

Course Title: Research Methodology in Computer Science

Course Code: AI800

Weighting: 30%

Lecturer: Dr. Mohammed Anbar

Hand-out Date: 1 November 2025

Hand-in Date: 22 November 2025

Hand-in Method: Online Submission via E-Learning.

**The Influence of AI Tools on Stakeholder Communication Effectiveness in Agile Projects**

Student Name: Ammar Mohammad Wassas

Student ID: 253002052

Table of Contents:

- Problem Statement
- Research objectives
- Literature review (Summary from Assignment 1)
- References

## **Problem Statement:**

Agile project management thrives on clear and constant communication with stakeholders. While new Artificial Intelligence (AI) tools like smart chatbots and live dashboards promise to revolutionize this communication, we still lack a clear and evidence-based picture of their true impact. Right now, much of what we know comes from people's opinions and feelings about the tools, rather than hard data that proves they make communication more effective (Čančer et al., 2023; Taboada et al., 2023).

Why does this matter? Because at the heart of Agile is need for transparency and collaboration. If AI tools are to be more than just a trendy addition, we need to understand not just their potential, but their actual performance. Initial research is promising, suggesting AI can provide real-time updates and foster a more inclusive environment (Felicetti et al., 2024; Miller, 2022). However, these same studies point out that the tools are not perfect, they can struggle with complex questions and might even create new tasks for the humans who have to manage them (Joshi, 2024).

This research seeks to bridge the gap between the promising potential of AI and the need for concrete evidence. The goal is to move beyond what people think about AI tools and start measuring what they actually do for stakeholder communication in Agile projects.

## **Research Objectives:**

The main goal of this research is to move beyond the hype and gather solid evidence on how AI tools are shaping communication with stakeholders in Agile settings. To achieve this, we have set the following objectives:

### **1. To understand the real-world experiences with AI tools in Agile communication.**

- We will look closely at existing stories and case studies to summarize the reported benefits, like increased transparency, as well as the common frustrations.
- We will create a clear list of the practical challenges teams face, from technical limits to changes in team dynamics.

### **2. To measure the tangible impact of AI tools on communication.**

- This involves going beyond surveys to collect real data. We will track metrics like how quickly information is shared, how fast stakeholders get responses, and if the number of status meetings changes after introducing an AI tool.
  - We will then Compare this hard data with what people feel has changed, to see if perceptions match reality.

3. To create a practical guide for successfully using AI in Agile communication.
  - By combining what we learn from people's experiences and our data, we will build a straightforward framework. This guide will help teams choose the right tools and use them effectively.
  - It will specifically address known pitfalls, like ensuring data quality and defining the human's role in overseeing the AI.
4. To test and refine our guide with real agile teams.
  - We will partner with companies using agile to see how our framework works in practice. Does it help? Is it easy to follow?
  - Feedback from other project managers and stakeholders will be crucial for making the guide as useful as possible.
5. To provide clear, actionable advice for Agile practitioners.
  - The final step is to translate all our findings into straightforward recommendations. These recommendations will help organizations make informed decisions about investing in and implementing AI tools to genuinely improve how they communicate with stakeholders.

### **Literature Review:**

The collective message from recent research is clear; AI tools are making a positive difference in how Agile teams talk to their stakeholders. Studies show that tools like automated dashboards and AI assistance are excellent at providing instant updates and making project progress clearer for everyone (Felicetti et al., 2024; Auth et al., 2021). For instance, AI chatbots allow stakeholders to get immediate answers to their questions, which makes them feel more involved and satisfied with the process (Joshi, 2024; Miller, 2022).

In fact, research has found a direct link; the more a team uses AI, the better their communication tends to be (Čančer et al., 2023). Some of the most exciting findings suggest that AI can even change the dynamic, turning stakeholders from passive observers into active participants in the project (Miller, 2022).

However, it is not all smooth sailing. When we look closer, a significant challenge emerges. Most of this evidence is based on what people report in surveys and interviews; there is very little data that objectively measures the impact on speed, efficiency, or error rates (Čančer et al., 2023; Taboada et al., 2023). Researchers also point out that these tools have limits, they can be tripped out by complicated questions, and they require human supervision. In short, the existing research does a great job of showing us the potential of AI, but it also highlights a real need for studies that provide measurable proof of its impact.

## References:

### 1. Artificial Intelligence and Project Management

- Felicetti, A. M., et al. (2024). *Artificial Intelligence and Project Management*. Elsevier, ScienceDirect.  
<https://www.sciencedirect.com/science/article/pii/S2444569X24000842>

### 2. Multi-Criteria Measurement of AI Support to Project Management

- Čančer, V., Tominc, P., & Rožman, M. (2023). Multi-Criteria Measurement of AI Support to Project Management. *IEEE Access*, 11, 142816–142828.  
<https://ieeexplore.ieee.org/abstract/document/10355961/>

### 3. Artificial Intelligence in Project Management: A Study of The Role of Ai-Powered Chatbots in Project Stakeholder Engagement

- Joshi, H. (2024). A Study of The Role of AI-Powered Chatbots in Project Stakeholder Engagement. *International Journal of Software Engineering & Project Management*.  
[https://www.academia.edu/download/111187583/Role\\_of\\_AI\\_Powered\\_Chatbot\\_in\\_Stakeholder\\_Management.pdf](https://www.academia.edu/download/111187583/Role_of_AI_Powered_Chatbot_in_Stakeholder_Management.pdf)

### 4. A Conceptual framework for Applying Artificial Intelligence in Project Management

- Auth, G., Jöhnk, J., & Wiecha, D. A. (2021). A Conceptual Framework for Applying Artificial Intelligence in Project Management. *IEEE Conference on Business Informatics (CBI)*.  
<https://doi.org/10.1109/CBI52690.2021.00027>

### 5. Stakeholder Roles in Artificial Intelligence Projects. Elsevier.

- Miller, G. J. (2022). *Stakeholder Roles in Artificial Intelligence Projects*. Elsevier.  
<https://www.sciencedirect.com/science/article/pii/S266672152200028X>

### 6. Artificial Intelligence Enabled Project Management

- Taboada et al. (2023) – *Applied Sciences*, Vol. 13(8), Article 5014. Artificial Intelligence Enabled Project Management: A Systematic Literature Review  
<https://www.mdpi.com/2076-3417/13/8/5014>