

# IBM Global Skills and Education Study

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November 2 – December 20, 2022

# KEY FINDINGS

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## 1. Awareness of STEM jobs is low, and many are concerned these careers won't pay enough.

- 50% of *Students*, *Job Seekers*, and *Career Changers* are interested in pursuing a STEM-related job.
- 64% of *Career Changers* are not familiar with STEM jobs.
- Many respondents are unsure of which careers are considered to be a STEM job.
- 62% share concerns that they won't be able to find a STEM job that pays enough to support themselves or their family.

## 2. With misconceptions that STEM training is expensive, many learners say they don't know where to start and that they don't know enough about digital credentials.

- 61% think they are not qualified to work in a STEM job because they don't have the right academic degrees.
- 40% of *Students* say the greatest barrier to professional or technical skill development is that they don't know where to start.
- 60% of respondents worry that digital credentials may be costly to obtain.
- 27% of *Job Seekers* and *Career Changers* say that affordability is the single most important consideration when pursuing digital credentials and training for STEM jobs.
- Being able to continue to work while earning a credential is particularly important to *Career Changers*.

# KEY FINDINGS

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## 3. Respondents are optimistic that jobs in STEM fields will increase in the future, and that digital credentials are a good way to supplement traditional education and increase career opportunities.

- 66% of all respondents are of the opinion that STEM jobs across industries will increase over the next decade.
- 47% of *Students*, *Job Seekers*, and *Career Changers* are familiar with digital credential programs.
- 86% of those who have earned a digital credential agree that it helped them achieve career goals.
- 75% of all respondents agree that digital credentials are a good way to supplement traditional education
- Increased career opportunities and qualifications were top reasons why respondents across the globe said they wanted to earn digital credentials.

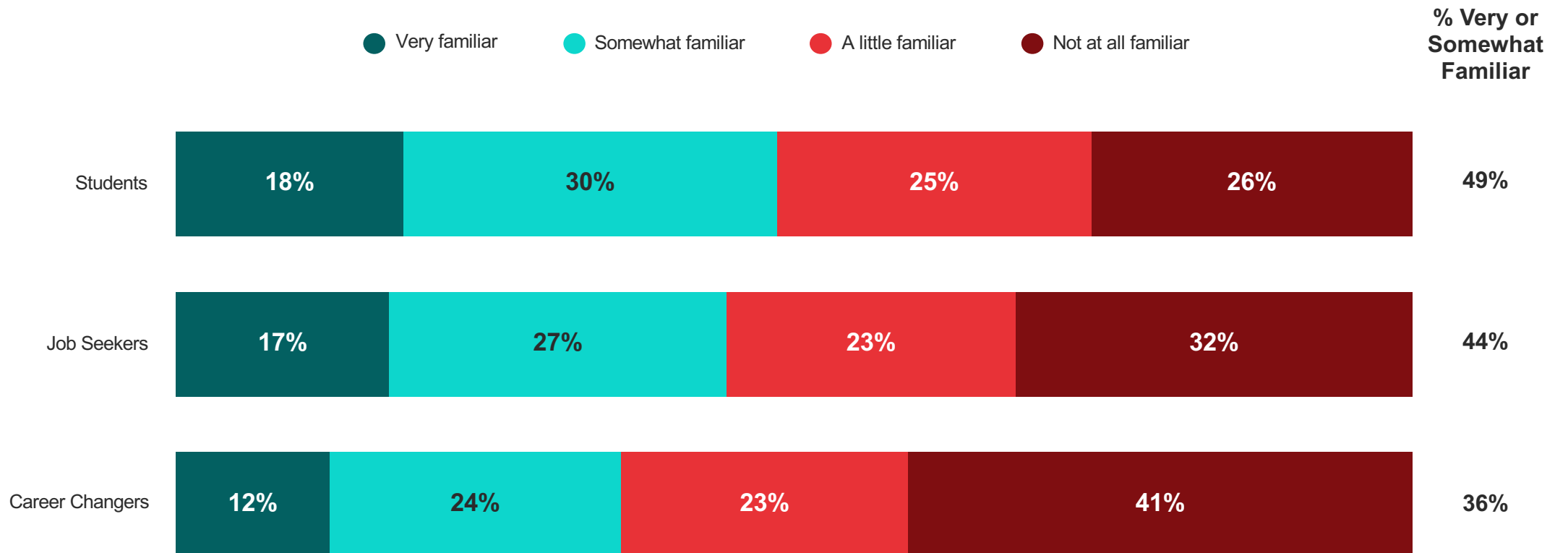
## 4. Learners and workers around the world are planning to make a change, with many looking for a new job in the next 12 months.

