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Ready for AI?

How Canadian educators, youth, parents and caregivers are using and thinking about artificial intelligence

actua

Youth · STEM · Innovation
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Table of Contents

03	Ready for AI?
04	What we did
05	Highlights
06	Preparing Youth to Navigate AI Effectively and Responsibly
12	Use and Effects of AI Among Youth
19	Youth Skills to Use AI
22	Are Educators Ready to Play a Role?
26	Preparing Youth and Educators for AI
27	Actua's AI Ready Project

Ready for AI?

Actua is building a Canada where every child has the skills and confidence to reach their full potential. As artificial intelligence (AI) rapidly transforms work, education, science, and society, Actua has expanded its efforts to ensure youth are prepared to lead in this new reality. We are doubling down on our efforts to develop AI skills in youth by launching a first-of-its-kind national survey and a bold national initiative to develop an AI-ready generation in Canada.

As a leading science, technology, engineering and mathematics (STEM) outreach organization, Actua includes over 40 universities and colleges, engaging 500,000 youth in 600 communities each year. For 30 years, Actua has focused on identifying and removing the barriers for entry into STEM and now delivers national programs dedicated to engaging Indigenous youth, girls and young women, Black youth, those facing economic barriers and youth in Northern and remote communities.

AI tools and applications promise a range of exciting benefits for youth, including breaking down language barriers to connect with people around the world, creating personalized learning experiences that adapt to individual needs, supporting mental health through smart apps, and helping young innovators design solutions for global challenges like climate change and clean water access. At the same time, AI poses risks. AI tools can be used to generate fake or misleading images and videos; algorithms can amplify extremist content and reinforce gender, racial, class and other biases; AI in education, without proper training and guidance, can impair learning and skill development; and the environmental impact of AI is a growing concern.

Are Canadians ready to navigate AI effectively and responsibly? Are young people in Canada getting the instruction they need to think about AI critically and use it constructively? Are educators equipped with the skills and knowledge they need to guide their students through the emerging age of AI?

To help answer these questions and to inform the ongoing evolution of Actua's AI Ready Project, we commissioned Abacus Data to survey over 500 educators and 1,000 youth and their parents and caregivers. We collected their views about the importance of AI, perceptions of benefits and risks, how educators and youth are using AI, and whether they think they have the skills and knowledge to talk about and use AI effectively and responsibly. This report presents the results and compares the differences across and within the different survey groups.

What We Did

Actua commissioned Abacus Data to conduct two national surveys to collect insights about how Canadians are thinking and talking about AI, especially as it relates to education and youth development and well-being.

- The first survey captured the views of 502 educators from across Canada, including both elementary and high school teachers and a balance of those who teach STEM (science, technology, engineering and math) and those who teach other subjects (e.g., arts, social studies, languages, physical education).
- The second survey was conducted in two parts to capture the views of 1,000 young Canadians (aged 12 to 18, from all regions, and with a balanced gender distribution) and their parents or caregivers (n=1,000).¹

In both surveys, we asked respondents for their views about:

- how *important* it will be for students to develop critical awareness and skills to use AI in their future education and careers;
- whether AI will be beneficial or harmful in science and innovation, healthcare, the workplace, education, government, and arts and culture;
- how they currently use AI in teaching, learning and their personal lives;
- the impact of AI on skills development, including math and data analysis, writing, creativity, and critical and independent thinking;
- whether they have skills and knowledge to use and talk about AI.

¹ The surveys were conducted online and respondents were drawn from a panel of Canadians Abacus Data has identified as willing to complete surveys. While margins of error cannot be calculated for online surveys of this kind, similar surveys would have margins of error of 4.4% (educator survey) and 3% (youth and parent/caregiver surveys).

Highlights

- Artificial intelligence (AI) is quickly becoming a reality in work, education and social life – but it's not clear that young people in Canada are prepared to navigate its benefits and risks, nor that educators are prepared to guide them.
- We surveyed 502 educators and 1,000 youth and their parents and caregivers to understand their views about AI and whether they have the skills and knowledge to use, teach and talk about AI.
- **9 in 10** youth are already using AI and most believe they have the skills to do so effectively and responsibly. Educators disagree.
 - **71% of youth** say they know how to use AI effectively – but only **38% of educators** have confidence in students' ability.
 - **73% of youth** believe they know how to use AI responsibly – but just **36% of educators** agree.
- Most youth, educators, parents and caregivers agree that awareness of the benefits and risks, and skills to use AI are important to education and careers.
- Respondents have mixed views about the effects of AI on learning and skills.
 - **54% of youth** and **53% of parents and caregivers** think AI improves skills development generally, but only **40% of educators** agree.
 - 49% of educators say that AI worsens students' writing skills.
 - 48% of educators say that AI worsens students' critical thinking skills.
- Fortunately, **84% of youth** recognize that they have more to learn about AI, but educators say they need more training to help their students.
 - **Less than half of educators** think they have the skills they need to use AI tools in the classroom (**48%**), to teach students how to use AI responsibly (**46%**) and teach students how to use AI effectively (**42%**).
 - **4 in 5 educators** say there is room to improve their skills and knowledge about AI and would welcome professional development opportunities related to AI if offered to them.
- Recognizing the need, Actua has developed a suite of AI programs to help equip youth, educators, parents and caregivers with the technical skills and ethical understanding needed to navigate AI now and in the future.



DEFINING AI

Artificial intelligence has become a broad and widely-used term to describe a range of software and programs that attempt to mimic aspects of human intelligence. While we understand that many respondents will have their own ideas of what AI is and how it might be used, we presented a simplified definition to respondents to provide some orientation and shared understanding. This was important given the different education and literacy levels of the youth, educator, parent and caregiver respondents.

“Artificial Intelligence (AI) involves computer systems and programs that attempt to mimic aspects of human intelligence to perform a range of tasks including pattern-recognition; decision-making; problem-solving; text-, image-, sound- and video-generation; organizing; and learning. Examples include ChatGPT, Bard, DALL-E, chatbots, Gradescope, etc.”

Preparing Youth to Navigate AI Effectively and Responsibly

Educators, students, parents and caregivers believe that developing skills and knowledge to understand and use AI effectively and responsibly is essential to a 21st century education. Most agree that youth will need to build an understanding of AI in order to succeed in their future careers and that schools should play a key role in helping students develop the necessary skills and knowledge.

To be sure, educators, parents, caregivers and youth have concerns about AI. Developing youth awareness of the benefits and harms of AI, and their skills to use AI when appropriate, does not necessarily imply positive judgments about the value of AI. Learning about AI is not simply about mastering technical skills, but about developing the critical thinking skills and ethical awareness one needs to engage with AI responsibly.

AI AWARENESS AND SKILLS ARE ESSENTIAL TO A 21ST CENTURY EDUCATION

Educators, youth, parents and caregivers agree that awareness and knowledge of AI is important to students' future education and career success.

- 80% of educators, 82% of parents and caregivers, and 77% of youth agree that *awareness of the benefits and risks of AI is important to students' future career success.*
- 78% of educators, 81% of parents and caregivers, and 75% of youth agree that *awareness of the benefits and risks of AI is important to education success.*

