

# INVESTIGATING NATURAL LANGUAGE MODELS FOR FACILITATING PEER LEARNING IN CHEMISTRY

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Peer based learning (PBL) has been shown to improve students understanding and engagement in chemistry tutorials (Tullis & Goldstone, 2020; Gok & Gok, 2016). However, challenges remain in the implementation of PBL activities, particularly around student anxiety interacting with peers (Downing et al., 2020) and lack of effective leadership within groups in the absence of direct facilitation (Blumenfeld et al., 1996). The release of readily available large language models presents an opportunity for PBL to be facilitated by AI chatbots designed to address these challenges by providing guidance and promoting collaboration within student groups.

We have developed a custom AI chatbot, 'AcademiQ' purpose built for facilitation. We investigated the effectiveness of 'AcademiQ' in chemistry tutorials, comparing outcomes with conventional, teacher facilitated PBL sessions. We analysed student perceptions, the quality of student responses and teacher perspectives of both traditional and 'AcademiQ' facilitated sessions.

## REFERENCES

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