



Perceived Role of Artificial Intelligence in Career Decision Making Among Secondary School Students in Port Harcourt Metropolis

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Abstract

The study examined artificial intelligence as an effective tool for career decision-making among public secondary school students in Port Harcourt Metropolis. It used a descriptive research design. Three (3) objectives and research questions guided the study. The study population comprised 54,102 students (SSI-SS3) from public senior secondary schools in Port Harcourt Metropolis. The study sample comprised 397 students. The study used simple random sampling. Data were collected using a self-structured questionnaire. Face and content validity were determined by three expert supervisors in Guidance and Counselling at Rivers State University. Internal consistency reliability was assessed using Cronbach's alpha, which yielded a reliability coefficient of 0.88. The study answered the research questions using descriptive statistics. The findings concluded that artificial intelligence tools play varying roles in the career decision-making of public senior secondary school students in Port Harcourt Metropolis. However, the study recommends that school guidance counsellors and administrators integrate AI career tools such as Google Gemini, ChatGPT, and Pymetrics into structured career guidance programmes.

Keywords: Artificial Intelligence, Career Decision-Making, Career Guidance, Google Gemini, ChatGPT

Introduction

Artificial Intelligence (AI) is a branch of computer science focused on developing systems that can perform tasks that typically require human intelligence, such as problem-solving, learning, reasoning, perception, and natural language understanding. The field has evolved rapidly, with foundational frameworks provided by scholars such as Russell and Norvig (2020) in *Artificial Intelligence: A Modern Approach*. They conceptualise AI as the study of intelligent agent systems that perceive their environment and act to maximise success through four lenses: thinking like humans, acting like humans, thinking rationally, and acting rationally. This multifaceted perspective underpins both theoretical advances and practical applications. In education, AI has demonstrated transformative potential. Zawacki-Richter et al.'s (2019) systematic review highlights its integration into personalised learning, automated assessment, and adaptive student support systems, shifting traditional pedagogy towards more responsive, individualised models. These capabilities extend naturally to career guidance, where AI can analyse vast datasets on student interests, skills, academic performance, and labour market trends to deliver tailored recommendations that address limitations of conventional counselling, such as resource scarcity and human biases.

Career decision-making is a critical developmental task for adolescents, as it shapes their educational choices, occupational aspirations, and future career trajectories (Holland, 1997; Gottfredson, 2005). In Port Harcourt Metropolis and many parts of Nigeria, public senior secondary school students often struggle to access effective career guidance, including limited availability of professional counselling services, inadequate career information resources,

and the influence of family expectations on career choices (Federal Republic of Nigeria (2013). Traditional career guidance approaches remain valuable; however, they may be limited in providing individualised, timely, and easily accessible support for students in rapidly changing educational and labour-market environments (OECD, 2021).

Recent advances in artificial intelligence (AI), particularly in natural language processing, machine learning, and intelligent recommendation systems, have created new possibilities for improving personalised educational support and decision-making (Zawacki-Richter et al., 2019). AI-based conversational systems such as ChatGPT and Google Gemini provide interactive platforms through which learners can access information, explore options, and receive guidance tailored to their queries. However, much of the existing research on AI applications in education has focused on higher education contexts, leaving limited empirical evidence on the effectiveness of AI tools for career decision-making among public secondary school students, particularly in developing-country settings such as Nigeria (Zawacki-Richter et al., 2019). Therefore, examining the effectiveness of AI tools such as Google Gemini, ChatGPT, and Pymetrics among secondary school students in the Port Harcourt Metropolis is necessary to provide evidence on their accessibility, usefulness, and potential contribution to career decision-making.

