

Link to presentation notes:

https://docs.google.com/document/d/1a9vdjVTN5AtQMSwfeqWSzsc53kaflAFq2S90CS_JT7c/edit?usp=sharing

Our Process:

- We started researching, and found that there wasn't much on our initial topic.
- When Michael clarified our research project direction, we changed direction. That is, he defined our project as being based not on the TOPIC of AI, but instead, the RESEARCH behind AI. We started researching more and decided that we would let the research guide us.
- We decided that our research question was, What does the research say about the impact of Artificial Intelligence on Education? An examination of the positives and negative impacts for students and teachers of AI.

The goal of this project is to address the disparity between Indigenous and nonIndigenous learners in BC by creating an online website that will act as a resource for technology educators to guide in implementing and intersecting Indigenous education with technology education classes and shops.

<https://indigenizingshop.opened.ca/>

https://dspace.library.uvic.ca/bitstream/handle/1828/12903/O%27Shea_Jeremy_MEd_2021.pdf

Goblin Tools: fostering their independence

1 - just enough guidance

5 - breakdown of every step

Brainstorm a list -

Push the magic wand -

AI Research Presentation

Initial Question:

Given what you know about Chat GPT and other AI platforms, do you think it has a negative or a positive impact on students and teachers?

Concluding question:

Now that you've heard the research.. Are you more or less likely to use Artificial Intelligence in your teaching practice?

Potential:

What questions came about throughout our presentation?

What piqued your interest through the presentation?

Menti Metre

Notes from Tuesday October 3:

- It's a project on the RESEARCH .. essentially presenting a synopsis of the research, not the tech itself. Important differentiation.
- <https://techonline.ca/webinars>
- Generate a word cloud
- Citation - look at the citations to find more resources
- Original research papers are usually "best"

Wondering if you want to maybe go the route of "impact of ChatGPT in education". It seems like this could be a possible approach where we examine the positives and negative impacts for students and teachers of AI. Is this different enough from the other AI groups?

AI Conversation with Jacquie:

Application of AI in the classroom: 2019

There's more than one way to use this particular tool. Student vs teachers.

Question stems: this is how you can best phrase a question... input their subject areas.

AI Platforms.

Questions to ask:

Do we add in a buffer for questions at the end?

Is 15 minutes "strict"?

Screen sharing - demo this for us on Zoom.

How many sources should we roughly be looking at? Journal articles.

Can we use TikTok and other platforms for information? Evidence, observation, and collecting data. This is becoming prevalent. Current trend in education.

Like Goblin Tools: breaks it down.

Jacque: Teacher perspective.

Deanna: Student perspective. More likely to see it. Benefits? Drawbacks too.

Ideas for how to present / order of things:

Poll at the beginning: how many people have used AI

Define AI: Chat GPT, open source, Magic School Deck AI

Information gathering time 😊

Potential Resources:

<p>Magazine Article</p>	<p>How Chat GPT is transforming the role of teachers in today's world of digital learning? Network, digitalLEARNING Digital learning, 2023</p>	<p>https://search.library.uvic.ca/permalink/01VIC_I NST/1ohem39/cdi_proquest_miscellaneous_2815260697</p> <p>Article link: https://advance-lexis-com.ezproxy.library.uvic.ca/document/?pdmfid=1516831&crd=3c069dd0-2acf-4110-9dd8-ba85091d47d2&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A688G-2PT1-DXMP-K09Y-00000-00&pdcontentcomponentid=365040&pdteaserkey</p>	<p>Dee - not read yet</p> <p>J has read</p>	<ul style="list-style-type: none"> • Suggests teachers are accepting ChatGPT is here to stay and looking for ways to use it to maximize their efficiency. • Suggests teachers are utilizing ChatGPT to increase student engagement • Suggests teachers are using ChatGPT as an assistant for planning (units, lessons, etc) • Suggests teachers are using it as a research assistant • Suggests teachers are using ChatGPT to translate material for their students <p>Article makes reasonable suggestions but provides no evidence/sources to fact</p>
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		=sr0&pditab=allpods&ecomp=hmnyk&earg=sr0&pid=30a2b920-f4a8-49e3-ba5f-e1b9e46530b7		check the validity of their assertions.
Article Peer reviewed	Empowering Education with Generative Artificial Intelligence Tools: Approach with an Instructional Design Matrix	https://search.library.uvic.ca/permalink/01VIC_I NST/1ohem39/cdi_doaj_primary_oai_doaj_org_article_489473e20f9c40c1bdd8e43df535389e	Dee - started to read	Great article. SUPER relevant to our discussions. Has a good graph on page 4 we might want to use in our presentation. Outlines a ton of diff AI that teachers successfully use. Page 5 has a breakdown of each one. Graph on pg. 11 shows percentage of teachers using which AI tool Discusses potential pitfalls of AI usage
	The impact of AI writing tools on the content and organization of students' writing: EFL teachers' perspective			Dee - started Might be more from the student perspective which I've been having a hard time finding.
tik tok videos	https://vm.tiktok.com/ZMjavc3Md/ Scholar AI https://vm.tiktok.com/ZMjac2uCk/ Ideas for classroom ChatGPT: https://vm.tiktok.com/ZMjacN6eN/			