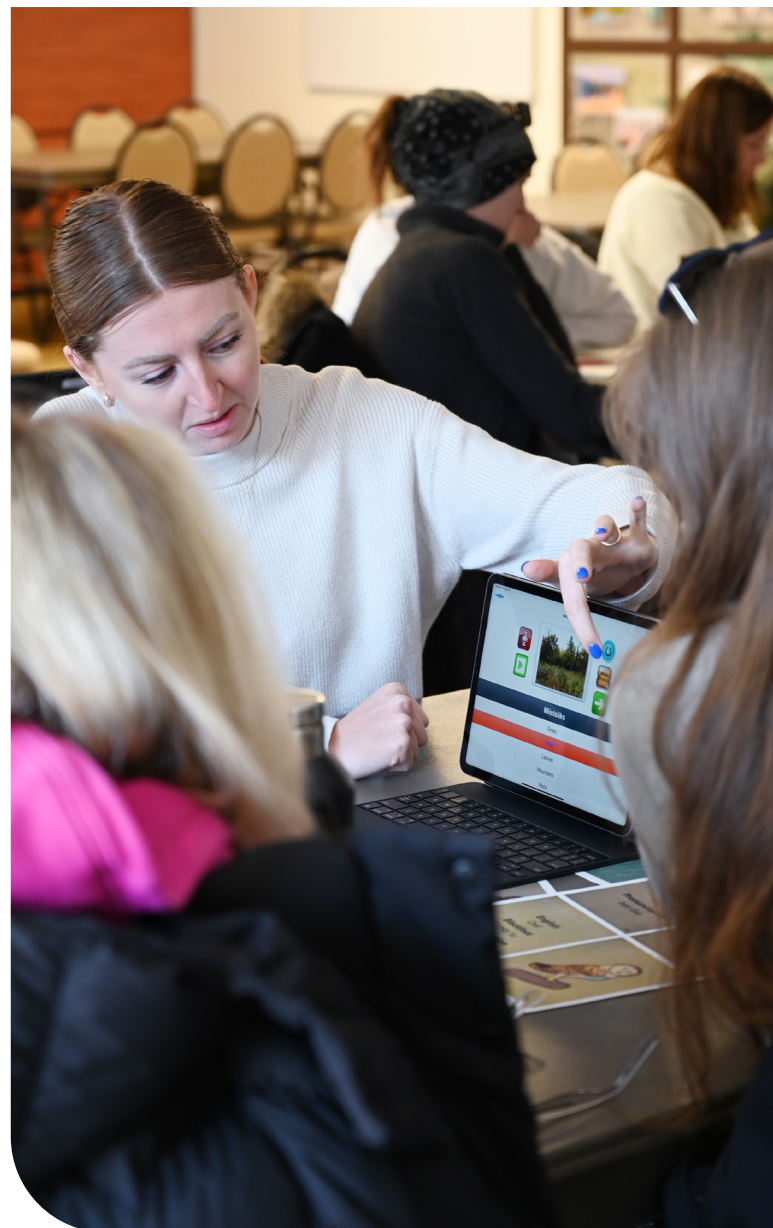
- In terms of using AI:
 - 73% of educators, 77% of parents and caregivers, and 75% of youth agree that knowledge of *how to use AI is important to future career success*.
 - 67% of teachers, 76% of parents and caregivers, and 75% of youth also say that knowledge of *how to use AI is important to future education success*.

It is telling that educators, parents and caregivers are a little more likely to say that *awareness of the benefits and risks* is important than they are to say that *skills to use AI* is important. There appears to be an emphasis on awareness and responsible use over mere effective use.

SCHOOLS HAVE A ROLE TO PLAY IN DEVELOPING AI SKILLS

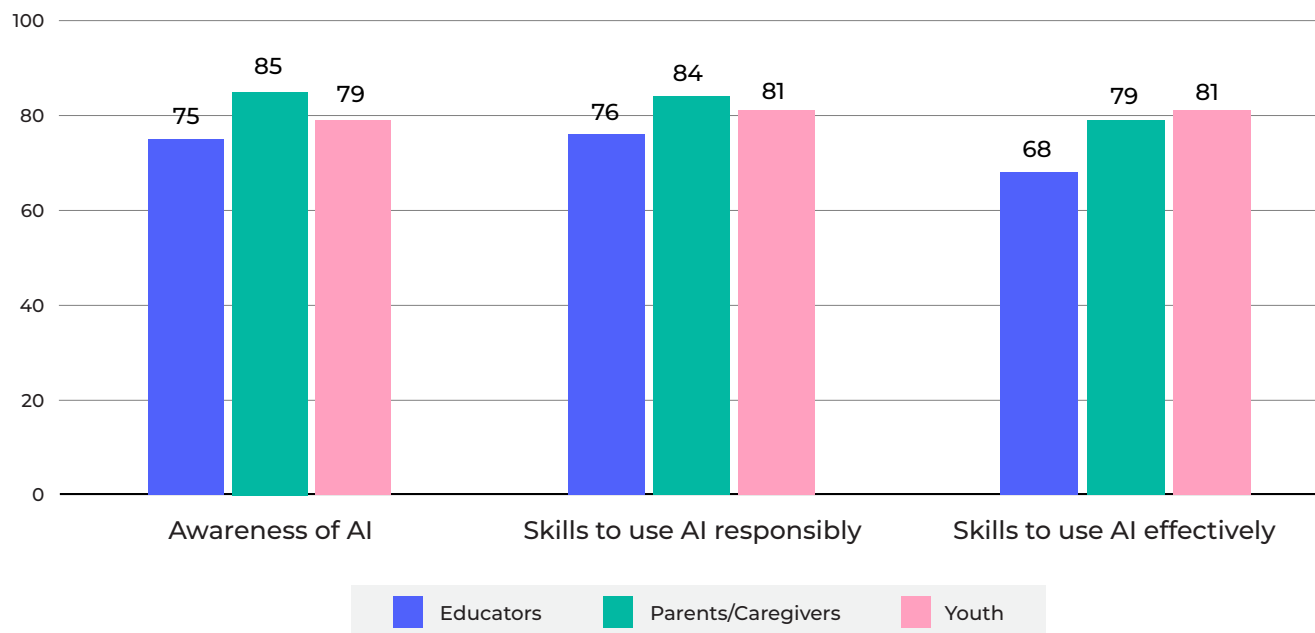
Given that most respondents think AI awareness and skills are important for students' education and career success, it is not surprising that most also think it is important for schools to play a role. A majority of educators, parents, caregivers and youth agree that it is important for schools to develop students' awareness of and skills to use AI effectively and responsibly.

- 74% of educators, 85% of parents and caregivers and 79% of youth think that it is *important for schools to develop students' awareness of AI*.
- 76% of educators, 84% of parents and caregivers and 81% of youth think that it is *important for schools to develop students' skills to use AI critically and responsibly*.
- 68% of educators, 79% of parents and caregivers and 81% of youth think that it is *important for schools to develop students' skills to use AI effectively*.



Educating for AI

% agree and strongly agree it is important to develop students'...



While most educators think that developing students' AI awareness and skills is important, they are somewhat less likely than parents, caregivers and youth to say so. This is true even of STEM educators. Although STEM teachers are more likely than their non-STEM peers to say that developing AI awareness and skills is important, they are still less likely than parents, caregivers and youth to say it is important.

The hesitation among some teachers is likely a mix of skepticism about AI generally and a reaction to the pressure educators face to address an increasing range of social issues in the classroom. Additionally, **8% of educators surveyed say that their board or school prohibits the use of AI altogether** which would make it difficult to go beyond simply talking about AI and actually teach students how to use various tools.

Variations aside, most educators, parents, caregivers and youth think schools should help develop students' awareness of AI and skills to use AI effectively and responsibly.

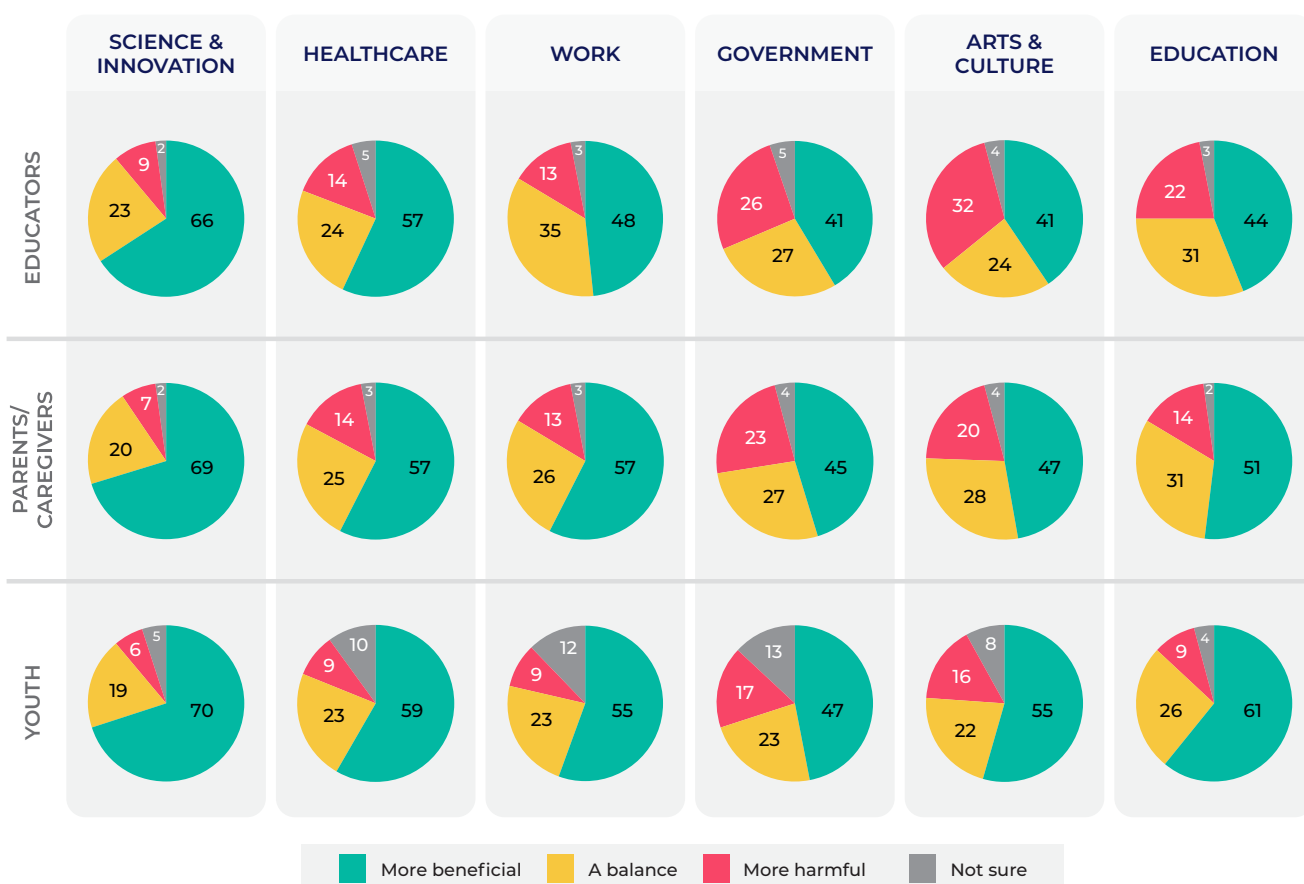
PERCEPTIONS OF BENEFITS AND HARM

As schools and society think about how exactly to develop students' AI literacy, they will need to grapple with questions about the value of AI. Is AI beneficial, harmful or a mixed bag in social and economic life?