- 61% of *Students* and *Career Changers* are actively looking for a new job now or plan to within the next year.
- More than 80% of all respondents have plans to build their skills in the next two years.
- At least 90% are confident they can develop skills or learn something new from an online program.
- 25% of all respondents say they plan to complete online coursework in the next two years.

Across all countries, nearly half of Students (49%) and Job Seekers (44%) report familiarity with STEM jobs; 64% of Career Changers are not familiar with STEM jobs

How familiar would you say you are with the idea of STEM jobs?

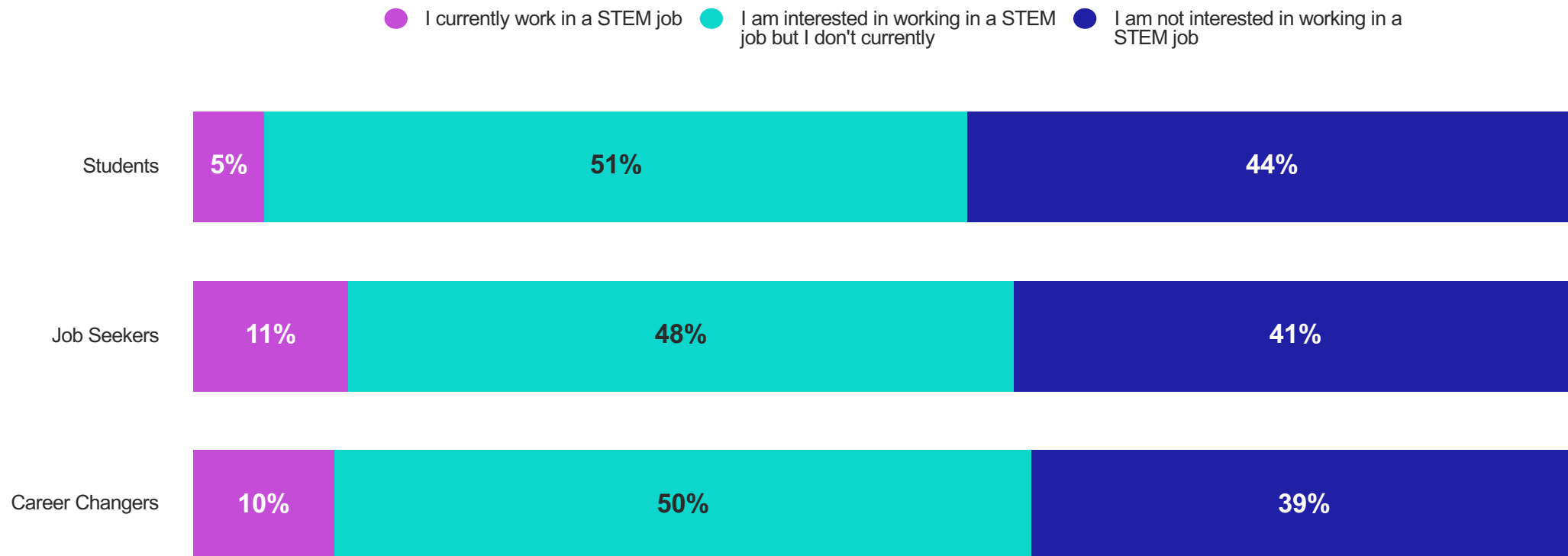
“STEM stands for Science, Technology, Engineering, Math and a STEM job is one that relies on any of those fields.”