This study addresses these gaps by examining the effectiveness of Google Gemini AI, ChatGPT, and Pymetrics as tools for career decision-making among public senior secondary school students in the Port Harcourt Metropolis. It evaluates their potential to deliver accurate, efficient, and personalised guidance compared with traditional methods, while considering contextual challenges such as infrastructure, digital literacy, and ethical concerns, including data privacy and algorithmic bias. Recent scholarship indicates that artificial intelligence is increasingly influencing career exploration, career guidance, and career management, thereby creating new possibilities for supporting individuals in making career-related decisions (Bankins et al., 2024). Google Gemini is a generative artificial intelligence (AI) assistant developed by Google that uses large language models to understand and generate human-like responses. It allows users to interact with AI through conversation, similar to ChatGPT. Gemini can process and generate different types of information, including text, images, and other data formats, depending on the version and features available. It is designed to help users with tasks such as learning, writing, research, problem-solving, information search, and productivity. ChatGPT, developed by OpenAI, offers an interactive conversational interface that can simulate guidance, answer queries, and support self-directed career exploration—potentially helping to address limitations in access to career guidance. Research on AI-enhanced learning analytics has shown that AI-based tools can provide decision-support capabilities for learners in relation to career choices, while also revealing challenges concerning user needs, technology acceptance, and the appropriate use of AI in career decision-making (Gedrimiene et al., 2024). Pymetrics uses assessment-based approaches to identify individual cognitive and behavioural characteristics and can use these profiles to support career matching, thereby providing an accessible and potentially personalised approach to career guidance. By examining these tools in the Port Harcourt context, this research provides timely evidence to inform policy, enhance guidance frameworks, and promote equitable career development opportunities for Nigerian secondary school students.

Despite the critical role of informed career decision-making in shaping individual futures and national workforce development, many secondary school students continue to face difficulties in making appropriate educational and occupational choices. Career guidance is particularly important during secondary education because students are required to make decisions about subjects, programmes, further education, and eventual occupational pathways. A systematic review by Wang et al. (2024) found that career interventions for high school students are associated with outcomes related to career adaptability and career decision-making, demonstrating the importance of structured career guidance at this educational level. In contexts where access to qualified career counsellors and up-to-date labour-market information is limited, students may depend heavily on parents, teachers, peers, personal assumptions, or readily available online information when making career decisions. While traditional career counselling methods remain important in educational settings, their effectiveness may be constrained by limited resources, counsellor availability, large student populations, and difficulties in providing highly personalised guidance. Emerging evidence suggests that AI can potentially complement conventional career guidance by providing interactive and data-supported assistance. Bankins et al. (2024), based on a systematic review of 104 empirical studies, reported that AI is reshaping career exploration, career guidance, and career management and can influence individuals' career trajectories and

career competencies. Similarly, Gedrimiene et al. (2024) found that AI-enhanced learning analytics can support career decision-making, although issues relating to users' needs, acceptance, and the limitations of AI-supported recommendations must be considered. These findings suggest that AI should be viewed as a potential complement to, rather than an automatic replacement for, professional career counselling.

The Nigerian context further highlights the need for empirical investigation. Eze et al. (2025) examined perceptions of AI-driven personalised career guidance among Nigerian undergraduate and postgraduate students and found that AI-based career guidance is increasingly relevant to career decision-making in Nigeria. Their study also identified differences in perceptions between undergraduate and postgraduate students, demonstrating the importance of examining users' educational contexts when evaluating AI-driven career guidance. However, their study focused on university students rather than public senior secondary school students. Consequently, evidence concerning the use and perceived effectiveness of AI-driven career guidance among Nigerian secondary school students remains limited. Specifically, previous studies have not sufficiently examined the comparative effectiveness of specific AI-based systems such as Google Gemini, ChatGPT, and Pymetrics in enhancing career decision-making among public senior secondary school students (SS1–SS3) in Port Harcourt Metropolis. There is a notable gap in context-specific evidence regarding accessibility, cultural relevance, accuracy in aligning student profiles with local and global labour-market demands, and the extent to which AI-based tools complement or improve upon traditional career guidance approaches among this demographic. Moreover, although recent studies have established the relevance of AI to career development and career decision-making, much of the empirical literature has focused on adults, university students, or general career contexts rather than public senior secondary school students in Nigeria (Bankins et al., 2024; Eze et al., 2025). Wang et al. (2024) similarly demonstrate the importance of career interventions at the high-school level, but their systematic review does not specifically establish the comparative effectiveness of contemporary generative AI tools such as Google Gemini and ChatGPT or assessment-based platforms such as Pymetrics.

