GUIDE FOR THE USE OF ADVANCED ARTIFICIAL INTELLIGENCE TOOLS IN TEACHING AND LEARNING

A Brief Introduction on AI Tools

1. Anyone can have access to virtually any information thanks to the Internet. Communication has been revolutionised by the Internet. Educators and students can quickly access cutting-edge intelligence tools like Chat Generative Pre-Trained Transformer through the Internet (ChatGPT) for teaching and learning.

2. ChatGPT is an NLP (Natural Language Processing) tool. NLP is an area of AI that focuses on making it possible for computers to comprehend, interpret, and produce human language. ChatGPT is powered by the GPT-3 (Generative Pre-trained Transformer 3) architecture, which is created and maintained by the company, OpenAI. ChatGPT, which was built on a massive corpus of text data up to 2021 can carry on conversations just like people do, respond to queries, give clarifications, and produce content on a variety of subjects. **Chatbots, automated customer support, content creation, and language translation** are a few examples of applications where ChatGPT can be employed. ChatGPT is currently the most popular language model in education. Other popular language models or chatbots used for education include BERT, GPT-2, and RoBERTa. The latest addition to the growing family of language models is Google Bard.

USING ChatGPT IN TEACHING AND LEARNING

ChatGPT and the Democratisation of Education

1. ChatGPT has the potential to increase inclusivity and accessibility in education.

2. Students with learning difficulties or limitations that restrict their participation in traditional classroom settings can receive the support they need to succeed by using ChatGPT.

3. ChatGPT can be used to deliver instruction and training to learners in isolated and underserved communities who lack access to conventional educational options.

ChatGPT and the Educator

1. Many higher educational institutions are riding the ChatGPT wave since ChatGPT and other AI tools are widely available. Instead of banning these new technologies, students should be taught how to utilise them effectively, ethicaly and responsibly.

2. The manner that learners learn and educators teach could both be changed through ChatGPT. ChatGPT is an ideal companion for teaching and learning because of its sophisticated natural language processing, which can understand and reply to requests and commands in a way that is human-like.

3. ChatGPT can be utilised in the classroom as an addition to conventional teaching strategies, giving learners more assistance and direction as they complete their assignments.

4. ChatGPT can streamline educators' workloads and help them save time.

5. ChatGPT can be used to grade assignments, give comments, and respond to frequently asked questions by students, giving educators more time to concentrate on other crucial responsibilities.

6. ChatGPT may be utilised to create and deliver interactive and engaging classes, which can keep learners interested and motivated.

ChatGPT and the Student

1. ChatGPT can help students with their assignments and tasks by responding to their inquiries, offering justifications and giving examples. By doing so, students can improve their ability to think critically and solve problems as well as comprehend difficult topics.

2. ChatGPT can also be utilised to promote student cooperation and communication.

PRINCIPLES TO OBSERVE IN ALLOWING THE USE OF ChatGPT		
Principle 1: **Safeguard Sensitive Data**	**Principle 2:** **Establish Ethical Guidelines and Principles**	**Principle 3:** **Disclose Chatbot Use**
1. It is crucial to protect sensitive data, such as financial information, private company information, and personal details, while employing chatbots in higher education. 2. Before entering any text into ChatGPT, students should remove any personally identifying or sensitive information. They should also understand that, unless the material is shared on a secure server, it will be processed in the same way as if it were posted on the public Internet. 3. Students, educators, and professionals should exercise caution when handling sensitive information since unauthorised access to or misuse of sensitive information can have serious repercussions, including identity theft, financial fraud, and reputational injury.	1. It is important to establish up front what a chatbot's use will be for in terms of teaching and learning. The learners' unique requirements and goals should be considered, together with the moral ramifications of the chatbot's intended uses, in this description. 2. Higher learning institutions can make sure that the chatbot is being utilised in ways that are consistent with their objectives and core values by clearly defining the chatbot's purpose and scope. 3. A code of ethics that defines the obligations and ethical issues related to using chatbots for training, research, and academic purposes must be established. 4. The instructional objectives established for the chatbot should be met while minimising bias and misleading information.	1. The use of ChatGPT or other chatbots must be openly disclosed in both academic and professional settings. 2. This makes sure that members of the public, academics, researchers, and professionals are informed about when and how chatbots are utilised in the creation of scholarly and professional work. 3. Transparency also helps the audience to judge the reliability of the data generated by chatbots and take responsible actions. Trust and accountability are also facilitated by disclosure. 4. Lastly, it is critical to be explicit about the chatbots' restrictions and intended applications. This makes sure that members of the public and professionals are informed of chatbot limits and the kinds of information that can be gleaned from them. It also aids in avoiding misconceptions and inaccurate interpretations of the data offered by chatbots.