	<p>Chat gpt as a tool for differentiation https://vm.tiktok.com/ZMjacsenX/</p> <p>Great lesson to introduce ChatGPT to students: https://vm.tiktok.com/ZMjacnMtN/</p> <p>X and Y axis responses from ChatGPT: https://vm.tiktok.com/ZMjacn8ty/</p> <p>How to maximize your prompts: https://vm.tiktok.com/ZMjacpnfC/</p> <p>**not tiktok but jessicam.reid on instagram has a lot of videos about different AI platforms and how use them as a teacher</p>			
journal article	<p>A Discussion about the Impact of ChatGPT in Education: Benefits and Concerns Author: Charles Alves de Castro</p>	<p>http://www.schoollink.org/ojs/index.php/jbtp/article/view/20378</p> <p>UVIC library search link: https://search.library.uvic.ca/discovery/openurl?institution=01VIC_I NST&rfr_id=info:sid%252Fprimo.exlibrisgroup.com-bX-Bx&rfr_id=in</p>	I has read it	<p>I'm liking what I've read so far. It's a review of other research and ties it all together.</p> <ul style="list-style-type: none"> • Reviews articles published between 2019-2023 • Based on ChatGPT in higher education • Provides solid information that outlines the pros and cons of ChatGPT for both students and teachers • While it's aimed at higher

		<p>fo:sid%2Fprimo.ezproxy.library.yorku.ca/xlibrisgroup.com-181854404-Bx&rf_t_val_fmt=info:ofi:fmt:kev:mtx:dissertation&ft.volume=11&rf_t_id=info:doi%2F10.1007/s10639-022-11177-3&resource_type=article&ft.isbn_list=&ft.jtitle=Journal%20of%20business%20theory%20and%20practice.&ft.genre=article&ft.issue=2&ft.eisbn_list=&ft.atitle=A%20Discussion%20about%20the%20Impact%20of%20ChatGPT%20in%20Education:%20Benefits%20and%20Concerns&ft.issn=2329-2644&ft.issn=2372-9759&svc_dat=CTO&vid=01VIC_INST:01UVIC (good source for related articles that looked promising)</p>		<p>education, the same concerns and risks exist for all grades/levels. Especially the concerns related to privacy or person student information (this could be prevent by not providing the platform with any personal data)</p> <ul style="list-style-type: none"> • Pros: increased student engagement, personalized learning experiences, enhancing teaching practices • Cons: privacy concerns, risk of bias, and academic integrity
Journal article	Interacting with educational chatbots: A systematic review	<p>https://link.springer.com/article/10.1007/s10639-022-11177-3</p>	J has read intro and findings	<p>Introduction, paragraph 3 has some possible directions to focus our project.</p> <ul style="list-style-type: none"> • Has interesting data about where chatbots are primarily being used in education. Research is primarily out of the US

