WHITE PAPER

CHAT GPT & EDUCATION

BY THE OCTOPUS MOVEMENT

NONLINEAR THINKING

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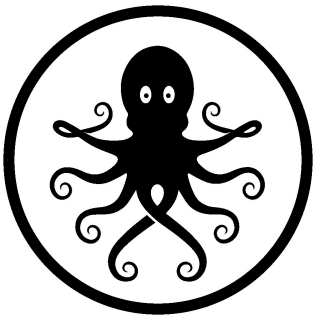

Artificial intelligence has opened many doors in the modern world, but the accessibility of the technology, then in its infancy, made it difficult to integrate into everyday life.

Eventually, subject-specific AI started to slowly make its way into the mainstream, doing everything from helping us form predictive searches to making written communication more streamlined with platforms like Grammarly. Despite the more common uses of this kind of technology, often a particular platform is what made it relevant to us as individuals. That barrier has now disappeared.

The recent release of ChatGPT has turned the normalcy of small AI integrations on its head and now offers a unique opportunity for development and advancement of the human experience, but it doesn't come without its challenges. Facing those challenges and deciding on how artificial intelligence will be used and can function in our evolving world has become a prominent concern, and carrying those values forward as educators, parents, and a community has now become a focus more than ever.

the Octopus Movement Foundation
www.theoctopusmovement.org

Nonlinear thinkers work differently and capably. We are **uniquely** interested and able to focus on and acquire expertise in, many areas. We are multi-specialists who sometimes defy the norms of a nine-to-five world.

WHO ARE WE?

The Octopus Movement is a **global** coalition of nonlinear thinkers united by a desire to create positive change in the world.

We are here to drive acceptance and **awareness** of the awesome abilities of atypical thinkers and embed our diverse experience, expertise, and polymathic skills inside institutions ready and willing to tackle the trickiest challenges of today and tomorrow.

1.
STATEMENT

So what does ChatGPT do, exactly? It proffers a system of advanced integration for the knowledge currently on the world wide web, and allows a more organic exploration of the information humans have aggregated online, but it also does more; it allows us to ask organic questions about topics, and request explanation, feedback, or even written evaluations of the information it retrieves. In essence, as Artificial Intelligence Expert Manuj Aggarwal puts it, “The world wide web has been akin to a librarian, keeping track of where to find information and how frequently it’s been accessed. ChatGPT and technology like it functions like a person you send to go read those books and report back on what they’ve learned.”

ChatGPT’s predictive and complex systems will soon become widespread, and at a meteoric rate. With so much of the world online and accepting daily innovation, the stage has been set for rapid interest in this emerging technology. When Netflix was first released, it took 41 months for them to reach one million users. Later, when Twitter was unveiled, it took 24 months to reach one million users, representing the emerging rapid acceptance of new platforms and ideas.

By the time Instagram made its entrance into the market, it only took one month to reach one million users. We had

already become so used to expressing ourselves online and the platform simply afforded us another avenue.

“CHATGPT IS A POWERFUL TOOL FOR EDUCATION AND CREATIVITY, ALLOWING PEOPLE TO EXPLORE AND LEARN IN NEW WAYS. IT CAN INSPIRE DIVERSE CREATIVITY AND FOSTER COMMUNICATION AND COMMUNITY, BUT HOW IT IS USED WILL ULTIMATELY DETERMINE ITS IMPACT.
AS TECHNOLOGY ENTHUSIASTS, IT IS OUR RESPONSIBILITY TO ENSURE THAT THOSE WHO MAY BE HESITANT OR AFRAID OF TECHNOLOGY ARE ABLE TO ENGAGE WITH IT IN A HEALTHY AND PRODUCTIVE WAY.

WITH ITS ABILITY TO ASSIST WITH RESEARCH AND STRUCTURE, CHATGPT HAS THE POTENTIAL TO LIBERATE OUR OWN CREATIVITY AND PROVIDE ACCESS TO LEARNING AND KNOWLEDGE FOR UNDERREPRESENTED GROUPS. HOWEVER, WE MUST BE VIGILANT IN ENSURING THAT THE TECHNOLOGY IS INCLUSIVE, UNBIASED AND THAT IT'S LEARNING IS GUIDED IN A POSITIVE DIRECTION.”