This study therefore fills an important empirical and contextual gap by investigating the effectiveness of Google Gemini, ChatGPT, and Pymetrics as career guidance resources for public senior secondary school students in Port Harcourt Metropolis. It compares their ability to provide accurate, efficient, and personalised career information and guidance against traditional approaches, while also considering contextual and ethical issues associated with their use. The study consequently provides evidence that can support the responsible integration of AI into school-based career counselling frameworks and contribute to the development of more accessible, responsive, and contextually appropriate career guidance practices in similar under-resourced Nigerian educational contexts.

The primary purpose of this study is to determine the overall perceived contribution of AI tools to career decision-making among public senior secondary school students in Port Harcourt Metropolis. Explicitly, the objectives of the study are to:

1. Assess public senior secondary school students' perceptions of the role of Google Gemini in career decision-making in Port Harcourt Metropolis.
2. Examine public senior secondary school students' perceptions of the role of ChatGPT in career decision-making in Port Harcourt Metropolis.
3. Investigate public senior secondary school students' perceptions of the role of Pymetrics in career decision-making in Port Harcourt Metropolis.

The following research questions were posed to guide the study:

1. What are public senior secondary school students' perceptions of the role of Google Gemini in career decision-making in Port Harcourt Metropolis?
2. What are public senior secondary school students' perceptions of the role of ChatGPT in career decision-making in Port Harcourt Metropolis?
3. What are public senior secondary school students' perceptions of the role of Pymetrics in career decision-making in Port Harcourt Metropolis?

Methodology

This study adopted a descriptive research design. According to Nworgu (2015) and Nwankwo (2013), descriptive research aims to describe a population, situation, or phenomenon in a precise and systematic manner, which is appropriate for studies that seek to examine one or more variables measured on a ratio or interval scale (scores), thereby allowing for score correction. This design is therefore essential, as the study seeks to determine the effectiveness of artificial intelligence tools for career decision-making among secondary school students. This study was carried out in the Port Harcourt Metropolis, Rivers State. Rivers State is located within the Niger Delta area in the South-South geographical zone of Nigeria. The study population is 54,102, comprising male and female students in public senior secondary schools in the Port Harcourt Metropolis. The population comprises 24,680 male students and 29,422 female students (Rivers State Senior Secondary Schools Board, 2024). The study sample comprised 397 male and female students, calculated using Taro Yamane's formula (Yamane, 1967). The study used simple random sampling. A total of 200 males and 197 females took part in the study. A self-structured questionnaire titled the AI and Students' Career Decision-Making Questionnaire (AI-SCDMQ) was used for data collection. The researchers designed the questionnaire and divided it into 2 sections, A and B. Section A covered respondents' demographic data, while Section B addressed respondents' ideas on the subject matter. The instrument comprised 30 items; responses to the statement items were rated on a 4-point scale: Strongly Agree (SA) = 4 points, Agree (A) = 3 points, Disagree (D) = 2 points, Strongly Disagree (SD) = 1 point. The questionnaire was subjected to face and content validity, and the instrument was validated by expert judges in Guidance and Counselling at Rivers State University, Nkpulu-Oroworukwo, Port Harcourt. To determine the reliability of the instrument, Cronbach's alpha was used to obtain an index of 0.88. Of the 397 copies of the instrument distributed, 397 (100%) were correctly filled in and retrieved in good condition and were used for data analysis. The research questions were answered using the mean and standard deviation.

Results

Table 1: Mean and Standard Deviation on public senior secondary school students' perceptions of the role of Google Gemini in career decision making in Port Harcourt Metropolis(n=397).

SN	Items	Mean	SD	Remarks
1	Google Gemini provides me with accurate and up-to-date information about different career options.	2.18	1.04	Disagreed
2	Using Google Gemini helps me understand the educational requirements for careers I am interested in	2.22	1.51	Disagreed
3	Google Gemini assists me in matching my skills and interests with suitable career paths.	1.76	0.83	Disagreed
4	The career advice I receive from Google Gemini influences my choice of subjects or courses.	2.07	1.04	Disagreed
5	Google Gemini helps me explore emerging career opportunities in technology and other fields.	1.81	1.02	Disagreed
6	I rely on Google Gemini to clarify doubts about career prospects after secondary school.	2.87	1.06	Agreed
7	Google Gemini's responses make me more confident in making career-related decisions.	1.71	0.75	Disagreed
8	Using Google Gemini has broadened my knowledge of alternative career options I had not previously considered.	3.28	0.82	Agreed
9	Google Gemini helps me evaluate the long-term benefits and challenges of different careers.	2.66	0.66	Agreed
10	Overall, Google Gemini plays a significant role in guiding my career decision-making process.	1.92	0.95	Disagreed
Total	Google Gemini	2.25	0.38	Disagreed