To get a baseline understanding of how different groups view AI, we asked educators, parents, caregivers and youth whether they think that, on balance, AI is more beneficial or harmful in various spheres of life. While the general disposition of all groups is more optimistic than pessimistic, enthusiasm varies by group and different uses of AI.

On balance, is AI more beneficial or harmful in...

% respondents



POSITIVE VIEWS ABOUT AI IN SCIENCE, INNOVATION AND HEALTHCARE

Optimism about the benefits of AI in science, innovation and healthcare tends to be fairly strong across all respondent groups. While there is a significant number who think that using AI in these areas is likely to generate harm, or a mix of benefits and harm, a substantial majority believe AI will be beneficial.

- **66% of educators, 69% of parents and caregivers, and 70% of youth** expect AI to be *more beneficial than harmful* in **science and innovation**.
 - 9% of educators, 7% of parents and caregivers, and 6% of youth anticipate *more harm than good* in science and innovation.
 - 23% of educators, 20% of parents and caregivers, and 19% of youth think AI will generate a *balance of harm and good* in science and innovation.
- **57% of educators, 57% of parents and caregivers, and 59% of youth** think AI will be *more beneficial than harmful* in **healthcare**.
 - The proportion of those who anticipate more harm than benefit rises slightly to 14% (educators), 14% (parents and caregivers) and 9% (youth).
 - 24% of educators, 25% of parents and caregivers, and 23% of youth anticipate a balance of harm and good in healthcare.

MIXED VIEWS ABOUT AI IN THE WORKPLACE AND GOVERNMENT

While respondents are still more likely to be optimistic than pessimistic about the impact of AI in the workplace and government, fewer hold this view and the number who expect more harm than benefit rises. It may be that, for some respondents, the closer AI gets to their lives, the more cautious they are about its use and impact.

- **57% of parents and caregivers and 55% of youth** expect AI will generate *more benefit than harm* in the **workplace**, but among **educators** this drops below half to **48%**.
 - 13% of educators, 13% of parents and caregivers and 9% of youth think AI will be *more harmful than beneficial* in the workplace.
 - 35% of educators, 26% of parents and caregivers, and 23% of youth think there will be a *balance of benefit and harm*.
- In **government**, **41% of educators, 45% of parents and caregivers, and 47% of youth** expect AI to be *more beneficial than harmful*.
 - A much higher proportion of respondents than in other areas think AI will be *more harmful than beneficial* in government, including 26% of educators, 23% of parents and caregivers, and 17% of youth.
 - 27% of educators, 27% of parents and caregivers, and 23% of youth think there will be a *balance of benefit and harm*.

CONCERNS ABOUT AI IN ARTS, CULTURE AND EDUCATION

There is more skepticism about the impact of AI in the arts and culture – and the divide between youth and educators on the impact of AI in education is stark.

- In **arts and culture**, **41% of educators**, **47% of parents and caregivers**, and **55% of youth** expect AI to be *more beneficial than harmful*.
 - Meanwhile, 32% of educators, 20% of parents and caregivers, and 16% of youth – expect AI to do more *harm than good in arts and culture*.
 - 24% of educators, 28% of parents and caregivers, and 22% of youth think there will be a *balance of benefit and harm*.
- Just **44% of educators** think AI will be *more beneficial than harmful* in **education** versus **61% of youth** who feel this way. **51% of parents and caregivers** expect *more benefits than harm*.
 - While only 9% of youth think *AI in education will generate more harm than good*, this more than doubles (22%) among educators.
 - 24% of educators, 28% of parents and caregivers, and 22% of youth think there will be a *balance of benefit and harm*.

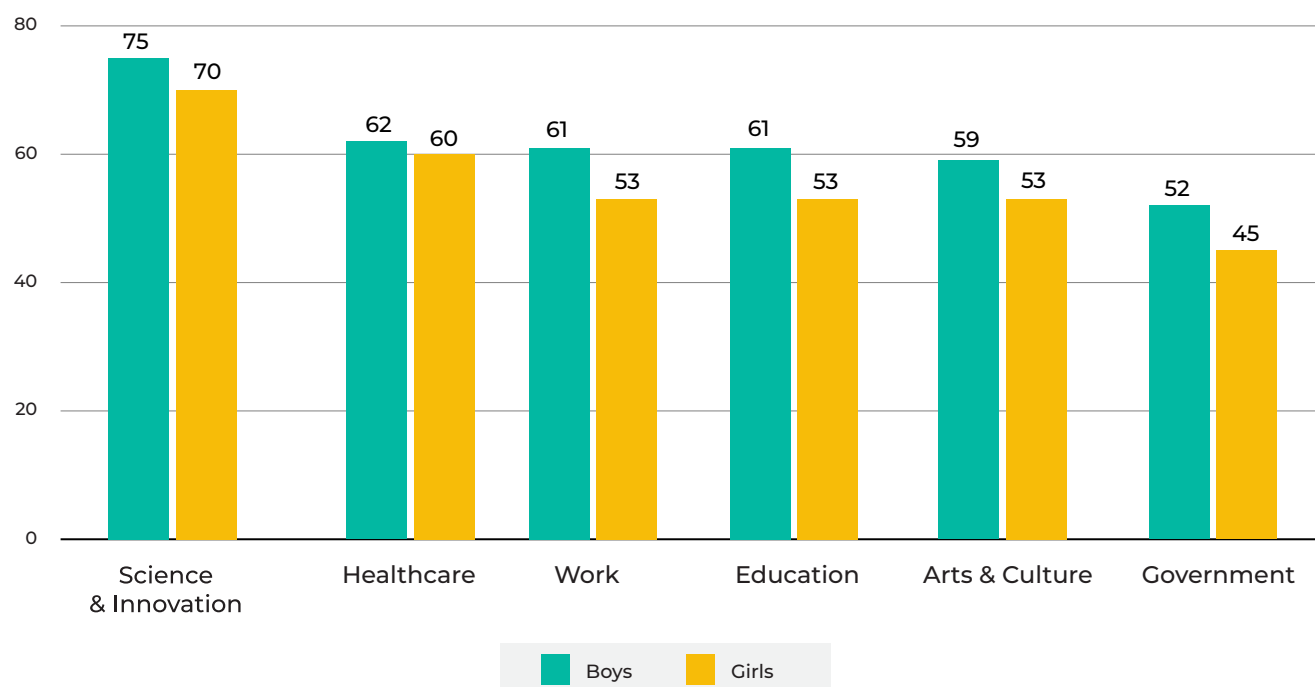
BOYS ARE SLIGHTLY MORE OPTIMISTIC ABOUT AI THAN GIRLS

Across all spheres, youth respondents tend to have more optimism about the potential effects of AI than educators, parents and caregivers, though there are some differing opinions among them. Boys appear to be a little more optimistic than girls about the effects of AI.

- Boys are 8 percentage points more likely than girls to say that AI is more beneficial than harmful in work and education, and 7 percentage points more likely to say that of AI in government.
- The gap narrows to 6 percentage points in arts and culture, and 5 percentage points in science and innovation.

On balance, is AI more beneficial or harmful in the following areas?

% saying more beneficial



In sum, while there is general optimism about AI among educators, parents, caregivers and youth, there is some concern about harmful effects among a significant number of respondents – particularly, among educators when thinking about AI in education and arts and culture.

As we think about how to teach and talk about AI with students, it will be useful to include conversations about the possibilities for benefit and harm. That there is a diversity of views about the merits of AI is arguably a constructive feature of public opinion. Students are likely to hear contrasting views about AI from educators, parents, caregivers and peers which could have positive effects on their capacity for critical thinking about and responsible use of AI.