By comparison, ChatGPT reached one million active users in just under 150 hours. The online world has made us so much more accepting of rapid change, but reacting to that change will be a challenging and dynamic endeavor, especially as we look forward.

Some of the biggest impacts of this emerging technology will be in education. Teachers and professors can now ask AI to develop a lesson plan on a topic, students can quickly and easily answer their pressing questions, and universities can offer artificial intelligence that can quickly help learners navigate their respective repositories of information on narrow subjects.

These advancements are not without parallel concerns and limitations. When a student can simply ask an AI to write a book report or research paper for them instead of putting in the work themselves, at a very basic level plagiarism can become a concern. With the ‘black box’ modality of AI, there is also often an absence of the process by which the AI came by the information it is summarizing, and that source amnesia

can be frustrating when trying to properly cite a paper or credit an idea. It also invites misconception and bias into the process of epistemologically separating information from knowledge, something that has, until now, become an organic process for thinkers and academics. Asking an AI about superstitions or values born of bias, improperly framing questions, or asking it about contentious topics will often result in a very one-sided summary of commonly held notions on that idea. Many of these subjects are anything but synonymous with truth. ChatGPT will find the opinions of those who support the idea and explain them, but it doesn't think to offer the rarity of those opinions or contrasting viewpoints.

Artificial intelligence also brings other challenges to the academic sphere. Are we currently sending our newest generation to college to learn skills that will be replaced by AI before they graduate? How will the ability to generate a somewhat qualified opinion on a topic instantly affect critical thinking and self-development? Will written works follow the music industry in having to reimagine their business model in a world where songs can be shared instantly without album sales? The answers to these questions and more can often be as complicated as the questions themselves.

A strong point to ChatGPT's credit is inclusion. Since the vast majority of AI functions on servers, computers, and databases that operate independently of the platform used to engage them, only an internet connection and a web browser are really needed to take advantage of artificial intelligence, but that same ease-of-access can also be problematic when academics, researchers, and students might not know the right way to ask questions so that the answers provided have more qualified notions of truth.

In a focus group conducted by The Octopus Movement, a global group of non-linear problem-solvers and thinkers headed by Perry Knoppert out of the Netherlands, it became

clear that AI may create as many problems as it solves. Knoppert, AKA Dr. Octopus, shared that many ethical considerations came to light when the subject was discussed in depth, ranging from a medical doctor asking AI about the most likely conditions supported by symptoms to better direct healthcare to whether or not AI underwrites the value of instant gratification and need for high-dopamine activities like video games and social media in today's youth.

Making AI into a tool, rather than a crutch, of tomorrow's students will take cultural integration and understanding of AI, as well as a willingness of today's instructors to learn alongside students about what artificial intelligence has to offer in and out of the classroom. Much like today's search engines, the manner in which questions are asked often determines the kind of responses the platform will offer; the classrooms of tomorrow may be just as focused on how to formulate the right questions so that artificial intelligence understands intention. It's not off the mark to think that the widespread use and acceptance of this technology may bring critical thought, asking intelligent questions, and avoiding logical fallacy into its own educational focus and curriculum in the classroom of tomorrow.

The classroom of the future may also be far more friendly to the neurodivergent. Conditions and disorders like Autism, which can affect an individual's ability to communicate, could have AI written to help them self-express. A non-verbal person on the spectrum may soon be able to hit a series of image tiles and predictive words and generate words to express themselves in real time, and at a far less simplistic level than existing technology affords. Neurodivergent and disabled workers who have skill with artificial intelligence will have a whole new job market full of careers they can run from home, taking the fact that many people with disabilities have challenges in sharing the physical workplace. This new set of evolving platforms for self-expression and non-linear thought will bring completely new ideas and personalities to the

workspace, and companies will have to adapt to take advantage.

These concerns are mirrored in the business world. Business systems have long benefitted from AI, but ChatGPT's unique method of not only collecting data but interpreting it for the user has taken Business Intelligence, the prior method of collecting market and operational data to better guide business decisions, to a whole new level. The AI currently in development will not only collect that data, but interpret it, leaving some companies wondering if the perfect CEO of the future will not, in fact, be a person, but will be a computer, able to make dispassionate business decisions that properly weigh the direction of an organization. Dictador, a Columbian Rum and Luxury Cigar company, has already boldly made this move with Mika, an artificial intelligence designed to integrate sales, market, and internal data and preside as CEO over corporate direction.