SKILLS AND EDUCATION GLOBAL STUDY

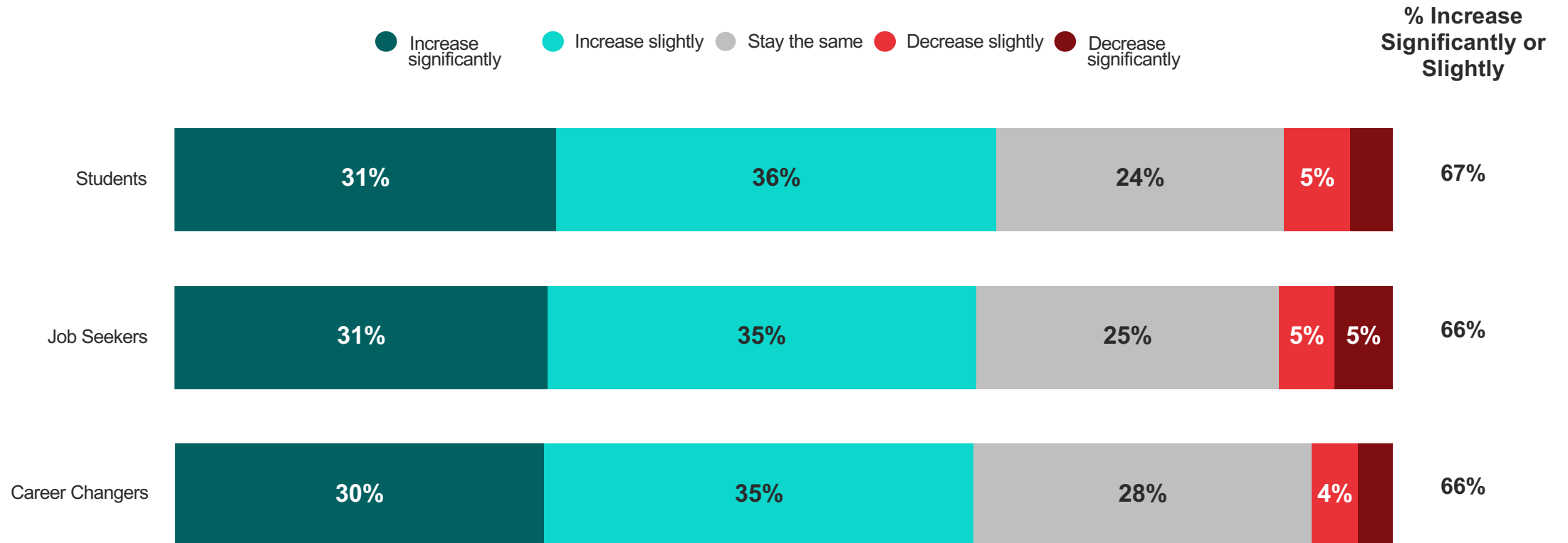
A majority of respondents across all audiences and countries do not currently work in a STEM job; Half of Students (51%) and Career Changers (50%) and nearly half of Job Seekers (48%) say they're interested in working in a STEM job

Which of the following would you say describes you?



## Two-thirds of each audience think that career opportunities in STEM jobs will increase over the next 10 years

Over the next 10 years, do you think career opportunities in STEM jobs will:



## Many respondents are unsure of which careers are considered to be a STEM job

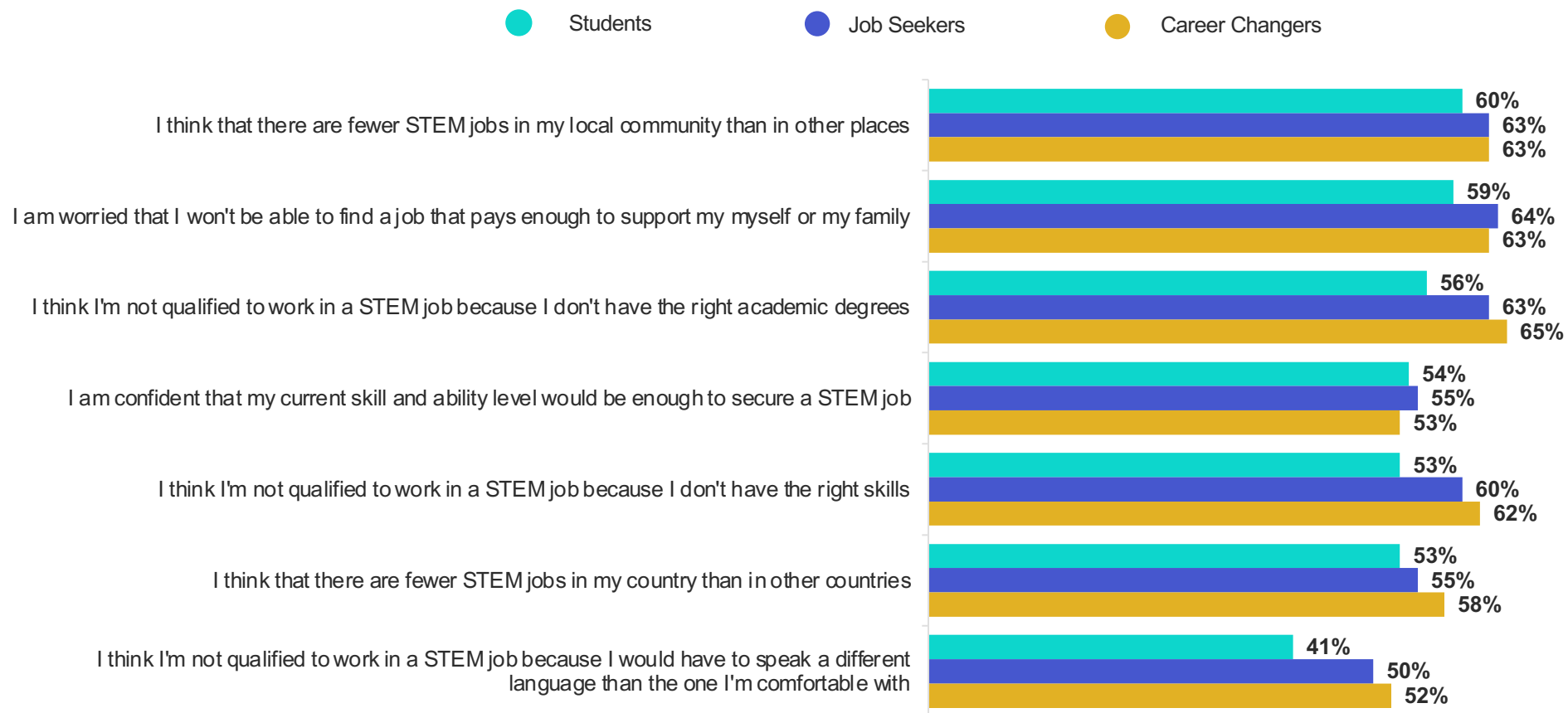
Which of the following careers would you consider to be a STEM job? Please select all that apply.