Use and Effects of AI Among Youth

AI is already deeply woven into students' lives. Many youth indicate that they use various AI tools and applications in their education and personal lives. In that case, efforts to educate students about effective and responsible use might benefit from engaging directly with youth experience.

How are youth using AI? What do they think about its benefits and risks? What concerns do their parents, caregivers and teachers have about how they use AI and its impact on their and others' lives?

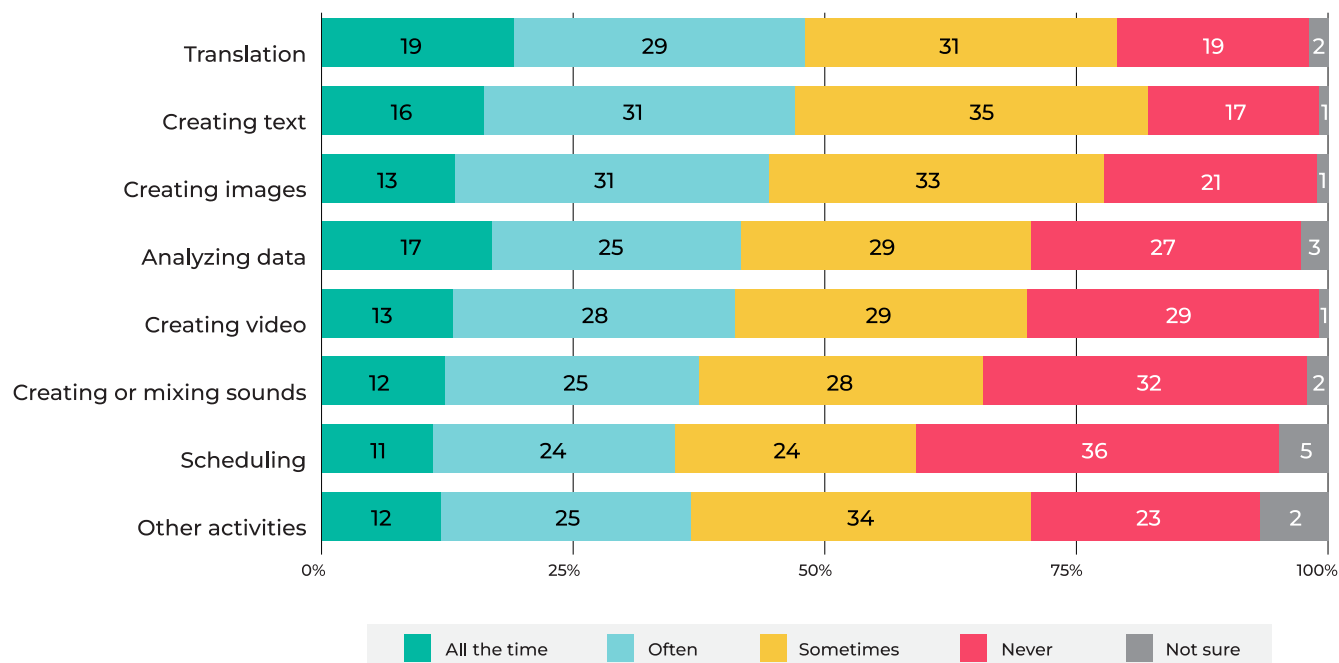
NEARLY ALL YOUTH ARE ALREADY USING AI

More than **9 in 10 youth say that they have used AI in some capacity**, whether to help with schoolwork or outside of school for their own interest. Use is similar across all ages and between boys and girls, but varies by kind of activity.

- **48% of youth** say they use AI for **translation** to help with schoolwork all the time or often, while 60% do so outside of school.
 - 1 in 5 youth say they have never used AI for translation whether inside or outside of school.
- **47% of youth** say they use AI to **create text** to help with schoolwork all the time or often, while 59% do so outside of school.
 - Nearly 1 in 5 say they have never used AI to generate text.
- Just **35%** say they use AI for **scheduling** to help with schoolwork all the time or often, while 45% do so outside of school.
 - More than 1 in 3 say they have never used AI for scheduling.

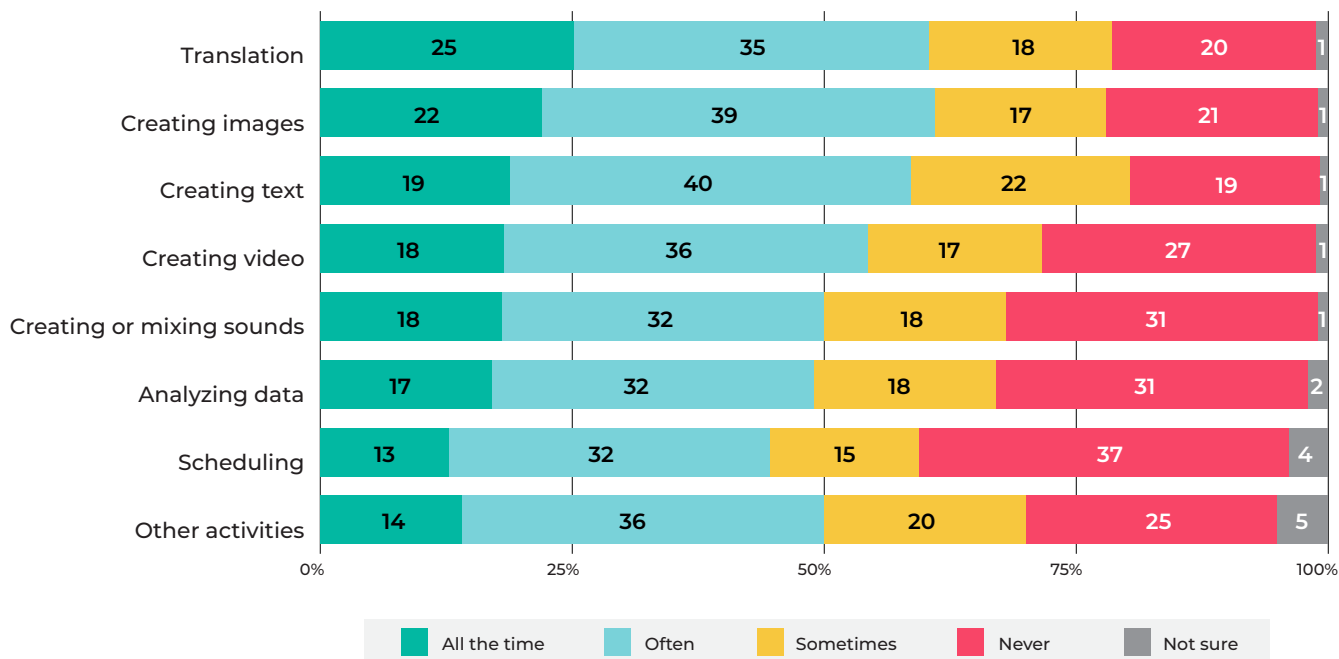
Using AI for schoolwork and classroom activities

% indicating frequency of use



Using AI outside of school + for own interest

% indicating frequency of use



ADULTS ARE AWARE OF HOW YOUTH ARE USING AI

Parents and caregivers seem aware of how, and how often, their children use AI for various activities. Parents' and caregivers' perceptions of how frequently their children use AI both for schoolwork and outside of school closely matches what youth themselves say.

While educators were asked a related, but differently worded, question (focused on how many of their students use AI for different activities as opposed to how often), their awareness also seems aligned with how students themselves report AI use.

- **72% of educators** think that some (35%), most (25%) or all (13%) of their **students are using translation** to help with schoolwork and assignments.
 - 1 in 5 think that none of their students are using AI for translation.
- **70% of educators** think that some (38%), most (17%) or all (15%) of their **students are using AI to generate text** for schoolwork and assignments.
 - Close to 1 in 4 think that none of their students use AI to generate text.
- **47% of educators** think that some (20%), most (15%) or all (12%) of their **students are using AI for scheduling** schoolwork and assignments.
 - More than 2 in 5 think that none of their students use AI to help with scheduling.