				<p>but numerous cited articles are from Europe.</p> <ul style="list-style-type: none"> • Found that chatbots were primarily used to teach computer science, some taught foreign languages • Basically reviewing how chatbots have replaced the teacher rather than the teacher using AI to help further instruction. • Recent research: 2017 and newer
Journal Article	<p>Reflection on whether Chat GPT should be banned by academia from the perspective of education and teaching</p> <p>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10267436/</p>	Uvic Library Search Link:	D read it	See below
Journal article	<p>ChatGPT in education: a discourse analysis of worries and concerns on social media</p> <p>Lingyao Li, Zihui Ma, Lizhou Fan, Sanggyu Lee, Huizi Yu & Libby Hemphill</p>	https://link.springer.com/article/10.1007/s10639-023-12256-9	J - in progress	Has potential for identifying the negatives

Deanna's Notes to add to Presentation

Journal Article: "Reflection on whether Chat GPT should be banned by academia from the perspective of education and teaching"	Negatives for teachers	Positives for teachers	Negatives for students	Positives for students
	<p>Cheating:</p> <p>"It is difficult for teachers to determine whether students are using Chat GPT" (Yu, 2023, p. 3)</p>	<p>Keep up with social demands:</p> <p>"Finally, exploration of new educational models and teaching methods is essential to meet the needs of the new era. The transformation and upgrading of education must be continuously promoted to meet the ever-changing social demands. With the promotion of new technologies, efforts should be made to seek new educational models and teaching methods, create more flexible and efficient</p>	<p>Ability / Skill Loss:</p> <p>"has a negative impact on students' over-reliance on this tool, gradually causing them to lose their ability to think critically, explore, verify, and summarize actively. If this trend continues, it will greatly affect students' learning outcomes and development" (Yu, 2023, p. 3)</p> <p>Loss of Independent Thinking:</p>	<p>Time Saving, Increased user interest and motivation:</p> <p>"AI technology can provide users with knowledge and basic language and text services throughout the entire academic writing process, not only relieving users' time burden, but also improving learning experiences and increasing users' interest and motivation for continuous creation. Therefore, effective systems should be established to regulate and promote the use</p>

		<p>educational environments, focus on students' comprehensive development, and improve the qua” (Yu, 2023, p. 8)</p> <p>Provide students with more efficient, interesting and practical learning experiences:</p> <p>“Driven and catalyzed by artificial intelligence technologies such as Chat GPT, teachers can employ various teaching methods and strategies to provide students with more efficient, interesting, and practical learning experiences (Else, 2023). These teaching methods and strategies include project-based learning, experiential</p>	<p>“for example, over-reliance on AI technology could weaken students' independent thinking” (Yu, 2023, p. 5)</p>	<p>of artificial intelligence technologies such as Chat” (Yu, 2023, p. 5)</p>
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		<p>learning, inquiry-based learning, cooperative learning, educational games, and problem-based learning. In project-based learning, teachers can guide students to use artificial intelligence technology to design and complete practical tasks, thereby improving their abilities and skills. In experiential learning, teachers can enable students to deepen their understanding of the trends in artificial intelligence development through practical activities such as coding, programming, and robotics. In inquiry-based learning, teachers can encourage students to explore</p>		
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		AI-related issues actively, conduct on-site investigations, and enhance their problem-solving abilities. In cooperative learning, teachers can guide students to explore the latest technologies and applications” (Yu, 2023, p. 9)		
Tik Tok		Differentiation: https://vm.tiktok.com/ZMjacsenX/		

Deanna’s draft for Article #1:

Summary of the empirical evidence gathered:

The emergence of AI has created quite a stir in the educational community and this paper outlines the dichotomous nature of the topic. While many see the benefits of the technology, others believe it creates more harm than good. “Some people believe that the development of AI technology should be supported and encouraged rather than restricted and hindered, while others believe that the rapid development of AI technology may bring enormous challenges and risks to humanity, which needs to be handled with caution.” (Yu, 2023, p. 3) The research paper outlines some specific positives for teachers, including: keeping up with social demands, providing students with more “efficient, interesting and practical learning experiences (Else, 2023). The main negative for teachers is they are struggling to differentiate between what was authentically