	Students	Job Seekers	Career Changers
Software Developer	48%	40%	42%
Website programmer	41%	34%	38%
Data analyst	41%	36%	39%
Life scientist (biologist, chemist, etc)	38%	32%	32%
Mechanical Engineer	38%	30%	30%
Cybersecurity analyst	38%	33%	36%
Database administrator	34%	31%	33%
IT help desk	33%	30%	31%
Social scientist (psychologist, sociologist etc)	24%	25%	21%
Project manager	18%	18%	20%
Customer service representative	10%	13%	14%
None of the above	12%	15%	16%

SKILLS AND EDUCATION GLOBAL STUDY

All audiences share concerns that they won't be able to find a STEM job that pays enough to support themselves or their family; At least six-in-ten of each audience think that there are fewer STEM jobs in their local community than in other places

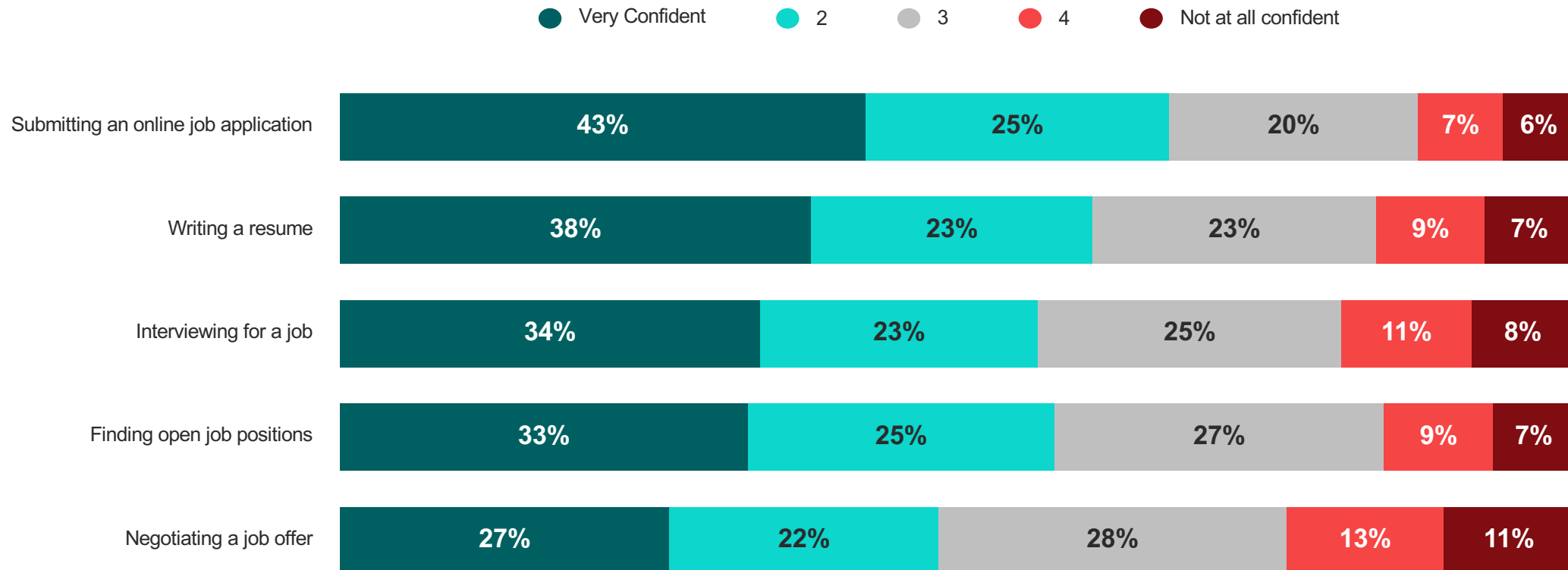
If you were searching for a STEM job for your next position, to what extent do you agree or disagree with the following? [Showing % Strongly + Somewhat Agree]





