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**Student Sentiment towards a Socratic Approach to  
Automated Research Background as Measured by  
AI Models**

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**Abstract**

Providing effective research guidance to tertiary students is a challenging aspect of research lecturing. As students have varying interests, their research ideas are often outside the typical curriculum preparation. This presents the lecturer with the challenge of providing effective guidance to a novice researcher, outside of their area of expertise. Tertiary students enrolled in a degree qualification are required to complete an 'Introduction to Research' module. To focus the research process into a structured format the Socratic approach is adopted. The Socratic method enhances the understanding and clarity of the problem and supports co-creativity. To both prioritize and track the effectiveness of this approach, sentiment AI models are employed to evaluate the student's attitude towards the Socratic dialog. Each student completed a form which outlines the requirements of a research background in a series of questions. An automated system uses the provided responses to suggest a formulaic construction of a research background. These suggestions emailed to both student and lecturer, initiate the Socratic dialogue. Student responses to questions and suggestions posed by the lecturer were evaluated using AI sentiment models, based on language and keywords used in email correspondence. Each student's engagement in the Socratic dialog were initiated as neutral. Negative sentiments were highlighted as priorities for additional development. AI sentiment models used to track the level of confidence depicted in Socratic dialog can facilitate bespoke student support and improved research quality outputs.

**Keywords:** AI, Automation, Research, Student support, Background construction