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Curriculums in the Advent of ChatGPT and other Artificial Intelligence Tools

By: Fiona Herzog

On November 30, 2022, ChatGPT was released to the public by Open AI, an AI and research company. ChatGPT is a Large Language Model that has the knowledge it has to create text through a vast amounts of text data. This text data includes publicly available data libraries, billions of internet pages such as Wikipedia articles, tweets, new stories etc. The more diverse of data a large language model has, the better it works to tailor to specific requests.
The model will then analyze this vast amount of data to find patterns and relationships. This includes noticing patterns such as email letterheads before an email or developing context to understand what words mean. Another important component of data within ChatGPT is human feedback. Through users honing in their queries to the model and asking for more specifics, the model uses this data to better refine its responses. As time passes and more and more people use ChatGPT, ChatGPT becomes an even better resource for its users.

Therefore, given this powerful resource, teachers should not ignore ChatGPT. Students who have been exposed to this resource are likely to use it, and teachers need to accommodate their curriculum and grading policies accordingly.
Some teachers may turn to websites such as Turnitin who claim they have artificial intelligence (AI) writing detection tools. However, a grading policy that just relied on this software may have disastrous effects regarding grading equitably. Turnitin admits that their software does result in a false-positives as to whether text is AI generated or not. When the user mixes in AI generated text with self-editing, this further reduces the capability of the detection software. Teachers should not rely on watermarking technology just yet, as the prevailing conclusion indicates that this technology isn't ready for mass use yet.

However, watermarking may prove to be a valuable factor for education curriculums later on. The goal of watermarking is to mark AI generated text with certain traits to make them algorithmically detectable as AI generated text a without compromising the quality of the text. The vocabulary of large language models is limited, with a specific vocabulary of fragments and words called tokens. Researchers hope to develop software that is capable of inputting and identifying these watermarks. That way, because the user won't know what

phrases are watermarked, even when combined with user editing, AI text will still be able to be differentiated.

When this tool is able to be fully realized, educators can more reliably trust softwares to detect AI in writing and thus penalize accordingly. However, in the meantime, it is important to adjust grading policies and teaching methods under the guise that students will be using ChatGPT.

First, teachers should fully assume that ChatGPT is a tool that students will use in and outside of the classroom, regardless of school policy and bans. Just two months after its release, ChatGPT had reached over a 100 million unique users. This can pose some concerns of how to test a student's writing ability when traditional assignments of take-home essays can easily be faked. Therefore, an increased emphasis should be placed on in class collaboration and debate, where students are encouraged to not only build soft skills, but also develop skills to think and respond critically on their feet.

Many people liken the implementation of ChatGPT to the classroom to the calculator. Both question traditional forms of teaching and require teachers to have policies to address them. However, there is one marked difference. Because ChatGPT derives its knowledge from user-input, it also can return flawed answers. Not only can it a produce flawed answers due to incorrect pattern analysis, it can return flawed answers due to user manipulation. After all, the model doesn't discriminate the data based on whether it is truthful or not. It regards an increase in data as a benefit to help the model give responses to user queries. Furthermore, the flawed answers they return are presented with so much authority that it can be hard for impressionable young students to differentiate when it is telling the truth or not. Students who grow to be over-reliant on ChatGPT as a source can easily fall prey to misinformation.

Instructors should not be worried about ChatGPT as a replacement for live, human teachers. In fact, it is all the more important that we have these individuals in students' lives to guide them through this complex and powerful technology. Therefore, it is also important for teachers to encourage students to openly discuss ChatGPT in the classroom. Through open discussion, teachers can guide students on how to properly cite and find sources, how to critically examine sources and how to identify misinformation. This needs to be an integral part of the curriculum. While current college students who have just had access to this resource have the fundamentals of examining sources from years without ChatGPT, for younger students, ChatGPT is all they know. It is all the more important for teachers to adapt their teaching to prevent students from being over-reliant on ChatGPT due to its unreliable nature.

In addition to ChatGPT being a resource to students, teachers can benefit from ChatGPT and other forms of AI. Through giving students schoolwork that is adaptive using AI technology, teachers can gain real-time information on what learning styles best suit each student. As illustrated above, just as increased data allows ChatGPT to perform better, increased data on students allows teachers to a better tailor their teaching styles to their student's needs. Teachers who often have large classes may not otherwise be able to spend enough time individually with each student to collect that information.

Another benefit for teachers comes in the way of saving time. a Mike Harris initially struggled with developing a lesson plan in accordance with his state's standards. However, with ChatGPT, a lesson outline plan was produced in about two minutes. Because of the ease in which ChatGPT can perform low-level tasks such as writing emails, low level grading, and more, teachers are able to have more mental clarity to spend on their students. A a study conducted by researchers in MIT found that college-educated professionals were able to substantially increase productivity when using Chat-GPT. Spending long hours on these tasks can otherwise be draining, taking away from the energy teachers can dedicate towards their students.

Therefore, the sudden prevalence of ChatGPT and other forms of AI in education is not something that needs to be immediately shunned due to fear. With proper implementation of the technology, teachers can greatly improve the quality of education they give their students and students can greatly improve their own education in an innovative way.

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