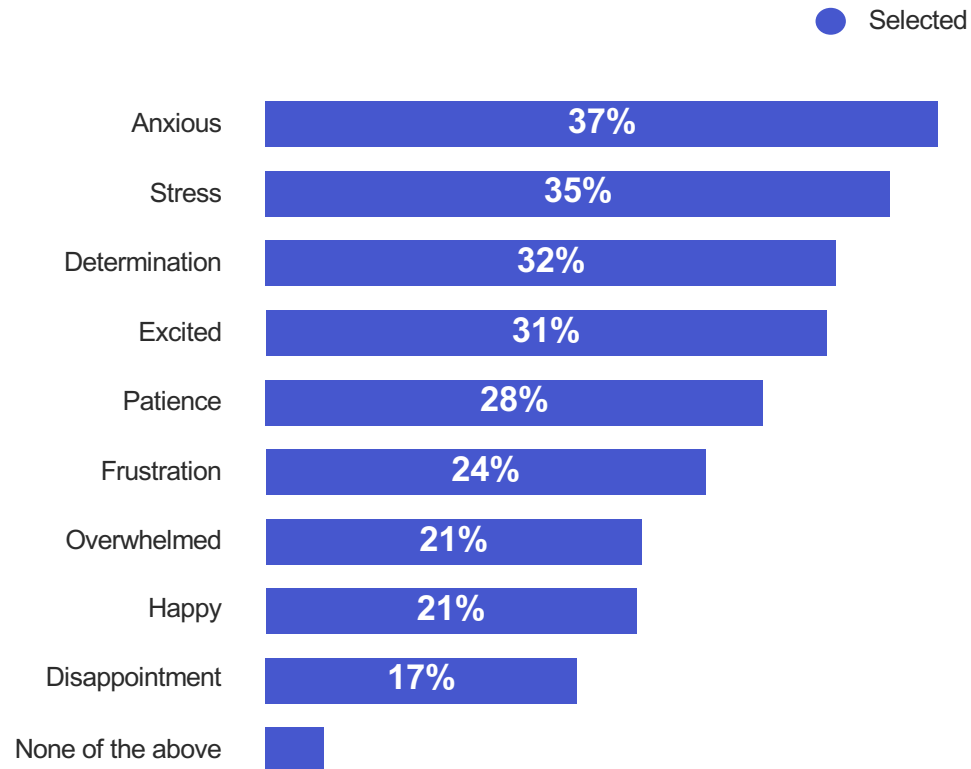
## Job Seekers are confident in submitting online job applications and writing resumes, but are less confident in negotiating a job offer

How confident are you with each of the following? [Showing for Job Seekers]



## Job Seekers report feeling anxious (37%), stressed (35%), and determined (32%) during the job search while 31% say they feel excited

Which emotions do you feel during the job search? Please select all that apply. [Showing for Job Seekers]



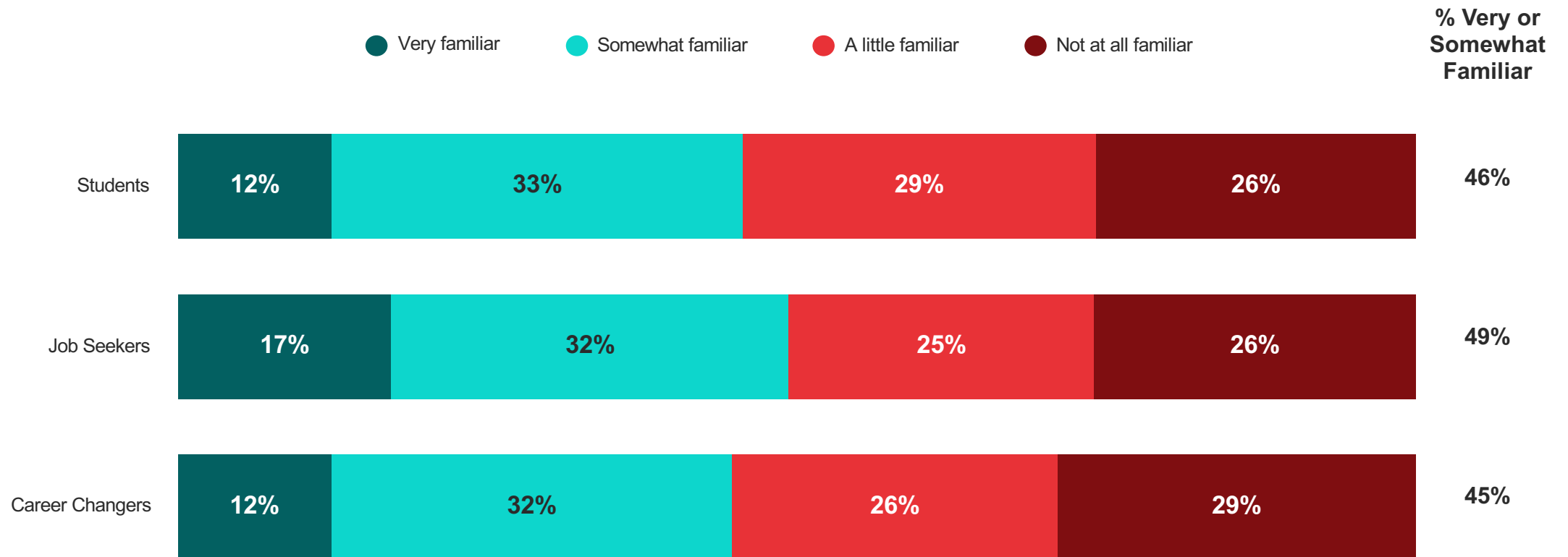
The greatest barrier to professional or technical skill development among Job Seekers (41%) and Career Changers (45%) is that the programs are too expensive; Students (40%) say they're unsure where to start