EDUCATORS ARE SKEPTICAL ABOUT THE EFFECTS OF AI ON LEARNING

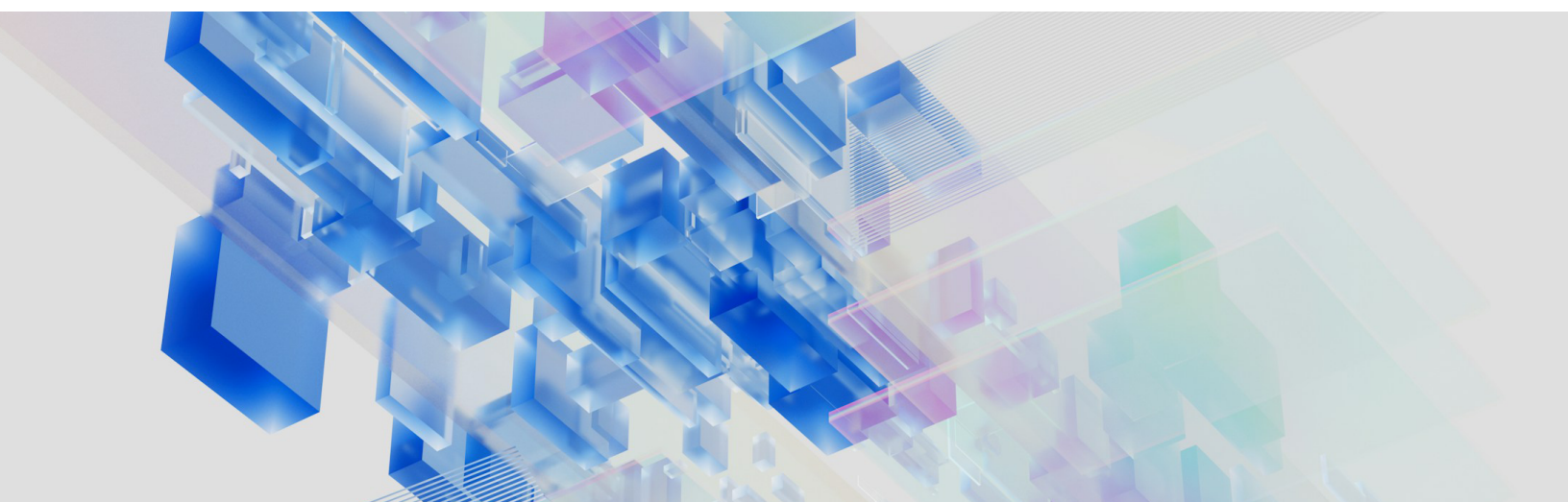
One of major concerns about youth use of AI is its impact on their education and skills development. While nearly **6 in 10 youth say that using AI for schoolwork and assignments has made learning easier**, emerging research shows that, when not adopted and used properly, AI can impair the development of writing, critical thinking, creativity and other skills.² How concerned are educators, parents, caregivers and youth about the effects of AI use on learning and development?

We asked respondents whether they think using AI improves or worsens students' skills development. Perceptions vary across the groups.

- **54% of youth** think that ***using AI improves their skills development*** a little or a lot, while 21% think it worsens skills and 22% say it neither improves, nor worsens, skills development.
- **53% of parents and caregivers** think that ***student use of AI improves skills development*** a little or a lot, while 23% think it worsens skills and 20% say it neither improves, nor worsens skills development.

Educators are more divided about the effects of AI use on students' skills.

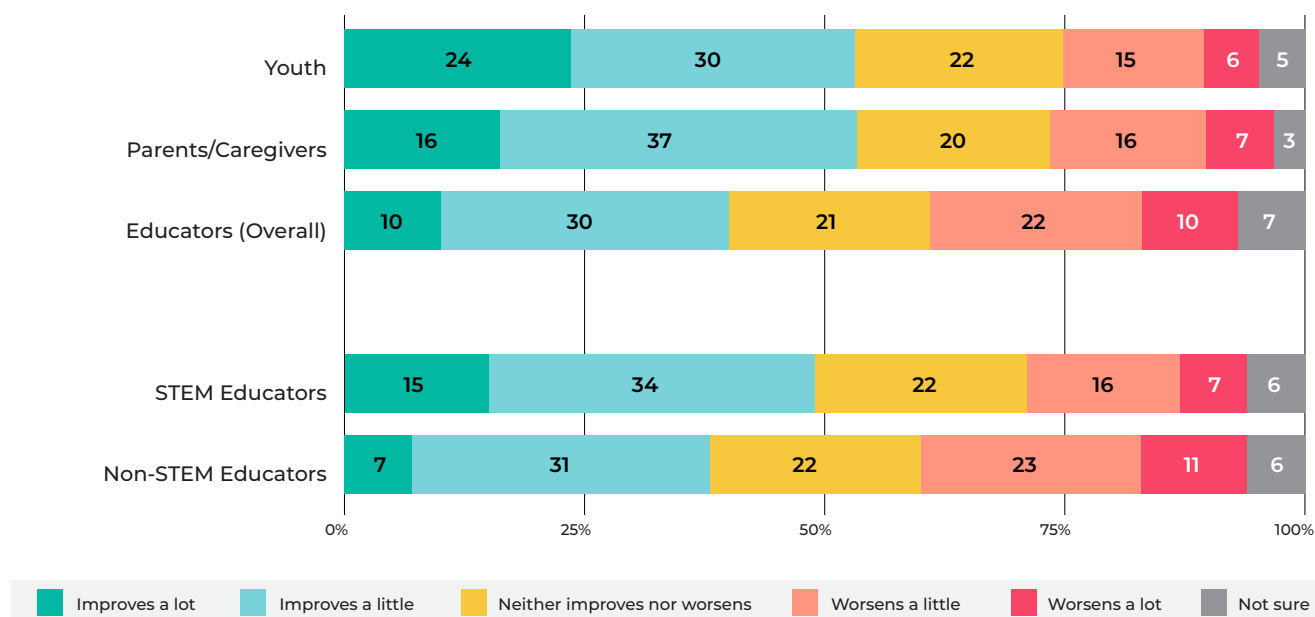
- **40% of educators** think using AI ***improves*** students' skills, while **32% of educators** say that it ***worsens*** students' skills a little or a lot.
 - **49% of educators who teach STEM** subjects think that *student use of AI improves skills*, versus **38% among their non-STEM peers**.
 - **34% of non-STEM educators** think using AI ***worsens*** students' skills development.



² M. Gerlich (2025). AI Tools in Society: Impacts on Cognitive Offloading and the Future of Critical Thinking. Societies 15, 6.

Does student use of AI improve or worsen skill development?

% responding



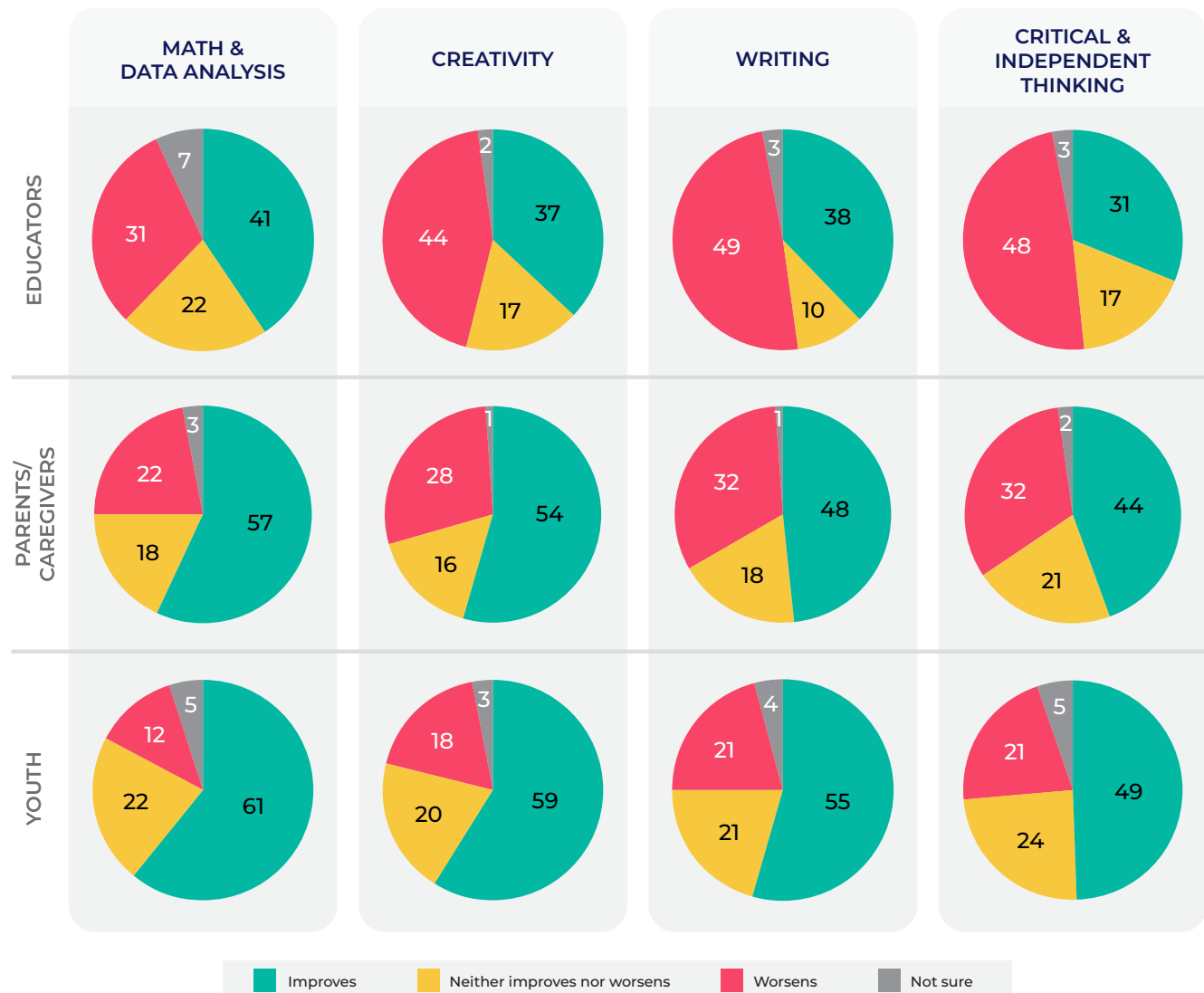
EFFECTS ON SPECIFIC SKILLS

When we ask about effects on specific skills, we found opinions even more divided.