Table 1 presents the mean and standard deviation of public senior secondary school students' perceptions of the role of Google Gemini in career decision-making in Port Harcourt Metropolis, based on 397 respondents. The overall (total) mean score is 2.25 with a standard deviation of 0.38, and the corresponding remark is "Disagreed." This

indicates that, on the whole, public senior secondary school students in Port Harcourt Metropolis do not perceive Google Gemini as playing a significant role in their career decision-making process. Although some individual items received agreement, particularly the use of Google Gemini to broaden knowledge of alternative career options (Mean = 3.28), clarify doubts about career prospects after secondary school (Mean = 2.87), and evaluate the long-term benefits and challenges of different careers (Mean = 2.66), these positive perceptions were not sufficient to produce an overall agreement. The overall mean of 2.25 suggests that students generally disagreed that Google Gemini significantly assists them in making career decisions. This is further supported by the relatively low overall standard deviation of 0.38, which indicates that the responses were relatively close to the overall mean, showing a fairly consistent pattern of perception among the respondents. Therefore, based on the total mean, the table indicates that Google Gemini is not perceived by the majority of public senior secondary school students as a major or significant influence on their career decision-making in Port Harcourt Metropolis. While students acknowledge that Gemini can provide useful information and expose them to alternative career possibilities, its overall perceived role in guiding their career decisions remains low.

Table 2: Mean and Standard Deviation on public senior secondary school students' perceptions of the role of ChatGPT in career decision making in Port Harcourt Metropolis (n=397).

SN	Items	Mean	SD	Remarks
1	ChatGPT provides me with detailed explanations of various career paths and their requirements.	2.75	0.99	Agreed
2	I use ChatGPT to generate ideas about careers that align with my personal strengths and interests.	2.72	1.05	Agreed
3	ChatGPT helps me prepare for career-related interviews or counselling sessions.	2.43	1.07	Disagreed
4	The career guidance I obtain from ChatGPT influences the decisions I make about my future occupation.	2.39	1.13	Disagreed
5	ChatGPT assists me in understanding the skills needed for success in different professions	2.56	1.25	Agreed
6	Using ChatGPT has improved my ability to compare multiple career options effectively.	2.54	0.99	Agreed
7	ChatGPT's responses encourage me to research further about potential careers.	2.51	1.06	Agreed
8	I find ChatGPT useful in identifying educational pathways that lead to my desired career.	2.49	1.12	Disagreed
9	ChatGPT helps me overcome confusion when choosing between different career alternatives.	3.27	0.94	Agreed
10	Overall, ChatGPT significantly contributes to my career decision-making process.	2.06	0.90	Disagreed
Total	ChatGPT	2.57	0.40	Agreed

The total mean score of 2.57 with a standard deviation of 0.40, with a remark of "Agreed," indicates that, overall, public senior secondary school students in Port Harcourt Metropolis agree that ChatGPT plays a role in their career decision-making. The mean of 2.57 suggests a generally positive perception of ChatGPT as a tool that supports students in exploring and considering career options. The standard deviation of 0.40 indicates that the students' responses were relatively close to the mean, showing a fairly consistent perception among the 397 respondents. Therefore, the finding implies that ChatGPT is perceived to have a positive and supportive role in the career decision-making process of public senior secondary school students in Port Harcourt Metropolis.

Table 3: Mean and Standard Deviation on public senior secondary school students' perceptions of the role of Pymetrics in career decision making in Port Harcourt Metropolis (n=397).