One certainty is that the jobs of the future may look very different than they do now; with the average cost of a Master's Degree in the United States exceeding $60,000, the prospect of investing in and completing an education for a career that may completely disappear in the next few years can be daunting. Not long ago, Elon Musk, CEO of Tesla, made public statements about the need for society to consider Universal Basic Income as part of its social support for citizens in a world run by AI, as entire careers disappear; he even scheduled one-on-one time with then-president Barack Obama to discuss his concerns over integrating artificial intelligence into military systems and what they could mean for a future where wars are fought, won, or lost with drones and virtual presence via robotics and digital warfare.

The flood of new ideas to capitalize on the innovations offered by AI will saturate the world with change, and many forward-thinking companies and organizations are already excitedly engaging with it. Knoppert is collaborating with non-

linear thinkers to create an intelligent database of subject-matter-experts that outsiders can draw ideas from that is fueled by artificial intelligence; new platforms exist to create a personal AI who is an expert on the sets of ideas and offerings by an individual; they may replace the benchmark of the resume or CV in future job markets and allow all of us to have a virtual personal assistant that already knows how to anticipate our questions and find information we're interested in. The refrigerator of the future may keep track of all the ingredients and expiration dates of the food inside and offer us recipes with what we have on-hand. The web designer of the future may be an AI that simply asks the right questions to develop 90% of web content nearly-instantaneously.

Creating the right focus on how to use AI and carefully consider its liabilities will become a more and more prevalent community process in the coming decade, and those invested in developing young minds in authentically carrying forward that responsibility will have to pivot quickly to help assimilate the ideas and approaches that will make artificial intelligence an asset to the personal development and education of the generations of tomorrow.

What will that focus be? Will AI become the catalyst that makes new generations evade the hard work that defines earned experience or will it become a powerful tool that we all learn to use for the better?

Approaching that answer collaboratively, learning from our mistakes as we make them, and placing the right value on how we develop our interaction with artificial intelligence as a society will become questions all of us will find ourselves asking. Honest consideration at this early stage of development can help inform the development of this new technology, and it's a process we can't neglect; doing so may leave us unengaged and future minds so unwilling to be genuinely creative that we may become stagnant with the

innovation of ourselves as human beings in the midst of our excitement.

Artificial intelligence will soon play a role in almost every classroom and workplace. What it does for us in those contexts will be decided by our attitude in accepting that change and our openness to not only learn how to improve it, but to teach future generations to keep grasping at the ideas that made AI possible in the first place.

2.
RECOMMENDATIONS

recommendations for teachers:

1. Educate adults as well as children: Parents and caregivers should join the rapid innovation learning curve, so that they can support their children in adapting to new technologies and reduce fear of change.
2. Encourage open communication: Encourage open communication between parents and children about ChatGPT and other AI technologies, and do not be afraid to ask questions.
3. Use ChatGPT to turn weaknesses into strengths: Find ways to use ChatGPT to help individuals with neurodiverse conditions or learning difficulties, such as dyslexia, to turn their weaknesses into strengths.
4. Empower yourself to understand the technology: Take the time to educate yourself about ChatGPT and its potential benefits for education.
5. Eliminate the fear: Try to eliminate the fear of change and embrace new technologies, such as ChatGPT, as an opportunity for growth and progress.
6. Develop for the world we live in: Use ChatGPT to help children and adults to develop skills that are relevant to the world they live in today, not the world we wish they lived in.
7. Play with your kids: Play with your children and use ChatGPT as an opportunity to learn and grow together.
8. Create community programs: Don't put more pressure on schools to educate parents, create community programs to support them and apply for grants to support these programs.
9. Build a community of support: Build a community of support for parents and children learning to use ChatGPT, and create forums for discussion.
10. Create challenges for new innovative ideas: Encourage parents and children to explore new ways of using ChatGPT and create challenges for new and innovative ideas.
11. Incorporate elements of gaming and gamification into the use of ChatGPT in education, to make learning more engaging and interactive for children and adults.