made by the student, and what was created using AI. Positives of AI for students include time saving, and “increasing users’ interest and motivation for continuous creation.”(Yu, 2023, p. 5) The main concerns around students using AI consistently is that they will become reliant on the technology and lose the ability to think for themselves, “for example, over-reliance on AI technology could weaken students’ independent thinking” (Yu, 2023, p. 5) Although the article outlines the potential pitfalls of the reliance on AI, the underlying message and theme was that AI is here to stay. Instead of fighting the technology, “it is a better choice to integrate these tools into the education system, allowing students to learn and use them in a correct and responsible environment. However, it is essential to balance the rights of students to independently use these tools with the requirements of academic integrity, so that students can use these tools properly and responsibly. (Yu, 2023, p. 4)

Slide can say this:

Plato claimed the use of this more modern technology would create “forgetfulness in the learners’ souls, because they will not use their memories,” that it would impart “not truth but only the semblance of truth” and that those who adopt it would “appear to be omniscient and will generally know nothing,” with “the show of wisdom without the reality.” - Plato

(<https://www.nytimes.com/2022/12/15/opinion/chatgpt-education-ai-technology.html>)

Research context:

The article makes reference to forty-seven different research papers. One of those papers, titled, “A Comprehensive Survey on Pretrained Foundation Models: A History from BERT to ChatGPT” shares research from nineteen different researchers, spanning a global approach; collecting data from their experiences at nine different universities. Another research paper referenced, titled, “Engineering Education in the Era of ChatGPT:

Promise and Pitfalls of Generative AI for Education” references twenty-seven citations.

Slide can show:

19 Researchers

Ce Zhou^{1*} Qian Li^{2*} Chen Li^{2*} Jun Yu^{3*} Yixin Liu^{3*} Guangjing Wang¹ Kai Zhang³ Cheng Ji² Qiben Yan¹ Lifang He³ Hao Peng² Jianxin Li² Jia Wu⁴ Ziwei Liu⁵ Pengtao Xie⁶ Caiming Xiong⁷ Jian Pei⁸ Philip S. Yu⁹ Lichao Sun³

9 Universities:

1Michigan State University, 2Beihang University, 3Lehigh University, 4Macquarie University, 5Nanyang Technological University, 6University of California San Diego, 7Salesforce AI Research,8Duke University, 9University of Illinois at Chicago

Ethical considerations (do we want to add this at the end? Maybe take a poll and see if our cohort agrees?)

“Compared to restricting students from using these AI tools to save time and effort, it is a better choice to integrate these tools into the education system, allowing students to learn and use them in a correct and responsible environment. However, it is essential to balance the rights of students to independently use these tools with the requirements of academic integrity, so that students can use these tools properly and responsibly. An article published in the jou” (Yu, 2023, p. 4)

“In evaluations, emphasis should be placed on students’ procedural performance capabilities, rather than solely focusing on the results. Students need to make great efforts during the learning process, constantly reflect, think, and explore. Only after a long journey can students cultivate patience and perseverance to face future challenges with a resilient mindset. Therefore, evaluations should focus more on students’ learning processes to help them develop their overall abilities and qualities.” (Yu, 2023, p. 10)

“Reflection on whether Chat GPT should be banned by academia from the perspective of education and teaching” (Yu, 2023, p. 1)

“This technology is not only profoundly influencing and shaping the production, life, and communication modes of the entire society, but also fundamentally reshaping society and humanity itself (Hill-Yardin et al., 2023). Since the emergence of Eliza, chatbots based on artificial intelligence generated content (AIGC) technology have been continuously developing and innovating.” (Yu, 2023, p. 1)

“The chatbot model was developed by OpenAI and attracted over one million users in just five days,” (Yu, 2023, p. 1)

“Additionally, the application of Chat GPT technology may also increase people’s reliance on artificial intelligence, thus diminishing human thinking and judgement abilities. Aside from its effects on the job market, Chat GPT” (Yu, 2023, p. 2)

“Chat GPT breaks free from the limitations of existing indexing, retrieval, and sorting models by accurately understanding the semantic meaning and intent of questions, providing organized and coherent human-like feedback, and modifying answers based on user feedback (see Table 1) (Deng and Lin, 2023).” (Yu, 2023, p. 2)