Which of the following would the greatest barrier to professional or technical skill development? Please select up to 3.

	Students	Job Seekers	Career Changers
I don't know where to start	40%	40%	36%
Programs are too expensive	38%	41%	45%
I don't have enough time	32%	27%	33%
I don't think I would fit in	19%	19%	17%
I just am not interested enough in skill development	18%	15%	12%
I don't think I would be a good enough student to learn	17%	18%	16%
I would have to read or listen in a language that I'm not comfortable with	17%	19%	21%
I have caregiving responsibilities	12%	19%	23%
None of the above	11%	7%	7%
Other	1%	1%	1%

## More than half of Career Changers are unfamiliar with digital credential programs (55%)

How familiar are you with digital credentials programs (These are online programs for professional or technical skill development where you can earn a credential for completion of the program).



## SKILLS AND EDUCATION GLOBAL STUDY

Respondents across audiences and countries have earned various digital credentials ranging from programming certifications to data analysis trainings; Increased career opportunities and qualifications were top reasons why respondents across the globe said they wanted to earn digital credentials

Which digital credential(s) have you earned?

What made you want to get a digital credential?

### Digital Credentials They've Earned

*Java, Jbuilder, C, C++, Office, Mobile Programming Language, Databases – Mexico Career Changer*

*Google data analytics, SQL for data science, inside LVMH – Spain Job Seeker*

*Cyber Security course by AIG – UAE Student*

*Salesforce Marketing Cloud Specialist Coding certificate on Codecademy – Germany Job Seeker*

*CISA, CISM, CISSP – UK Career Changer*

*Python Programming from 365 Data Science – Egypt Student*

*Certifications in Java Script management, C++ management, and big data analysis – Mexico Job Seeker*

*Microsoft and LinkedIn Certifications – France Career Changer*

*I have learned how to use Jira software from Atlassian university through LinkedIn learning. – Canada Student*

### What Made Them Want to Get a Digital Credential

*Increasing my career opportunities as well as satisfying my own curiosities around various technologies. – India Student*

*The job market requires more qualified people for this reason, I feel that the more certification the better it will be for my development. – Brazil Job Seeker*

*Because it is useful in seeking jobs and for working in my current job. – Japan Career Changer*

*To upgrade my skills and earn something for my benefit at the same time. – Singapore Student*