12. Use ChatGPT as a tool for creative writing and storytelling, allowing children to explore their imagination and develop their narrative skills.
13. Utilize ChatGPT to facilitate cross-cultural communication and collaboration, connecting students from different countries and backgrounds to work on projects and learn from one another.
14. Use ChatGPT to create a virtual reality learning experience where students can interact with and explore complex concepts and subjects in a fully immersive environment. This could revolutionize the way we think about traditional classroom learning and make education more dynamic and engaging for students.

recommendations for Parents

1. Educate adults about the benefits and uses of ChatGPT for education, so that they can better understand and support their children's use of the technology.
2. Encourage parents to join the rapid innovation learning curve, so that they can better understand and support their children's use of the technology.
3. Provide resources and training for parents to better understand their children's written work, and how ChatGPT can help with issues such as dyslexia.
4. Address privacy concerns by providing information and resources on how to use ChatGPT safely and responsibly.
5. Encourage parents to use ChatGPT to help their children develop the skills they need for the world they currently live in, rather than the world we wish they lived in.
6. Emphasize that AI can be used to turn weaknesses into strengths, and help parents understand how ChatGPT can be used to support their children's unique needs and abilities.
7. Encourage open communication and curiosity by encouraging parents to play with their children and explore the capabilities of ChatGPT together.
8. Create community programs and resources to support parents in understanding and using ChatGPT, rather than placing the burden solely on schools.
9. Encourage parents to learn like a child by setting aside their egos and exploring new ways of thinking and learning with their children.
10. Create forums for discussion and challenges for new and innovative ideas on how to use ChatGPT in education to promote a community of support for parents and children.

recommendations for students:

1. Ensure that you have access to technology by making sure you have a device and internet connection. This will enable you to utilise ChatGPT and other online resources fully.
2. Learn how to ask the right questions on ChatGPT to get the most accurate and relevant information.
3. Take control of your learning by exploring the different ways you can use ChatGPT to learn new topics and concepts.
4. Remember that learning is an ongoing process and encourage yourself to continue learning throughout your life.
5. Take responsibility for your own education and take the initiative to learn new things.
6. Always backup the information you receive on ChatGPT to access it later if needed.
7. Aim to have a deeper understanding of the information you learn by differentiating between knowledge, understanding, and experience.
8. Collaborate with older students to help you use ChatGPT and encourage peer learning.
9. Use ChatGPT to generate new ideas and explore new perspectives to boost your creativity.
10. Make use of the resources available to you by working with local libraries and community organizations to access technology and training.
11. Incorporate ChatGPT into your daily journaling practice to reflect on your experiences and explore your thoughts and emotions in a creative and unexpected way.
12. Join online chat groups or forums dedicated to using ChatGPT and collaborate with other students from around the world.
13. Create a ChatGPT-powered podcast or vlog that explores a topic of your choice. This can showcase your creativity and help you gain valuable experience in podcast or vlog production.
14. Create virtual reality simulations using ChatGPT for immersive learning experiences. This can allow you to interact with historical events, scientific concepts, and other cultures in a way that is more engaging and memorable than traditional classroom instruction.

recommendations for OpenAI

1. Develop solutions that address specific social issues: Encourage developers to build on top of ChatGPT and use the technology to solve real-world problems and improve the lives of underrepresented groups.
2. Maintain open access: Ensure that the technology is freely available and accessible to as many people as possible, regardless of their socioeconomic status.
3. Implement transparent and explainable AI: Allow users to see how the technology works, and how decisions are made, in order to build trust and understanding.
4. Incorporate accessibility features: Add an audio component for the visually impaired and an auto-translate feature to make the technology more inclusive.
5. Create guardrails for children: Develop safeguards to protect children from inappropriate content and ensure they are using the technology in a safe and responsible manner.
6. Provide clear guidelines for submission requests: Make it easy for new users to submit requests for new features and improvements to the technology.
7. Develop a fact-checking feature: Incorporate a fact-checking feature to guard against fake news and hate speech.
8. Promote guided use cases: Develop a set of guided use cases that demonstrate the technology's capabilities and help users understand how to best utilize it.
9. Personalize for specific industries: Customize the technology for different industries, such as healthcare or education, to make it more effective for those specific fields.
10. Educate teachers on the use of chatGPT: Provide training and resources for teachers to use ChatGPT in the classroom, in order to help students learn and understand the technology better.
11. Create a version of ChatGPT that is controlled by a decentralized AI network, allowing for a more democratic decision-making process in its use and development. This could be achieved through a blockchain-based system, where users can vote on updates and new features for the model, and also have a say in how it is used and regulated. The decentralized AI network would also be able to learn and

adapt quickly, as it is not limited by a single organization or government's agenda. This approach could also promote transparency and trust in the use of the model, as it would be controlled by the community rather than a centralized authority.