SUGGESTIONS FOR EDUCATORS WHO WISH TO START USING ChatGPT IN TEACHING AND LEARNING

1. **Get acquainted with ChatGPT:** The first step is to get to know ChatGPT and its features. Learn how to do this by perusing the OpenAI documentation and tutorials and conducting your own experiments using ChatGPT.

2. **Determine your objectives:** It is essential to have a firm grasp on your goals prior to introducing ChatGPT into your classroom. Do you wish to use ChatGPT to assist individuals who require extra guidance or to help your students learn more effectively? By prioritising your goals, you can use ChatGPT in a way that best satisfies your needs.

3. **Decide how to use ChatGPT most effectively:** After you have a clear understanding of your goals, the following step is to select how to use ChatGPT in your classroom the most efficiently. There are many methods to use ChatGPT, so it is important to think about which will help your students the best. A few ideas include developing personalised lesson plans, online tutoring sessions, group learning activities, self-directed learning tools, or formative tests.

4. **Choose the right level of integration:** Another important consideration is how ChatGPT should be integrated into your classroom. While some educators might prefer utilising ChatGPT as a supplement to conventional teaching, others could enjoy using it as their primary teaching tool. The most effective approach will depend on your goals, the needs of your students, and your particular teaching philosophies.

5. **Make a plan for your implementation:** The next step is planning your implementation after you have chosen the most effective way to use ChatGPT in your classroom. Examples of what this may comprise include deciding which specific ChatGPT features you want to use, putting the required technological framework in place (such as supplying computers or tablets for students to use), and scheduling when to introduce ChatGPT to your students.

6. **Prepare your students:** Make sure your students feel comfortable using ChatGPT before introducing it in your lecture. This may entail offering some basic instructions on how to use ChatGPT as well as establishing some fundamental expectations and standards for how it will be utilised in your classroom.

7. **Develop unique case studies:** Depending on the students' level of competency, ChatGPT can be used to develop unique case studies for students or group projects.

8. **Adopt a variety of assessment methods:** Consider adopting different assessment methods such as oral exams and live demonstrations or presentations. Ask questions that assess:
    a) current challenges and real-world problems that are relevant to the situation.
    b) an individual's viewpoint supported by logic and arguments.
    c) the way in which students give comments or consider how to enhance the knowledge they obtain from ChatGPT.

KEY CONSIDERATIONS WHEN USING ChatGPT FOR TEACHING AND LEARNING

1. Questions about <u>plagiarism, originality, and the veracity of student work</u> are among the ethical issues that the use of AI models in education, such as ChatGPT, brings. It is critical that educators and learners carefully consider these concerns and choose the right use cases for AI tools during the learning and assignment processes. Students who produce work using AI technologies and then submit it as their own original work without giving due credit or citation is generally regarded as unethical. For instance, it would likely be deemed plagiarism if a student used ChatGPT to generate a report or an essay, then turned in that work as their own without acknowledging that it was produced by an AI model.
    According to ChatGPT: *"As a language model, I do not have the ability to grant permission for use of my answers. It is generally considered plagiarism to republish someone else's work without proper attribution and permission. If you want to use my responses in your blog post, it would be best to paraphrase them and provide proper attribution to indicate that the information comes from me, a language model trained by OpenAI. Plagiarism is a serious offense and can have serious consequences, so it is important to properly credit the sources of any information that you use in your work."*

2. One of the key issues is the potential for chatbots and other language models to reinforce prejudice and discrimination in society. Large amounts of data are used to train these models, and if the data is skewed, the model's output will reflect that bias.

3. There is also a risk that chatbots and other language models may be used in ways that are destructive and at odds with our morals and ideals. Chatbots, for instance, might be programmed to influence people's behaviour and thoughts or to reinforce ingrained biases in society.

4. The inability to comprehend human emotions, motivations, and moral reasoning is another drawback. Chatbots and other language models are unable to comprehend moral reasoning, human emotions, or human intentions. This can be a drawback when using them for jobs that demand empathy, like counselling or tutoring.

5. Assuring the output quality of the language models is another challenge. Language models are not perfect; they occasionally make mistakes or give incorrect answers. This might be a drawback when utilising them to support activities that demand high standards of accuracy, including grading assignments and essays.

Further Reading

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