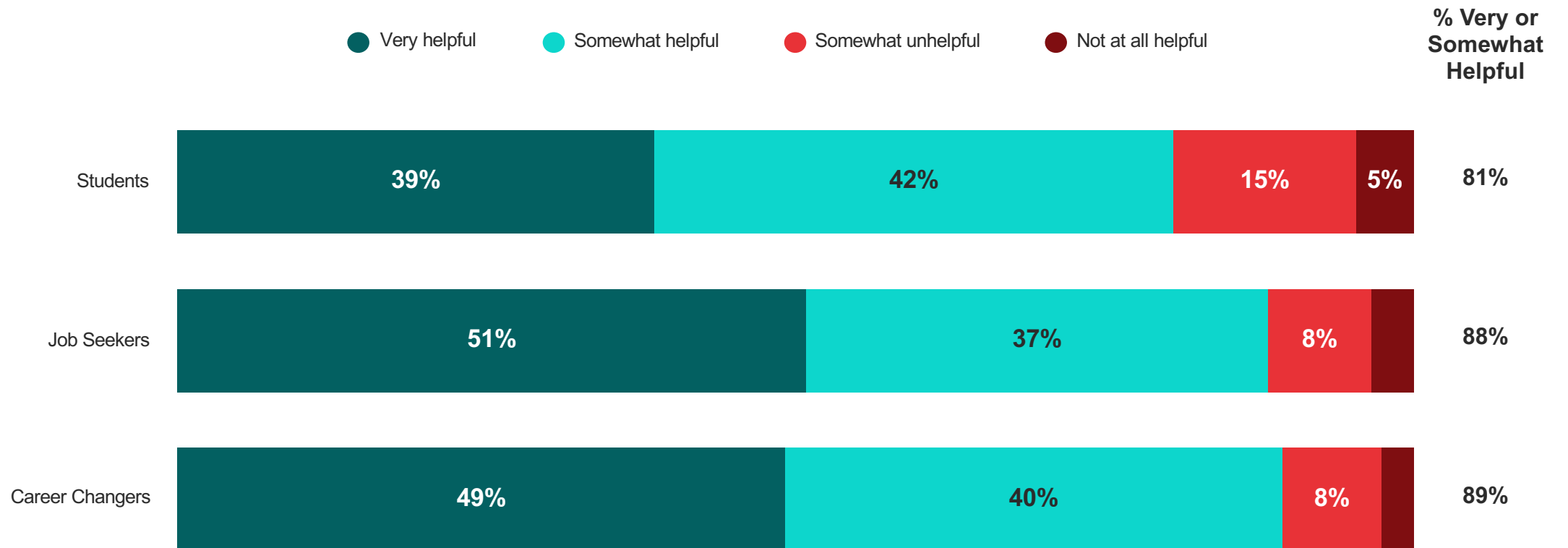
*Progress in my responsibilities and obtain an evolution toward a post of director. – France Career Changer*

*I thought it might help me find a better job. – US Job Seeker*

*Apply to my current job and leveling up there and my potential future career. – Canada Student*

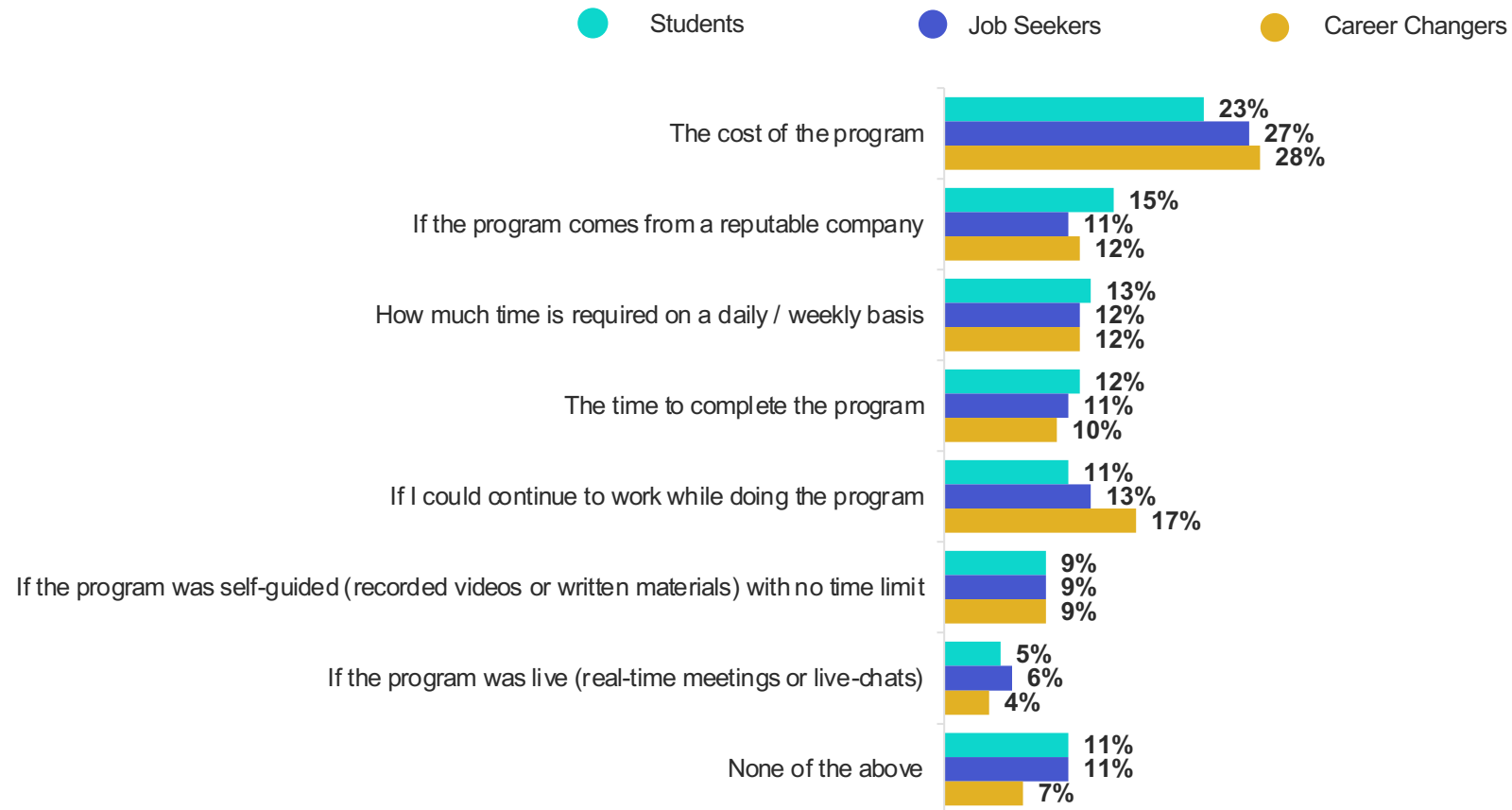
## More than 80% of those that have earned a digital credential agree that it was helpful in achieving their career goals