- **71% of youth** and **57% of parents and caregivers** think that using AI *improves math and data analysis skills* but only **41% of educators** agree.
 - **31% of educators** think that *using AI worsens math and data skills*.
- **59% of youth** and **54% of parents and caregivers** think *using AI improves creativity*, but only **37% of educators** agree.
 - **44% of educators** think that *using AI worsens creativity*.
- **55% of youth** and **49% of parents and caregivers** think *using AI improves writing skills*, while only **38% of educators** agree.
 - **49% of educators** think that *using AI worsens writing skills*.
- **49% of youth** and **44% of parents and caregivers** think *using AI improves critical and independent thinking skills*. Only **31% of educators** agree.
 - **48% of educators** think that *using AI worsens critical and independent thinking*.

Do you think using AI improves or worsens skills?

% respondents



In general, youth are more likely to think that using AI improves specific skills than worsens them, though a significant number (12% to 21% depending on the skill) think the opposite. With the exception of math skills (on which opinion is divided), educators are more likely to think that using AI worsens specific skills – an especially concerning result given that they are arguably best placed to assess students’ skills objectively.

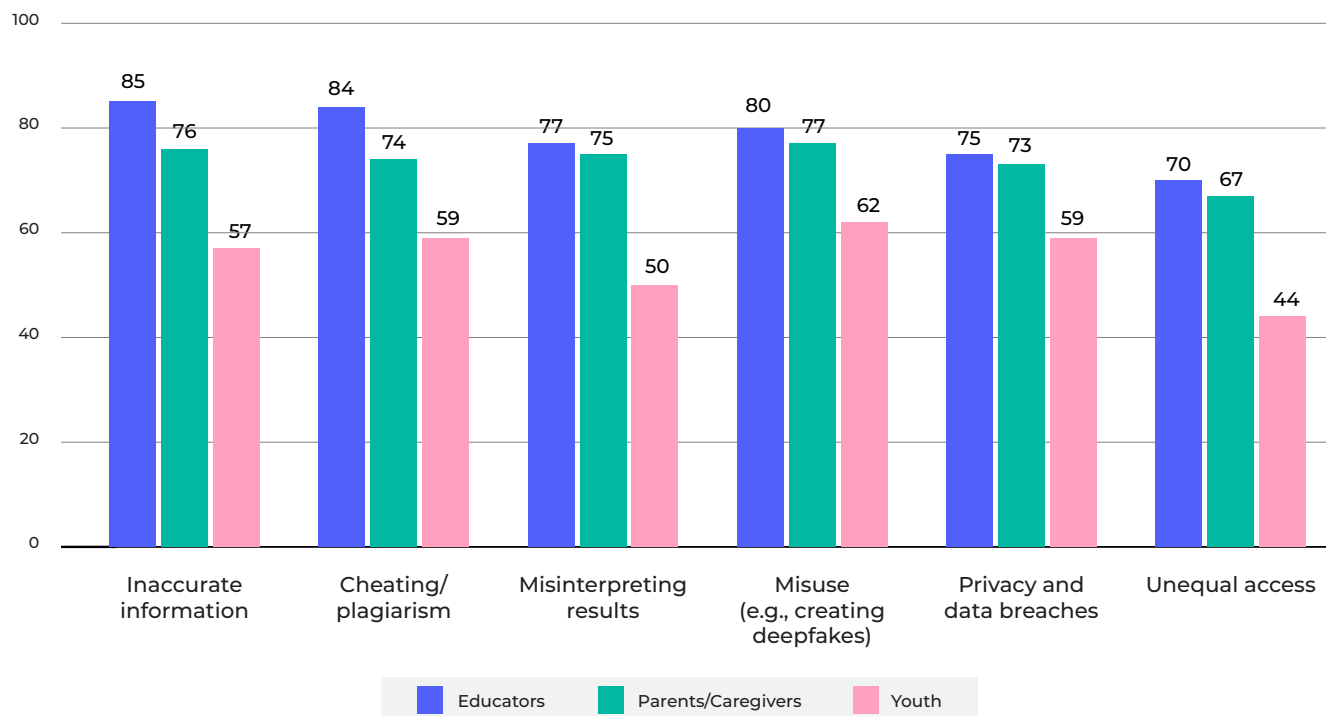
ADULTS ARE MORE CONCERNED ABOUT AI RISKS THAN YOUTH

Whether educators, youth, parents and caregivers think AI will improve or worsen students' skills development, most are concerned about a range of other effects that AI in education might have. At the same time, the level of concern among educators, parents and caregivers is substantially higher than it is among students. While most students report that they are at least slightly concerned about the risks, the share who say they are somewhat or very concerned falls well below that of the adults surveyed.

This raises questions about whether a number of youth lack sufficient awareness about AI and its potential risks, are unmotivated to care, or are simply more comfortable with emerging AI tools than their teachers, parents and caregivers. Indeed, a running theme in survey responses from youth is that they feel more optimistic about, and less concerned about the risks of AI than educators, parents and caregivers. Is that optimism warranted, or do they have more to learn?

Concerns about AI

% somewhat or very concerned



- While **85% of educators** and **76% of parents and caregivers** are somewhat or very concerned about students' **getting inaccurate information** from AI tools, just **57% of youth** share that concern.

- Similarly, **84% of educators** and **74% of parents and caregivers** are somewhat or very concerned about an increase in ***cheating and plagiarism***, while a much lower share of **youth (59%)** are somewhat or very concerned.
- Concern about students' ***misinterpreting results*** is also higher among **educators (77%)** and **parents and caregivers (75%)** than **youth (50%)**.
- **80% of educators, 77% of parents and caregivers**, and **62% of youth** are somewhat or very concerned about ***misuse of AI*** (e.g., to create deep-fakes and mis- or dis-information).
- **75% of educators, 73% of parents and caregivers**, and **59% of youth** are somewhat or very concerned about ***privacy and data breaches***.
- **70% of educators, 67% of parents and caregivers**, and **44% of youth** are somewhat or very concerned about ***unequal access to AI tools among different groups***.

Youth Skills to Use AI

Young people in Canada are already using AI in a variety of ways and appear to be less concerned about its impact on skills and other risks than educators, parents and caregivers. Do they have the skills to use AI effectively and responsibly?

While assessing youth knowledge of and skills to use AI directly was not feasible, we asked all survey respondents to indicate the extent to which they think youth are aware of and ready to use AI effectively and responsibly. The differences among the responses are striking and suggest that youth might be overconfident in their skills to use AI effectively and responsibly – especially as there are still so many unknowns about the potential benefits and risks of AI.

- **71% of youth** say they know how to use AI *effectively*, but only **38% of educators** agree.
 - 8% of youth disagree that they know how to use AI effectively while 21% are not sure. Responses showed no difference by gender.
 - 40% of educators disagree that their students know how to use AI effectively while 22% are not sure.
 - 62% of parents and caregivers agree that their children know how to use AI effectively while 10% disagree and 27% are not sure.
- **73% of youth** believe they know how to use AI *responsibly*, but a mere **36% of educators** share this confidence in students' ability.

- Just 5% of youth think that they do not know how to use AI responsibly, while 22% are not sure.
- 44% of educators think their students lack the skills to use AI responsibly, while 19% are unsure.
- 64% of parents and caregivers agree that their children know how to use AI responsibly while 10% disagree and 26% are not sure.

Do students have the skills to use AI effectively and responsibly?

% responding



MANY YOUTH ARE LEARNING ABOUT AI ON THEIR OWN

In light of the growing need for youth to develop skills and knowledge to navigate an AI-infused environment and a general agreement that education systems have a role to play, it is somewhat concerning that youth are learning much of what they know about AI on their own.

