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Smarter Solutions Through AI-Human Collaboration | Joyce Ejezie and Shaidul Kazi

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TAMKjournal | Artificial intelligence is changing the rhythm of modern work and learning, quietly shaping how people solve problems and connect. In the fast-paced world of technical support, where timing and precision matter, AI has moved beyond being just another digital tool. It now works alongside humans as a trusted partner. This article looks at how intelligent systems are transforming everyday support tasks and why human flexibility and creativity remain at the heart of meaningful progress.

Introduction

Businesses everywhere are working to satisfy and retain customers, build strong brands, foster client loyalty. To meet these needs in the new era, technical support plays a crucial role. This article and the study are based on the Master's thesis "Impact of AI-Driven Solutions on Technical Support

Engineers: A Case Study of Xend Finance" by Joyce Ejezie. The thesis investigates how AI reshapes technical support workflows, skill requirements, and operational effectiveness, and this article highlights key findings relevant to today's business environment.

Although automation can streamline repetitive tasks, true success depends on people.

Team members, including engineers and analysts, shared how tools such as automated ticket routing, smart diagnostics, and chatbots influence their daily work. Their stories show how technology and human adaptability continue to evolve together.

Although automation can streamline repetitive tasks, true success depends on people. Digital Transformation Theory (Westerman, Bonnet & McAfee, 2014) argues that technology alone cannot drive change, but leadership, culture, and human readiness are just as vital. In practice, this means that an organisation must invest not only in software but also in its people's ability to learn, adapt, and lead transformation. Dynamic Capabilities Theory further explains how organisations respond to change after implementing new technologies. It emphasizes a company's ability to sense emerging opportunities, take action, and continuously adjust resources as needed. The human-AI partnership also aligns with the Technology Acceptance Model (Davis, 1989; Venkatesh & Davis, 2000), which explains that people adopt new systems when they perceive them as useful and easy to use. Training and transparency are essential to increase both perceived usefulness and trust. These frameworks guided the study behind this article, which examines how the international fintech company Xend Finance uses AI tools in its technical support operations and how employees experience these changes in their daily work.

Adapting Business Operations to Change with AI

The study draws input from Dynamic Capabilities Theory (Teece, Pisano & Shuen, 1997; Teece 2007), which asserts that organizations must be constantly searching for and grasping new opportunities, initiating innovation through them, and adjusting their resources to remain competitive. In terms of technical assistance as well, this goes beyond merely adopting AI tools. It also requires staff re-training and role shaping to reflect changing demands. From a machine learning perspective, AI tools in technical support are more than automated systems, they are trained to learn from past data, recognise patterns, and suggest actions to improve outcomes (Russell & Norvig, 2021). Success is not just about installing technology. It requires connecting AI models with the knowledge and workflows of employees. For example, supervised learning can help identify common issues and recommend solutions, while reinforcement learning can improve how tickets are routed or prioritised. Continuous feedback, data review, and model updates are essential, reflecting on the sensing and reconfiguring activities highlighted by Dynamic Capabilities Theory.

Data for the study were collected through a structured questionnaire completed by 17 employees across different roles in the organisation, including technical support engineers, team leaders, and cross-functional staff. This approach made it possible to capture a wide range of experiences and perspectives on AI integration. The results show that AI is already deeply embedded in everyday processes, especially in automating repetitive tasks, streamlining ticket handling, and identifying recurring technical issues. As a result, engineers reported having more time to focus on complex, high-value problem-solving that requires human judgment. Study participants reported that AI greatly enhances efficiency and boosts productivity by cutting down ticket handling time and reducing errors. However, they also emphasised that ongoing training, both technical and soft skills, is important. Those who participated in role-specific AI workshops (trainings organised by Xend finance that ensures that every employee understands how AI applies directly to their tasks, making

the tools more practical, easier to adopt, and more effective in real work situations) felt more confident using automation tools, whereas employees who lacked guidance worried about job security and career growth. This shows that combining human expertise with machine learning does not automatically improve efficiency, it also requires careful attention to workforce development.

Success is not just about installing technology. It requires connecting AI models with the knowledge and workflows of employees.

In addition to the other insights, this study's biggest find is that the real function of artificial intelligence lies in augmentation. For example, technical support engineers achieve greater effectiveness with AI supporting their work than with AI doing it entirely on their behalf. Dwivedi et al. (2019) is of the view that human-machine collaboration must be designed to improve human decision-making rather than replace it. Automated triage systems now prioritise incoming support tickets based on historical data and complexity. AI chatbots handle standard customer queries, while engineers focus on high-impact issues that demand human reasoning. Over time, this division of labour will not only improve customer satisfaction but also increase morale among engineers who felt their expertise was better utilised. Some participants in the study described the feeling of empowerment they got when AI handled routine tickets, it freed their time so that they could focus on complex cases which require judgment and empathy. But others seemed uncertain or unprepared. This suggests that some employees still struggle to fully trust the system. One respondent remarked: "AI might help me with the basics, but I still have to verify its suggestions before passing them on to clients."

Challenges in this study

Despite the benefits, there are still some barriers that exist in the use of these AI driven tools in technical support. The resistance to change as well as the fears of redundancy and mistrust of AI outputs pose a major problem. Also, some engineers struggled with data quality issues that come with the use of AI tools, and inconsistent training schedules.

Leadership turned out to be the key factor that will drive this change. Teams that communicated openly and shared feedback clearly were able to adjust more quickly and felt more satisfied with this tool. On the other hand, teams with weak communication faced confusion and stress, showing how important psychological safety is during technological changes.

Conclusion

AI driven tools are not a magic solution nor a looming threat. AI is a tool that magnifies what organisations already value. When implemented thoughtfully, with leadership commitment, ongoing training, and open dialogue, it can turn technical support into a hub of innovation and improvements. As these tools becomes standard in support environments, new skill sets are emerging. Engineers now need more training, data interpretation, and ethical awareness in addition to their technical expertise. The change requires continuous learning and flexibility. Successful support Engineers are not those who compete with AI but those who collaborate intelligently with it.

One participant summarised this shift succinctly: "Before, my job was resolving tickets. Now it's about analysing patterns and improving our support processes with these AI tools." The companies that thrive will be those that treat their engineers not as operators of tools but as co-creators of smarter systems. Therefore, organisations must match AI tools with real operational needs, promote transparency in AI systems, establish continuous feedback loops to boost AI adoption, and provide comprehensive training and support which will strengthen a collaborative culture around AI.

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Authors

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