“On the one hand, while Chat GPT is expected to improve the way and efficiency of interpersonal communication, some people worry that this method may have a negative impact on interpersonal relationships. On the other hand, students using Chat GPT to complete assignments may lead to academic dishonesty and cheating behaviors, which have already sparked opposition and resistance from some universities, publications, and scholars. At the same time, the misuse of Chat” (Yu, 2023, p. 3)

“A recent survey revealed that nearly 89% of American college students use Chat GPT to complete homework tasks, with 53% using the tool for writing papers. Additionally, 48% of students use Chat GPT during exams and 22% use Chat GPT to generate paper outlines (McGee, 2023). However, it is worth noting that some students are not only able to successfully complete assignments using Chat GPT but also achieve high scores. Nevertheless, it is difficult for teachers to determine whether students are using Chat GPT, which has a negative impact on students’ over-reliance on this tool, gradually causing them to lose their ability to think critically, explore, verify, and summarize actively. If this trend continues, it will greatly affect students’ learning outcomes and development” (Yu, 2023, p. 3)

“As an artificial intelligence technology, the application of Chat GPT in education has attracted the attention of scholars. However, some scholars have expressed concerns about its feasibility and potential negative impacts. Scholars such as Alshater point out that Chat GPT faces various challenges, including dependence on data quality, limitations on knowledge scope, exacerbation of ethical issues, and risks of technical dependence and misuse (Alshater, 2022). Scholars such as Baidoo-Anu believe that the application of Chat GPT in education may lead to problems such as lack of communication, limited understanding ability, inaccurate training data, lack of innovation, insufficient understanding of context, and privacy leakage (Baidoo-Anu and Owusu Ansah, 2023). In addition, scholars such as Qadir also pointed out that Chat GPT and other generative AI systems also have biases and erroneous information, bringing serious moral risks (Qadir, 2022). These scholars unanimously believe that to make Chat GPT play a positive role in education,

multiple challenges need to be addressed, including data quality, knowledge reserves, privacy protection, and ethical issues. I” (Yu, 2023, p. 4)

“These technologies can help students better master knowledge and improve learning efficiency. However, to ensure that students adhere to academic integrity when using these new technologies, schools need to make appropriate adjustments to teaching methods and examination standards” (Yu, 2023, p. 4)

“Compared to restricting students from using these AI tools to save time and effort, it is a better choice to integrate these tools into the education system, allowing students to learn and use them in a correct and responsible environment. However, it is essential to balance the rights of students to independently use these tools with the requirements of academic integrity, so that students can use these tools properly and responsibly. (Yu, 2023, p. 4)

“Before discussing whether AI should be academically banned, it is necessary to carefully examine the challenges currently faced by education and the significant impact of artificial intelligence on education. Currently, there are many problems in the field of education from the international perspective, including unequal distribution of educational resources, unstable education” (Yu, 2023, p. 4)

“quality, insufficient education content, outdated teaching methods, excessive student workload, and imperfect education evaluation system. These problems severely restrict the fairness and quality of education, hindering its progress and development, quality, insufficient education content, outdated teaching methods, excessive student workload, and imperfect education evaluation system. These problems severely restrict the fairness and quality of education, hindering its progress and development. Among them, the unequal distribution of educational resources” (Yu, 2023, p. 5)