- While **58% of educators** say that they have talked to their students about AI, just **41%** say that they have taught their students how to use any AI tools.
- **52% of parents and caregivers** say they have helped their child learn about or use an AI tool.
- Meanwhile, **65% of students** say that they have watched content on social media or elsewhere to learn how to use AI.
- About a **quarter of youth** (27%) say that they have *attended a camp, club or workshop outside of school that taught them about AI* and/or how to use it, leaving 72% who have not had these experiences.

This means that many youth are learning about AI on their own, without structured guidance from educators, parents or caregivers. As with other emerging technologies, some of these students are likely more proficient than their teachers, parents and caregivers and may not have much to learn from them in terms of how to use various tools. But whether they have the ethical frameworks and critical capacity to use AI tools responsibly is less clear – especially as youth are much less likely than adults to be concerned about the potential risks of AI.

YOUTH ARE OPEN TO LEARNING MORE

Although youth appear to be overconfident in their skills to use AI effectively and responsibly, and largely learn how to use AI on their own, the good news is that most are open to learning more.

- **84% of youth** agree that they have *more to learn about AI*.
 - 14% are unsure and just 3% disagree that they have more to learn.
- **73% of parents and caregivers** agree that there is room to improve their child's skills to use AI, while most of the remaining are simply unsure (23%).

Given educators' poor assessment of their students' readiness to use AI effectively and responsibly, it is encouraging to see that the overwhelming majority of youth are ready to learn more. Combine this with the finding that 4 in 5 youth believe that schools have an important role in raising their awareness of AI, and skills to use AI effectively and responsibly, there is an encouraging window for structured, adult-led AI education for youth.

Are Educators Ready to Play a Role?

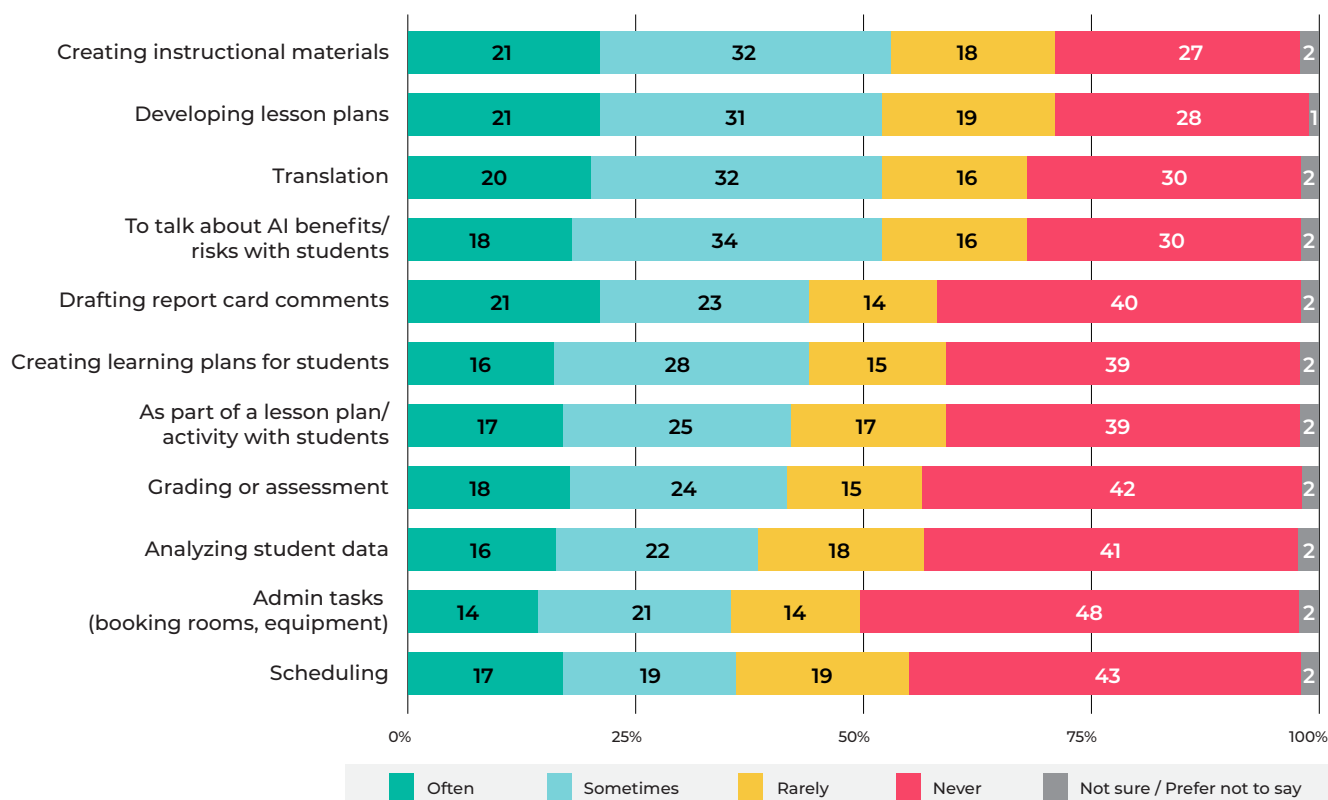
Most survey respondents agree that schools have an important role to play in preparing youth to think critically about AI and to use it effectively and responsibly. While many educators and some parents, caregivers and youth, are skeptical of AI, there is nevertheless a general sense that educators are uniquely placed to have informed conversations with their students about the benefits and risks of AI, and how to navigate the emerging AI environment. Are educators equipped to have those conversations and teach students to use AI effectively and responsibly?

NEARLY ALL TEACHERS HAVE TRIED AI, BUT FEW ARE USING AI REGULARLY

87% of teachers have tried using AI to help with work or in the classroom in some capacity, but **few are using AI regularly for any particular task**. STEM and high school teachers are more likely than non-STEM and elementary school teachers to say they use AI with some regularity for one or more tasks. In effect, many educators lack much experience with a technology that students, parents and caregivers expect them to be able to talk about. While regular use is not necessary for understanding, it would likely help in conversations with students.

How educators use AI

% respondents



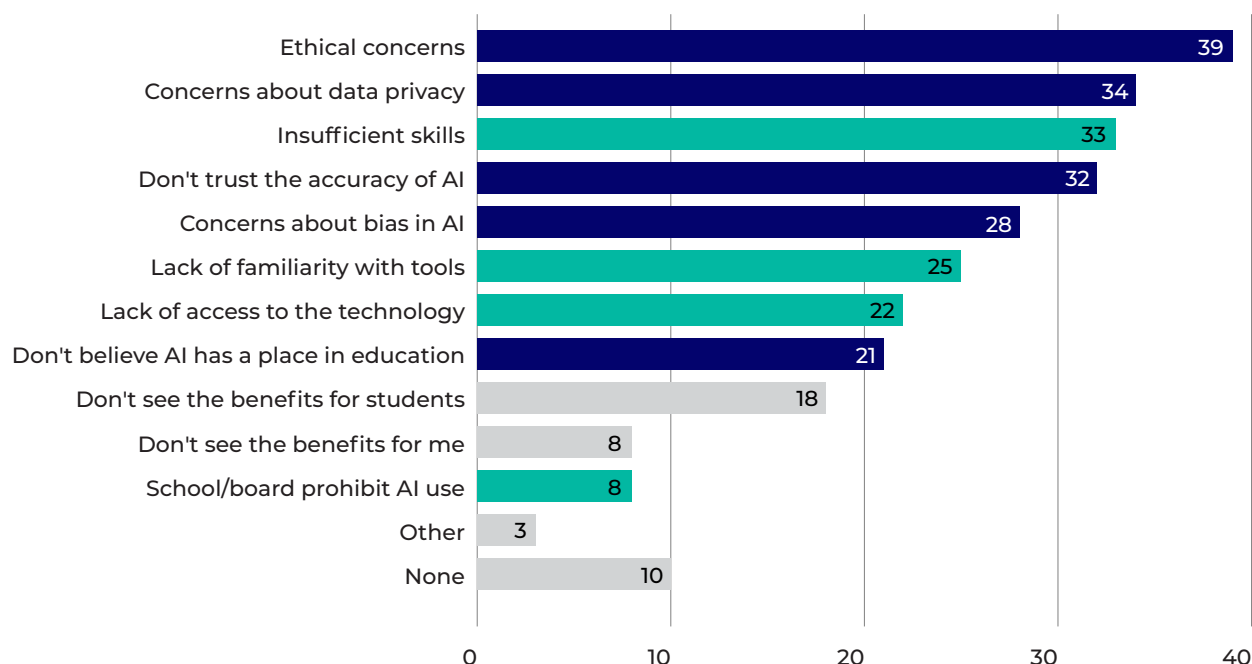
WHY DON'T MORE EDUCATORS USE AI?

