AI4AfL- Artificial Intelligence for Assessment for Learning to Improve Learning and Teaching in 21st Century

Østfold University College, Volda University College, Halden Municipality and Hypatia Learning AS will jointly implement the project "Artificial intelligence for assessment for learning to strengthen learning and teaching in the 21st century".

Short project summary

Artificial intelligence for Assessment for Leaning to Improve Learning and Teaching in 21st Century.

The AI4AfL project aims to develop new Artificial Intelligence (AI) technology that is able to analyse written texts and provide various types of automatic feedback (syntactic, semantic and sentimental). The project will also develop new knowledge about how teachers organise and facilitate AfL practices with AI technology to enhance students' capacity in learning to learn. The research in the project will provide a broader insight among teachers, school owners and teacher educators into how AfL practices supported by AI technology may contribute to the development of students' understanding about what it means to learn in English as a second/foreign language (ESL/EFL) writing classes. In doing so, the project will offer an approach to develop students' capacity in learning to learn.

AI4AfL is a collaborative interdisciplinary project combining the efforts of Educational and IT researchers (Østfold University College and Volda University College), a private actor (Hypatia), school owner (Halden municipality), teachers and students in the lower secondary schools. The project consists of five work packages and adopts a mixed methods approach to gradually develop the target AI technology and to examine AfL learning and teaching practices in the target (with AI technology) and the comparison (without AI technology) classes in lower secondary schools in Halden municipality.

AI4AfL will make empirical, methodological and theoretical contributions to the field of computer sciences (by developing new AI technology able to provide individually tailored syntactic, semantic and sentimental feedback on the written text) and to the field of pedagogy (by examining learning and teaching with AI technology, development teachers' and students' digital competence, competence building in technology enhanced AfL practices and students' capacity in learning to learn). This knowledge is much needed to ensure a research-based development of teachers' PDC, competence building in technology enhanced AfL practices to educate lifelong learners in the 21st century.

About the project

The AI4AfL is an interdisciplinary project that will combine the efforts of the pedagogy, IT researchers and Hypatia Learning company to achieve the projects' goals. Two PhD candidates will be employed in the project.

Understanding how to go about learning to be able to engage in lifelong learning is crucial for learners in the 21st century. Assessment for learning (AfL) is one of the strategies to develop such an understanding with learners and it has been a priority area in Norwegian schools since 2010. However, educational practice shows that AfL is extremely time and resource consuming process. In addition, teachers need to develop their profound understanding of the AfL approach to be able to design meaningful activities for learners to enhance their understanding of the target concepts and their capacity in learning to learn.

In summary, the AI4AfL project will foster collaboration among research environments, a private company Hypatia Learning and schools in Halden Municipality. Such collaboration is vital not only to develop technology that supports pedagogical practice but also to minimize the gap between the developers of educational technology, teachers and students who are consumers of such technology. In doing so, the project's participants will contribute to develop new knowledge about how AI can improve pedagogical practice and students' learning in Norwegian classrooms.

Project period

01.11.2021 - 31.10.2025

Project type

Collaborative and Knowledge-building Project

Objectives

The project Artificial Intelligence (AI) for Assessment for Learning (AfL) to Improve Learning and Teaching in 21st Century (AI4AfL) aims to develop Artificial Intelligence (AI) technology that is able to analyze students' texts and offer semantic, syntactic and sentiment feedback. Such feedback is tailored to the needs of each individual student and can be used to improve learners' written texts. In addition, the AI technology will help teachers to facilitate students' writing process and address their individual needs.

The project also aims (i) to examine how students interact with the technology and the feedback it offers and (ii) how teachers organize and facilitate students' learning during the writing process with the AI technology. In doing so, the project will develop new knowledge about students' learning in the writing process with the AI technology, teachers'' facilitating of such process and the development of students' capacity in learning to learn.

Funding

Total budget- 19,1 million NOK. From Research Council of Norway - 11,2 million NOK

Partners

Østfold University College
Volda University College
HYPATIA LEARNING
Halden Municipality – School District

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