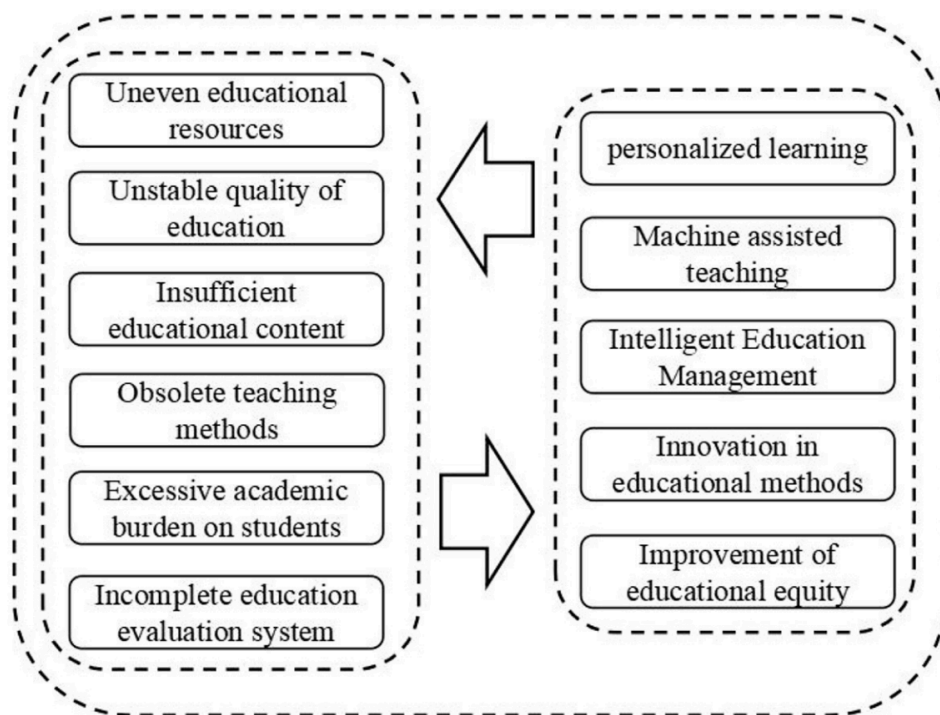
” (Yu, 2023, p. 5)

“Overall, AI has brought numerous benefits to the education field, promoting its transformation and fair improvement. However, AI faces some challenges and issues in education, such as data security and privacy protection. Therefore, when promoting the application of AI in education, it is necessary to strengthen technical research and development and management standards to ensure its safe and reliable use in educational practice.” (Yu, 2023, p. 5)

“The rapid development of artificial intelligence may affect the career prospects of different groups, so it is necessary to respect and understand the emotions and opinions of different groups and regulate the use of AI technology through effective systems to better serve human society (Ke et al., 2021). Although Chat GPT has improved compared to previous AI products, it still cannot meet the requirements of general artificial intelligence and highquality academic output.

However, **AI technology can provide users with knowledge and basic language and text services throughout the entire academic writing process, not only relieving users' time burden, but also improving learning experiences and increasing users' interest and motivation for continuous creation. Therefore, effective systems should be established to regulate and promote the use of artificial intelligence technologies such as Chat**" (Yu, 2023, p. 5)

"for example, over-reliance on AI technology could weaken students' independent thinking" (Yu, 2023, p. 5)



(Yu, 2023, p. 6)

“Therefore, higher education students need different skills and abilities than what Chat GPT possesses and must continue developing themselves to gain a competitive advantage in the job market. Only when humans and technology complement each other can more efficient and convenient solutions be built to meet the needs of learning and social work. Therefore, it is necessary to take full advantage of technologies such as Chat GPT while preserving necessary job positions for humans to adapt to future societal development trends.” (Yu, 2023, p. 6)

“At the same time, governments and schools should strengthen research and development of technologies such as Chat GPT to promote educational reform, break traditional education concepts, teaching models and practices, and provide a better development environment for education in the Chat GPT era.” (Yu, 2023, p. 7)

“Therefore, educators need to explore which knowledge and abilities are worth cultivating and improving.” (Yu, 2023, p. 7)

“Finally, exploration of new educational models and teaching methods is essential to meet the needs of the new era. The transformation and upgrading of education must be continuously promoted to meet the ever-changing social demands. With the promotion of new technologies, efforts should be made to seek new educational models and teaching methods, create more flexible and efficient educational environments, focus on students’ comprehensive development, and improve the qua” (Yu, 2023, p. 8)