Most teachers have tried AI, but few use AI regularly for any particular task. What explains their use rates?

When presented with a list of possible reasons why they might not use AI, educators were most likely to cite ethical concerns (39%), followed by concerns about data privacy (34%), insufficient skills (33%) and lack of trust in the accuracy of AI tools (32%). There is no significant difference in responses between STEM and non-STEM teachers and elementary and high school teachers.

Educators' reasons for not using AI

% citing reason (respondents could select more than one)



The mix of ethical (blue bars) and capacity or practical (green bars) concerns is noteworthy. In a few cases, educators list concerns about AI technology generally – such as accuracy, bias, and a belief that AI does not have a place in education at all. In other cases, educators might be more open to using AI, but lack the skills or technology to do so. For a small, but notable, number (8%) using AI is not an option because their school or board has a policy which prohibits them from doing so.

EDUCATORS' AI SKILLS GAPS

When we ask educators who do not use AI to list reasons that might explain their lack of uptake, insufficient skills (33%) is among the most cited reasons. When we ask all educators – whether they use AI or not – about their confidence in their skills and knowledge related to AI, we see a troubling gap.

- Less than half of educators (**48%**) agree or strongly agree that they have the skills to use AI tools in the classroom .
 - Confidence is higher among STEM (55%) and high school teachers (54%) than non-STEM (40%) and elementary teachers (44%), but the skills gap is large across all teacher groups.
- Even fewer teachers say they have the skills to teach students how to use AI responsibly (**46%**) or effectively (**42%**).
 - Confidence in skills to teach students how to use AI effectively and responsibly is slightly higher among STEM and high school teachers than non-STEM and elementary teachers, but half or more across all teacher groups say they lack the skills.

Not surprisingly, youth views about their teachers' readiness to talk about and teach AI are lukewarm:

- While **61% of youth** think that their teachers do a good job talking about the benefits and risks of using AI, only a little more than half (**56%**) say their teachers do a good job teaching them how to use AI.

Educators recognize the need to talk about AI with their students, but many of them feel they lack the skills and knowledge to do so effectively. Again, the issue is not that all educators need expert technical skills to teach students how to use AI; rather, they need sufficient awareness to guide their students through conversations about benefits and risks, and skills to offer assistance in learning and using specific tools when appropriate.

EDUCATORS ARE OPEN TO IMPROVING THEIR AI SKILLS, BUT FACE BARRIERS

Like their students, most teachers are open to learning more in order to help guide their students in the age of AI.

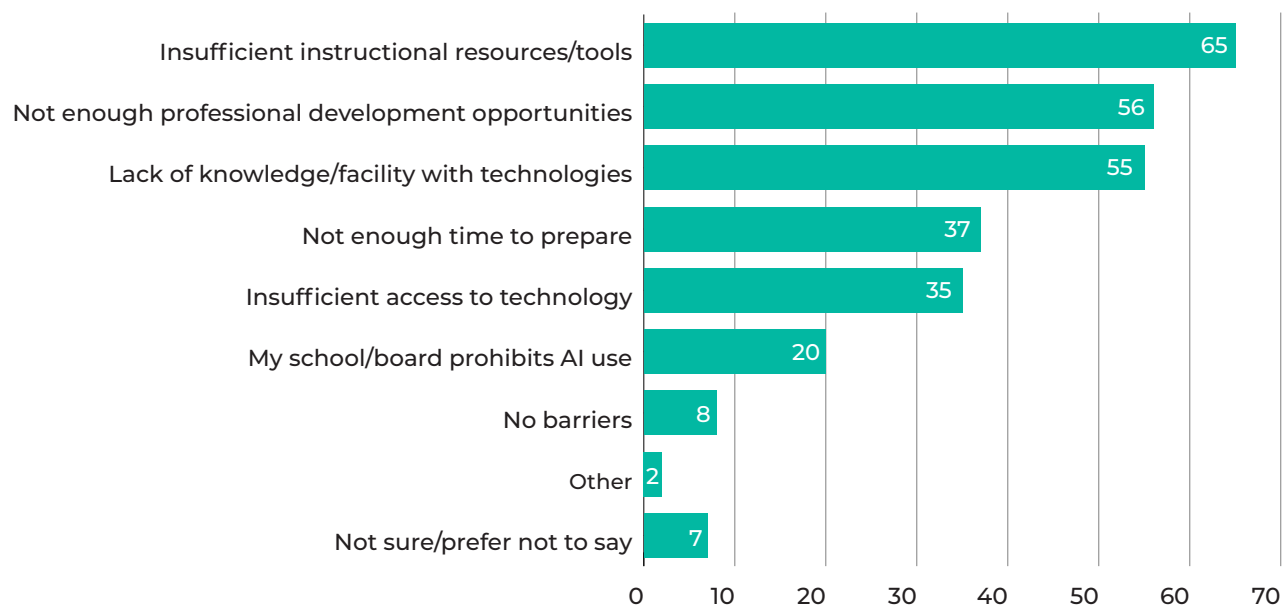
- **78% of educators** agree that *there is room to improve their skills to use and teach AI* - an openness which is consistent across STEM and non-STEM, and elementary and high school teacher respondents.

Unfortunately, teachers say they face a range of barriers to developing their skills and being better prepared to teach AI, including, most prominently, *insufficient resources and tools, not enough relevant professional development opportunities*, and *a lack of knowledge and facility with certain technologies*.

Less prominent, but still notable, barriers include not enough time to prepare and *insufficient access to technology*. Some of these barriers could be addressed through better professional development opportunities related to AI, while others (e.g., technology access and tools/resources) may require additional efforts by those aiming to support educators.

Barriers to being better prepared to use and teach AI

% responses (respondents selected top three barriers)



BARRIERS TO PURSUING AI-FOCUSED PROFESSIONAL DEVELOPMENTS

Many educators point to insufficient professional development opportunities as a barrier to being better prepared to use and teach AI. But even when such opportunities are offered, some teachers are unable or unwilling to pursue those opportunities – some say there are *too few opportunities offered* (38%), *not enough time* (29%), and *poor quality of available opportunities* (29%). Access issues are also prominent, including *opportunities not available in the area* (25%) and *opportunities are too costly* (24%).

It is worth noting as well that a substantial number of educators are simply not ready to prioritize AI-related professional development. Over a quarter (28%) say that *other professional development opportunities are more pressing* for them and just under a quarter (23%) are *not interested in AI-focused professional development*.

That said, **nearly 4 in 5 teachers** say that, if AI-focused professional development opportunities were available to them and they faced no barriers to participating, they would be likely or very likely to participate.



Preparing Youth and Educators for AI

Youth, educators, parents and caregivers agree that understanding AI and developing skills to use it effectively and responsibly are essential to a 21st century education. Although there are concerns about AI risks and its impact on students' learning and development, especially among educators, there is a widespread sense that youth need to learn how to engage with AI and that schools have an important role to play. Ensuring that youth develop the AI skills and awareness they need, and that educators are ready to guide them, are increasingly important priorities.

Both youth and educators are eager to learn. Although youth appear overconfident in their AI skills and knowledge and arguably less concerned than they ought to be about risks and effects on learning, most are open to learning more. And while educators are more skeptical than youth, parents and caregivers about the benefits of AI, they recognize the need to develop their own awareness and skills to help students navigate the AI environment.

The challenge for educators is finding the resources and time to improve their AI literacy. Given other education priorities and different policies across boards and schools about whether AI has a place in education at all, many educators find it difficult to pursue professional development related to AI. If Canada wants its youth to be ready for AI, we will need to help teachers access high quality instruction and resources to become the confident guides students need.

Actua's AI Ready Project

Actua has launched a bold initiative to develop an AI-ready generation in Canada. Recognizing that AI is rapidly transforming education, the job market and daily life, Actua is equipping Canadian youth, educators and parents with the critical technical skills and the ethical understanding needed to shape AI in the future.

Actua's AI Ready Project will help develop crucial AI knowledge and skills across Canada among youth, educators, parents and caregivers by:

- Providing hands-on, practical AI skills development for students through workshops, camps, clubs and after-school programs, enabling them to use AI effectively and responsibly in any career path they choose.
- Empowering educators with the confidence and resources to teach AI effectively and responsibly. Actua's AI Ready Project is a critical investment in their professional development and their ability to prepare students for the future workforce.
- Informing and engaging parents and caregivers, recognizing their crucial role in supporting their children's AI literacy journey and understanding the career opportunities AI skills can unlock.
- Providing a strong understanding of AI's impact on education, work, culture and beyond, along with an ethical understanding of AI risks related to misinformation, bias, misuse and environmental impact.

To learn more about Actua's AI-skills development work and to access resources, visit actua.ca/AIReady.

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