SN	Items	Mean	SD	Remarks
1	Pymetrics assessments help me discover my soft skills and cognitive strengths relevant to careers.	2.08	0.66	Disagreed
2	The career matching results from Pymetrics influence the career options I consider.	2.27	1.10	Disagreed
3	Pymetrics games and tests provide me with insights into careers that suit my personality.	2.32	1.25	Disagreed
4	Using Pymetrics has increased my awareness of careers I am well-suited for.	2.63	1.13	Agreed
5	Pymetrics recommendations guide me in selecting subjects or programmes that align with my strengths.	3.46	0.88	Agreed
6	The feedback from Pymetrics makes me more confident about my career choices.	3.11	0.93	Agreed
7	Pymetrics helps me understand how my behavioural traits relate to workplace success.	1.91	0.75	Disagreed
8	I rely on Pymetrics results when discussing career plans with teachers or counsellors.	2.91	1.04	Agreed
9	Pymetrics has broadened my perspective on non-traditional or emerging career paths.	2.41	0.81	Disagreed
10	Overall, Pymetrics plays an important role in shaping my career decision-making.	2.44	1.12	Disagreed
Total	Pymetrics	2.55	0.33	Agreed

The table shows that the total mean score for Pymetrics is 2.55, with a standard deviation of 0.33, and the corresponding remark is “Agreed.” This indicates that, overall, public senior secondary school students in Port Harcourt Metropolis perceive Pymetrics as playing a positive role in their career decision-making. The total mean of 2.55 suggests that respondents generally agreed that Pymetrics contributes to their understanding and consideration of career options. The standard deviation of 0.33 is relatively low, indicating that the responses of the 397 students were fairly consistent and clustered around the overall mean. Therefore, the finding implies that Pymetrics is generally perceived by public senior secondary school students as a useful tool in supporting career decision-making, particularly in helping them identify career-related strengths, consider suitable programmes, and gain confidence in their career choices. However, the overall level of agreement is relatively modest, suggesting that while students perceive Pymetrics positively, its role is supportive rather than overwhelmingly influential in their career decision-making process.

Discussion

The finding presented in Table 1 shows that public senior secondary school students in Port Harcourt Metropolis generally disagreed that Google Gemini plays a significant role in their career decision-making, as indicated by the overall mean score of 2.25 and standard deviation of 0.38. Although the respondents agreed with some specific functions of Google Gemini, particularly its ability to broaden their knowledge of alternative career options (Mean = 3.28), clarify doubts about career prospects after secondary school (Mean = 2.87), and help evaluate the long-term benefits and challenges of different careers (Mean = 2.66), the overall mean fell below the criterion for agreement. This suggests that although students recognise some informational benefits of Google Gemini, they do not generally perceive it as a major or significant influence on their career decision-making. This finding differs from the findings of Chang et al. (2024), who examined the use of an AI mentor in STEM career development and found that an AI-supported mentoring system could assist users with career planning, goal setting and the search for career-related information. Chang et al. (2024) suggested that generative AI can serve as a supplementary resource by providing accessible and responsive information during career development. The difference between their findings and the present finding may be associated with the population and context of the studies. While an AI mentoring system designed specifically for career development may encourage sustained engagement with career planning, public senior secondary school students in Port Harcourt Metropolis may not yet use Google Gemini extensively or specifically for

career guidance. Thus, the present finding suggests that the availability of career-related information through Gemini does not necessarily translate into a strong perceived influence on students' actual career decisions. The present finding also contrasts with Eze et al. (2025), who reported that undergraduate and postgraduate students in Nigeria generally had positive perceptions of AI-driven personal career guidance and expressed confidence in using AI platforms to obtain advice concerning their future careers. The difference may again be explained by the educational level and maturity of the respondents. University students are more likely to be directly confronted with decisions concerning academic specialisation, employment and professional development, whereas secondary school students may depend more heavily on parents, teachers, peers and professional guidance counsellors when making career decisions. Therefore, although the present respondents acknowledged that Google Gemini can provide useful career information, they did not perceive it as sufficiently influential to constitute a major source of career decision-making. The finding is nevertheless consistent with the caution expressed in the literature concerning the role of AI in career guidance. Yang et al. (2026) found that generative AI counselling could effectively reduce information deficits among students, but human counselling was more effective in improving career decision self-efficacy and actual decision-making outcomes. This provides a possible explanation for the relatively low overall perception of Google Gemini in the present study. Google Gemini may assist students in obtaining information about career alternatives and prospects, as reflected in the high mean of 3.28 for broadening knowledge of alternative careers, without necessarily providing the personal interaction, confidence-building and contextual interpretation required for students to make firm career decisions. The finding therefore suggests that Google Gemini may be more useful as an information-support tool than as a substitute for professional career counselling among public senior secondary school students.