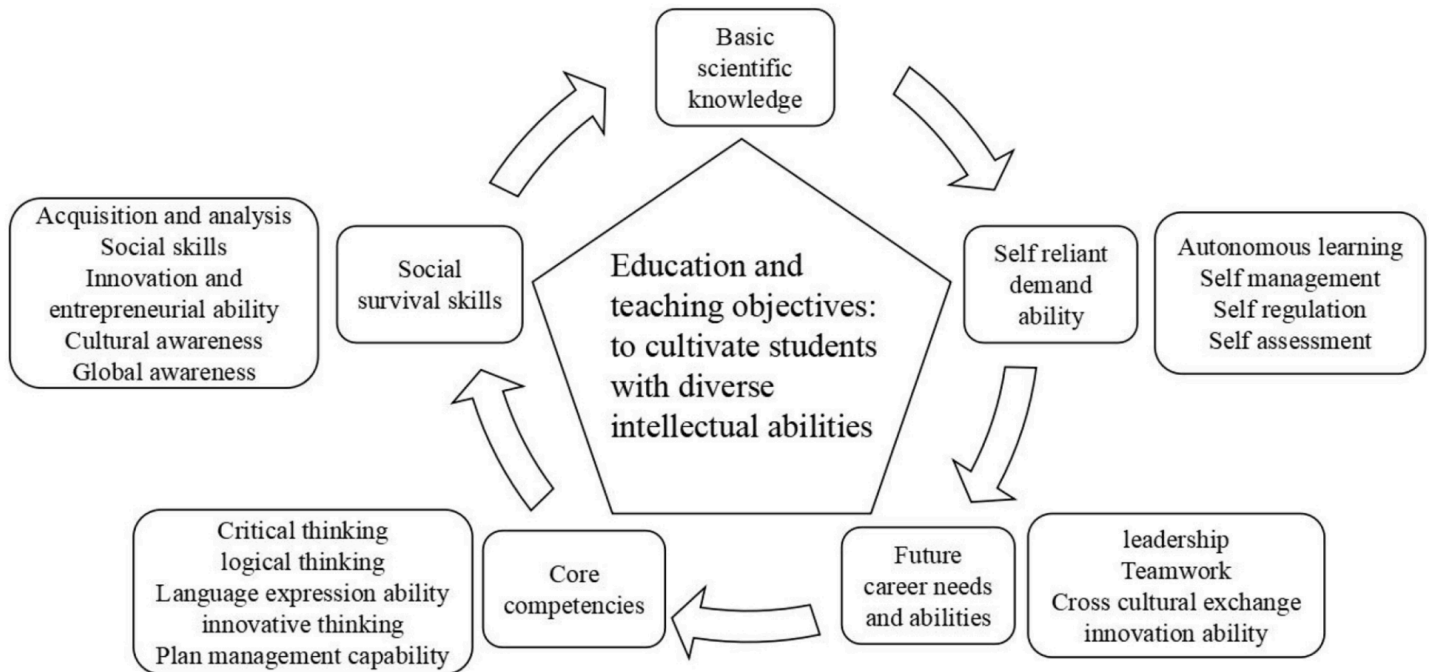


FIGURE 2
Qualities that students with multiple intelligence abilities should possess.

(Yu, 2023, p. 9)

“rhythms. Driven and catalyzed by artificial intelligence technologies such as Chat GPT, teachers can employ various teaching methods and strategies to provide students with more efficient, interesting, and practical learning experiences (Else, 2023). These teaching methods and strategies include project-based learning, experiential learning, inquiry-based learning, cooperative learning, educational games, and problem-based learning. In project-based learning, teachers can guide students to use artificial intelligence technology to design and complete practical tasks, thereby improving their abilities and skills. In experiential learning, teachers can enable students to deepen their understanding of the trends in artificial intelligence development through practical activities such as coding, programming, and robotics. In inquiry-based learning, teachers can encourage students to explore AI-related

issues actively, conduct on-site investigations, and enhance their problem-solving abilities. In cooperative learning, teachers can guide students to explore the latest technologies and applications” (Yu, 2023, p. 9)

“In evaluations, emphasis should be placed on students’ procedural performance capabilities, rather than solely focusing on the results. Students need to make great efforts during the learning process, constantly reflect, think, and explore. Only after a long journey can students cultivate patience and perseverance to face future challenges with a resilient mindset. Therefore, evaluations should focus more on students’ learning processes to help them develop their overall abilities and qualities.” (Yu, 2023, p. 10)