recommendations for the government:

1. Use research to guide decisions: Before implementing ChatGPT in education, governments should conduct thorough research to understand the potential benefits and drawbacks of the technology.
2. Focus on the science: Governments should focus on the scientific aspects of ChatGPT, such as its capabilities and limitations, rather than trying to control or manipulate the technology for political gain.
3. Promote science: Governments should use ChatGPT to promote science education and encourage students to pursue careers in science, technology, engineering, and mathematics (STEM) fields.
4. Incorporate new learning styles: Governments should recognize the importance of incorporating new learning styles in education to tap into the full potential of human talent.
5. Allow people to have a voice: Governments should involve the public in the decision-making process and allow them to guide the progress of ChatGPT in education.
6. Comprehensible laws: Governments should create laws that are easy to understand at different levels, so that the public can understand the implications of ChatGPT in education.
7. Rely on the experts: Governments should rely on experts in the field of AI and education to guide their decisions and implementation of ChatGPT.
8. Promote collaboration: Governments should promote collaboration among different stakeholders, including educators, researchers, and industry leaders, to develop the best possible solutions for incorporating ChatGPT in education.
9. Subsidize access: Governments should consider subsidizing access to ChatGPT for low-income students or schools to ensure that all students have the opportunity to benefit from the technology.
10. Use in a phased approach: Governments should implement ChatGPT in education in a phased approach, starting with pilot programs and gradually scaling up as the technology is proven to be effective and safe.

recommendations regarding neurodiversity

1. Develop AI models that can understand and respond to different forms of communication, such as sign language or alternative forms of written language, to ensure that neurodiverse individuals can access the information and express themselves in a way that is comfortable for them.
2. Use AI to create personalized learning experiences for neurodiverse students, allowing them to learn at their own pace and in a way that is tailored to their individual needs.
3. Incorporate neurodiversity into teacher training programs, so that educators can better understand and support neurodiverse students in the classroom.
4. Use AI to create alternative assessment methods for neurodiverse students, such as visual or auditory assessments, to ensure that their abilities are accurately measured and recognized.
5. Create AI-powered tools that can assist neurodiverse individuals with tasks such as organization and time management, to help them navigate the demands of daily life.
6. Use AI to help neurodiverse individuals connect with others who share similar experiences, creating a sense of community and support.
7. Use AI to create virtual reality environments that can be used for therapy and skill-building for neurodiverse individuals, such as social skills training for those with autism.
8. Use AI to create tools that can help neurodiverse individuals with job searching, such as resume builders and interview simulators.
9. Use AI to create games and interactive activities that can be used to teach important skills to neurodiverse individuals, such as problem-solving and critical thinking.
10. Use AI to create chatbots that can provide emotional support to neurodiverse individuals, particularly those who may struggle with social interactions.

3.
URLS

Find us on Reddit and join the conversation:

https://www.reddit.com/r/ChatGPT_Teachers/

https://www.reddit.com/r/ChatGPT_Parents/

https://www.reddit.com/r/ChatGPT_Students/

https://www.reddit.com/r/ChatGPT_Government/

https://www.reddit.com/r/ChatGPT_Neurodivers/

More about the Octopus Movement:

https://www.theoctopusmovement.org/manifesto

ABOUT THE AUTHORS

As part of the global mycelium of amazing out-of-the-box thinkers, we embody the spirit of the octopus - a symbol of adaptability, creativity, and resilience. We are a dynamic network of individuals from different cultures, religions, genders, and educational backgrounds, who have come

together to form a united force of change. Our writing and artistic creations serve as a reflection of our unique perspectives, exploring the challenges faced by our world with a fresh lens. Whether it be through poetry, prose, visual art, or musical expression, we seek to communicate the complexities of our global challenges in a way that is both thought-provoking and accessible.

In our work, we celebrate the beauty of diversity and seek to bridge the gaps between cultures and communities. We believe that by collaborating across boundaries, we can arrive at solutions that are more innovative, equitable, and sustainable. Together, we are pushing the boundaries of conventional thinking and creating new narratives for a better world. So, let us continue to explore, create, and engage in meaningful discourse, as we strive towards a brighter future for all.

With boundless creativity and a commitment to positive change, thank you for reading.

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