The finding for ChatGPT indicates a generally positive perception among the respondents. The overall mean score of 2.57 and standard deviation of 0.40 show that public senior secondary school students in Port Harcourt Metropolis agreed that ChatGPT plays a role in their career decision-making. The relatively low standard deviation indicates that the responses were fairly consistent among the 397 respondents. The result suggests that, unlike Google Gemini, students perceive ChatGPT as providing a more noticeable level of support in exploring and considering career options. This finding is consistent with Dahri et al. (2025), who examined the effect of ChatGPT on students' academic achievement and career readiness and found a positive relationship between frequent ChatGPT use, cognitive skills and career-related knowledge. They further reported a positive association between career-related knowledge and career readiness. The finding of the present study therefore suggests that the interactive nature of ChatGPT may enable students to obtain explanations about different career paths, understand the skills required in various professions and compare possible career alternatives. Such functions can increase students' access to career-related information and support their consideration of available options. The present finding is also supported by Xiao and Zheng (2025), who found that regular use of ChatGPT significantly increased university students' confidence in obtaining employment and contributed to career-related knowledge and proactive job-seeking behaviour. Although the respondents in the present study were secondary school students rather than university students, the findings suggest that access to an interactive AI tool can contribute to career-related understanding. ChatGPT may help students who are uncertain about their future careers to ask questions, compare alternatives and obtain explanations that may otherwise be difficult to access. Consequently, the agreement recorded in the present study indicates that students perceive ChatGPT as a useful supportive resource in their career decision-making. The finding is further supported by Loidl et al. (2026), who investigated undergraduate students' use of ChatGPT for career development and found that students used the technology for activities such as interview preparation, workplace communication, résumé and cover-letter development, brainstorming and revision. The researchers also observed that students considered ChatGPT accessible and useful, although they expressed concerns about its accuracy, authenticity and the possibility of overdependence. These concerns are important in interpreting the present finding. The overall mean of 2.57 represents agreement, but it does not imply that ChatGPT should be regarded as an authoritative source for career decisions. Rather, the result indicates that students perceive it as a useful support mechanism. Career information generated by ChatGPT may still require verification and professional interpretation, particularly where decisions have significant long-term consequences.

The finding concerning Pymetrics shows that public senior secondary school students in Port Harcourt Metropolis also agreed that Pymetrics plays a positive role in their career decision-making. The overall mean score of 2.55 and standard deviation of 0.33 indicate a moderate level of agreement and a high degree of consistency in the responses

of the 397 students. This suggests that respondents perceive Pymetrics as useful in helping them understand their career-related strengths, behavioural characteristics and possible career options. However, the relatively modest mean also indicates that its perceived influence is supportive rather than overwhelmingly strong. The finding can be related to Leutner et al. (2023), who investigated game-based assessments of cognitive ability using a large sample of completed assessments. Their findings provided evidence of convergent validity and test-retest reliability and indicated positive user experiences with game-based cognitive assessment. Although their study was conducted in a recruitment context rather than among secondary school students making educational and career decisions, the findings provide relevant support for the use of technology-based assessment in identifying characteristics associated with individuals' abilities. In the context of the present study, Pymetrics may therefore help students become more aware of their cognitive and behavioural characteristics and consider how these characteristics relate to possible career choices. However, the positive perception of Pymetrics in the present study should be interpreted with caution in view of the limitations identified in research on AI-based assessment. Rhea et al. (2022), in developing an external stability audit framework for personality predictions in AI hiring systems, emphasised the importance of independently examining the validity and stability of AI-based personality predictions before using them for important decisions. This is particularly relevant to the present finding because students may interpret the results generated by an AI-based assessment as an indication of the careers for which they are naturally suited. Such results should instead be treated as one source of information among several considerations in career decision-making. Similarly, Dukanovic and Krpan (2025) found that AI-based personality assessment methods showed potential advantages but had lower predictive validity than established psychometric measures. This provides an important qualification to the present finding. Although students may perceive Pymetrics as useful for identifying their strengths, personality characteristics and possible career preferences, such assessments should not be regarded as definitive evidence of career suitability. Professional interpretation, students' interests, academic performance, abilities, values and available educational opportunities should also be considered before making career decisions.

