


# Chapter 14

## Influenced by the Group: AI Misinformation Detection by Prospective Teachers

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### **ABSTRACT**

*This study examined how group discussions affected prospective teachers' meta-cognitive confidence and decision accuracy when classifying AI-based educational technology news as real or fake. A quasi-experimental design was used with 20 prospective teachers. Before evaluating the news, participants completed measures of news media and AI literacy. They then classified eight news articles individually, in groups, and again individually. Findings showed that group discussions significantly affected confidence and accuracy, with group confidence exceeding individual confidence after discussion. However, accuracy was more consistent for real news than fake news. News media and AI literacy had a small effect on initial judgments and a limited effect after discussion. The results highlight the need to integrate media and AI literacy into teacher education to improve decision making in collaborative learning, while highlighting the complexity of group dynamics in addressing misinformation about AI.*

### **INTRODUCTION**

News has the potential to influence people's perceptions and decisions. This potential can have positive or negative consequences. Negative consequences may include the spread of fake news and the content of the news being considered real because it cannot be understood by people. In recent times, with the increase in

DOI: 10.4018/979-8-3693-9601-8.ch014

the frequency of news about artificial intelligence (AI) and the widespread use of this concept in society, it may become difficult for people to distinguish between what is real and what is fake in news related to this concept. It has been said that overcoming this difficulty in distinguishing may be directly related to literacy skills. With the spread of AI-based educational technologies used in the field of education, fake news spreading may cause ethical concerns and a negative attitude towards AI technologies among people (Wilner, 2018; Al-Asadi & Tasdemir, 2021; Monteith et al., 2023; Williamson & Prybutok, 2024). Such negative attitudes may be one of the obstacles to parents not allowing the use of these technologies in classroom environments and benefiting from their potential benefits. Similarly, teachers' negative attitudes and lack of use of technologies may hinder their professional development. Therefore, it is argued that media and AI literacy can play an important role in dealing with such fake news (Adjin-Tettey, 2022; Jang & Kim, 2017; Jones-Jang et al., 2019; Washington, 2023).

Based on this information, it is said that individual information literacy can help in identifying fake news, but there is no support for finding media and AI literacy (De Paor & Heravi, 2020; Williamson & Prybutok, 2024). In addition, there is no evidence on how a person's ability to distinguish fake and false news in group dynamics is observed at individual levels belonging to these literacy types. While people have the potential to make more consistent decision evaluations when alone, they can change their initial decisions by adapting to other opinions in a group. It is important to understand how decision changes regarding the detection of fake news affect individuals' metacognitive confidence decisions and decision accuracy in a group decision-making process. Abels et al. (2024) emphasizes in a study that cognitive biases are effective in group decisions and can affect the decision made by the group. It has been found that by using adaptive machine learning models (such as MetaCMAB and ExpertiseTree), there are ways to enhance the decision-making process by preventing biases, thus improving group decision accuracy (Abels et al., 2024).

News about AI-based educational technology is important for the people of the country to learn about the developments. However, the fact that the news is fabricated or does not reflect the truth may cause people to worry about the applicability of these developments in daily life. For prospective teachers, it is important to examine such news critically in the long term so that it does not create different biases and prevent them from developing professional development. For them who have not received any literacy training from any official institution, it is important to evaluate whether such news is real so that it does not become an obstacle to their professional development in the long term. However, although the decisions that individuals make alone when evaluating the reality of the news are correct, these decisions can be turned wrong with group discussions. It is important to be

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