



Teachers' Motivation to Teach AI in K-12 settings

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Abstract

There is a growing consensus that both teachers and students have to understand AI before they can appropriately use AI technologies in their work and studies. Our study investigated teachers' motivation to teach AI in K-12 education. Eight teachers were interviewed about their experiences and knowledge of AI. Using the lens of self-determination theory (SDT), the study identifies the impact of external variations and internal regulations on teachers' motivation.



Theoretical Framework

- Self-determination theory (SDT) [3] is a macro theory encompassing human motivation, personality development and well-being.
- It examines the factors that drive individuals to engage in certain activities or behaviours.
- This theory posits three psychological needs of humans: **autonomy, competence, and social relatedness**.
- When these needs are fulfilled, they contribute to optimal human functioning.

Motivation

A few researchers have conducted research exploring teachers' conceptions and perspectives of AI in different countries. However, teachers' motivation to teach AI has not yet been the focus.

Understanding teachers' motivation can give insight into teachers' attitudes towards adopting AI into the curriculum and students' motivation to learn.

This study addresses the gap in research by employing qualitative methods to explore teachers' motivation to teach AI concepts in K-12 settings.

Our findings show that the teachers within our sample :

- Are partly **intrinsically motivated** to learn and teach about AI.
- Desire that designers of AI create technologies that are suitable for school contexts (**Autonomy**).
- Increase their AI knowledge and skills through self-initiated learning (**Competence**).
- Participate in support communities to augment their professional development (**Relatedness**).

Conclusion

- This study used qualitative methods to explore computing teachers' motivation to teach AI in England's K-12 settings. We found that our participants were partly intrinsically motivated to teach AI in school.
- Drawing on SDT, we believe that supporting teachers' autonomy and competence through the provision of validated teaching resources, professional development and revamping teachers' support communities post-covid could increase teachers' intrinsic motivation even more.
- Future work could extend this investigation of teachers' motivation to teach AI in school with more teachers and quantitative analysis.

Methods

To answer our research question, "**What are computing teachers' motivation to teach AI in England?**", we carried out 30-45 minutes individual online semi-structured interviews with 8 secondary computing teachers in England.

Interview questions were drawn from self-determination theory (SDT).

We analysed the interview data using reflexive thematic analysis [1].

References

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