The findings indicate that the three AI tools examined in the study do not have the same perceived role in the career decision-making of public senior secondary school students in Port Harcourt Metropolis. Google Gemini recorded an overall mean of 2.25, indicating disagreement, whereas ChatGPT and Pymetrics recorded overall means of 2.57 and 2.55 respectively, indicating agreement. This pattern suggests that students perceive ChatGPT and Pymetrics as having a more noticeable supportive role in career decision-making than Google Gemini. Google Gemini appears to be recognised primarily for providing information about alternative careers and career prospects, while ChatGPT may provide more interactive support for exploring career options and understanding career-related information. Pymetrics, on the other hand, provides an assessment-oriented approach through which students can gain insight into cognitive and behavioural characteristics relevant to career exploration. The overall finding is consistent with the broader position of Yang et al. (2026) that AI and human counselling should have complementary rather than competing roles in career development. AI tools can improve students' access to information and provide opportunities for exploring career alternatives, but professional guidance counsellors remain important for helping students interpret information, develop confidence and make contextually appropriate decisions. Therefore, the findings of the present study suggest that Google Gemini, ChatGPT and Pymetrics should be integrated into career guidance in public senior secondary schools as supplementary tools rather than replacements for professional career counselling. Guidance counsellors can help students evaluate information obtained from these technologies, identify their individual interests and abilities, consider educational and occupational realities, and make informed and realistic career decisions.

Conclusion

Based on the findings of the study, it is concluded that artificial intelligence tools have varying roles in the career decision-making of public senior secondary school students in Port Harcourt Metropolis. The findings revealed that Google Gemini was not perceived by the students as playing a significant overall role in their career decision-making, although the students acknowledged its usefulness in broadening their knowledge of alternative career options, clarifying career prospects after secondary school, and evaluating the long-term benefits and challenges associated with different careers. In contrast, ChatGPT was perceived as having a positive role in the students' career decision-making. The students agreed that ChatGPT supports their exploration and consideration of career options by providing accessible career-related information and helping them understand different career possibilities. Similarly, Pymetrics

was perceived positively, with the students agreeing that it contributes to their career decision-making, particularly by providing information that may help them understand their strengths and characteristics in relation to possible career choices. The study therefore concludes that while AI tools can provide valuable support for career exploration and decision-making, their roles are not uniform across different technologies. ChatGPT and Pymetrics were perceived as useful supportive tools, whereas Google Gemini was not perceived as having a significant overall influence. The findings further suggest that AI tools should not be regarded as replacements for professional career guidance and counselling. Rather, they should be integrated as supplementary resources that can improve students' access to career information while professional guidance counsellors provide the personal interpretation, contextual understanding, confidence-building and decision support required for effective career decision-making. Consequently, the effective use of AI in career guidance at the secondary school level requires a balanced approach in which students are encouraged to benefit from the informational and assessment capabilities of AI while relying on qualified guidance counsellors to help them critically evaluate AI-generated information and make informed, realistic and appropriate career decisions.

Recommendations

1. School guidance counsellors and administrators should integrate AI career tools such as Google Gemini, ChatGPT and Pymetrics into structured career guidance programmes, pairing digital exploration with human counselling to help students critically interpret and apply the information generated by these platforms.
2. Curriculum planners and education authorities should organise capacity-building workshops for teachers and counsellors on the effective and ethical use of AI career tools, ensuring that students receive age-appropriate, locally relevant guidance that complements rather than replaces professional support.
3. Developers and education stakeholders should collaborate to adapt and localise AI career platforms so that they reflect the Nigerian labour market, educational pathways, and cultural context, thereby increasing their relevance and usefulness for public secondary school students in Port Harcourt Metropolis and similar settings.

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