**CHAPTER FIVE**

**DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

This chapter presents a comprehensive discussion of the findings, the conclusion drawn from the research, the implications for policy and practice, and recommendations for future actions. It also includes suggestions for further study. The discussion section critically interprets the findings in light of previous literature, providing a basis for understanding the practical and theoretical significance of the study.

**5.1 Discussion of the Findings**

**Finding 1: Availability and Accessibility of Technological Resources**  
The findings indicate that there is a general lack of adequate technological infrastructure in senior secondary schools, particularly in public schools within Edo South Senatorial District. The mean scores showed that technological tools such as computers, internet access, projectors, and digital learning materials are limited. This finding strongly aligns with the work of Obi and Okoro (2020), who reported significant disparities in ICT resource allocation among Nigerian schools. Similarly, Ojo and Abimbola (2017) emphasized the role of inadequate infrastructure as a major barrier to effective technology adoption.

However, this study adds depth to existing literature by revealing that while some infrastructure may be present, its accessibility and even distribution remain problematic. Students and teachers often experience difficulty in accessing these tools regularly, leading to underutilization and dissatisfaction. This suggests that providing ICT tools alone is not enough equal access and functional usability are critical.

**Finding 2: Teachers’ Preparedness and Attitudes Toward Technology**  
The study revealed that teachers reported low preparedness and lack of confidence in using technology for instructional purposes. The responses also indicated minimal formal training in integrating technology into pedagogy. This corroborates the findings of Ertmer et al. (2012), who emphasized that teachers’ beliefs, confidence, and training significantly influence their adoption of technology.

Interestingly, the results showed no significant difference in perception between teachers and non-teachers, implying a systemic issue rather than an individual one. This uniformity in perception suggests that the professional development programs currently in place may not be effective or widespread enough. In contrast to studies like Adesanya and Idowu (2016), which reported successful integration of technology due to intensive teacher training, our findings reflect the gaps that still exist in mainstream public education settings.

**Finding 3: Impact of Technology on Student Engagement and Learning Outcomes**  
Contrary to expectations, the findings showed that technology had a limited perceived impact on student engagement and academic performance. Most respondents disagreed or were neutral on whether technology significantly improved participation, understanding, or test scores. These results contrast with the optimistic reports by Adewale and Alabi (2019), who documented enhanced performance in tech-supported classrooms, particularly in science and math.

One possible explanation for this divergence lies in the inconsistent or superficial use of technology in classrooms. It is likely that while technology is available, it is not used in a way that is pedagogically effective or aligned with curriculum goals. The absence of digital literacy among both students and teachers could also hinder the full realization of benefits. This study contributes by highlighting the need for integrating technology meaningfully, not just materially.

**Finding 4: Challenges to Technology Integration**  
A wide range of challenges were reported by respondents, including financial constraints, lack of administrative support, outdated infrastructure, and inadequate maintenance. These challenges are consistent with the findings of Emenike and Osarenren (2018), who stressed that successful technology integration requires more than equipment—it demands robust policy frameworks, funding, and continuous evaluation.

What makes this study particularly valuable is its confirmation that even when schools are equipped with technology, systemic issues can still impede its effective use. From irregular electricity supply to insufficient ICT personnel, the environment in many schools is not conducive to digital learning. Furthermore, the study found that there is no consistent strategy in most schools for evaluating the effectiveness of the technology they deploy, thereby weakening feedback loops that could inform better decisions.

**5.2 Implications of the Study**

The findings from this study have significant implications for multiple stakeholders:

* **For Policymakers:** The study reinforces the urgent need to develop targeted policies that ensure equitable access to technological tools in all schools, particularly in under-resourced public schools.
* **For School Administrators:** School leaders must prioritize the development of a strategic technology integration plan, allocate budgets for infrastructure upgrades, and monitor usage.
* **For Teacher Training Institutions:** Colleges and universities must revise their teacher education curricula to include modern ICT pedagogies and digital competencies.
* **For Curriculum Developers:** There is a need to revise learning objectives and materials to align with digital tools that support student-centered learning.
* **For NGOs and Donors:** Development partners can play a vital role by supporting ICT training programs, funding equipment, and helping establish sustainable monitoring frameworks.

**5.3 Conclusion**

This study investigated the impact of technology on teaching and learning in senior secondary schools in Edo South Senatorial District. It sought to understand the level of technological access, teacher preparedness, student engagement, and institutional challenges related to technology integration.

The analysis revealed that while some technological infrastructure exists, it is unevenly distributed and underutilized. Teachers lack adequate training and confidence in using these tools effectively. Student learning outcomes remain largely unaffected by current technological practices, and schools face persistent structural and financial obstacles.

In conclusion, technology alone cannot transform education. Its success depends on thoughtful integration, continuous teacher support, infrastructural development, and systematic policy implementation.

**5.4 Recommendations**

1. **Increase Investment in ICT Infrastructure:** Government and stakeholders should ensure all schools, especially in rural areas, have access to essential technological resources.
2. **Mandatory ICT Training for Teachers:** Periodic training and professional development on technology integration should be institutionalized.
3. **Establish School-Based ICT Committees:** These committees should monitor technology usage, maintenance, and guide future acquisitions.
4. **Policy Reforms:** The Ministry of Education should revise the national ICT policy to include accountability measures and provide funding for sustainable technology integration.
5. **Student-Centered Digital Tools:** Schools should adopt tools and software that promote student creativity, collaboration, and personalized learning experiences.

**5.5 Suggestions for Further Study**

1. Future studies could employ qualitative methods such as interviews and classroom observations to gain deeper insights into attitudes and behaviors.
2. Researchers may conduct comparative studies between different regions or states in Nigeria to determine geographical influences on technology adoption.
3. A longitudinal study could assess changes in learning outcomes over time in schools that implement continuous ICT upgrades.
4. Future research could investigate the impact of specific technological tools or learning platforms (e.g., Google Classroom, Moodle) on academic performance.
5. More focus could be placed on gender-based technology usage to explore any disparities between male and female students or teachers.

**References**

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