing Technical and Vocational Education and Training (TVET) in Nigeria. *Journal of Education and Practice*, 8(10), 18-24.
- Oladimeji, D. M., & Oladimeji, S. M. (2018). Affective skills of teachers as a predictor of academic performance of secondary school students in Mathematics in Ibadan Metropolis, Oyo State, Nigeria. *The International Journal of Educational Development*, 4(1), 80-87.
- Olatunji, M. A., & Asani, M. O. (2019). Differentiated instruction in vocational education: Strategies for enhancing student learning outcomes. *Nigerian Journal of Technology Education*, 4(1), 12-21.
- Olorundare, A. S. (2017). Affective skills of teachers: a panacea for quality education in Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 7(10), 157-166.
- Oni, O. (2016). Integrating technology into vocational education: Opportunities and challenges for Nigerian teachers. *International Journal of Vocational and Technical Education*, 8(3), 28-36.
- Owolabi, A. R. (2019). Teachers' affective skills and students' academic performance in secondary schools in Ondo State, Nigeria. *International Journal of Humanities and Social Sciences Invention*, 8(2), 07-11.