“When we ask teachers ‘what assistance would you like from Artificial Intelligence?’, the answer that always tops the list is: checking open-ended questions.”

Now, thanks to research conducted by Dr. Giora Alexandron’s group in the Weizmann Institute’s Science Teaching Department, their dream may soon be realized.

The world of education is replete with language and pedagogical challenges, and the group is developing artificial intelligence algorithms and tools to assist teachers in personalized teaching and learning. The group recently published a study that showed – for the first time in Hebrew – how machine learning and natural language processing (NLP) can learn to evaluate students’ answers to open-ended questions (in this case, in biology), and reach a high level of agreement with pedagogical experts and teachers.

The research team continues to work with biology teachers to examine ways to use the computerized algorithms in order to provide personalized feedback tailored to the needs of each student.

The study was led by postdoctoral fellow Dr. Moriah Ariely, who specializes in biology education, and doctoral student Tanya Nazaretsky, who specializes in applications of machine learning and natural language processing for personalized instruction.