How helpful do you think your digital credential(s) were in helping you achieve your career goals?



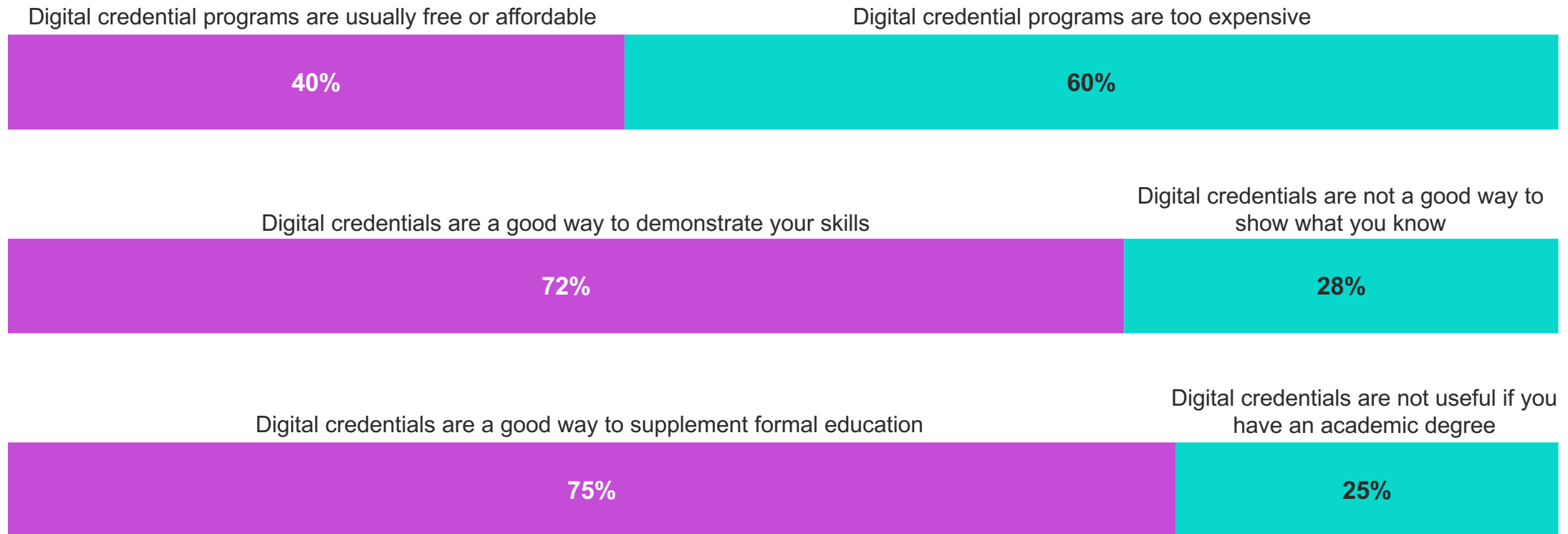
The most important factor for all audiences to consider when thinking about developing their skills and earning a digital credential is the cost of the program; Being able to continue to work while doing the program is particularly important to Career Changers (17%)

If you wanted to develop your skills and earn a digital credential, which of the following would be the most important factor for you to consider? Please choose the most important.



## 60% think that digital credential programs are too expensive; 75% also think that digital credentials are a good way to supplement formal education

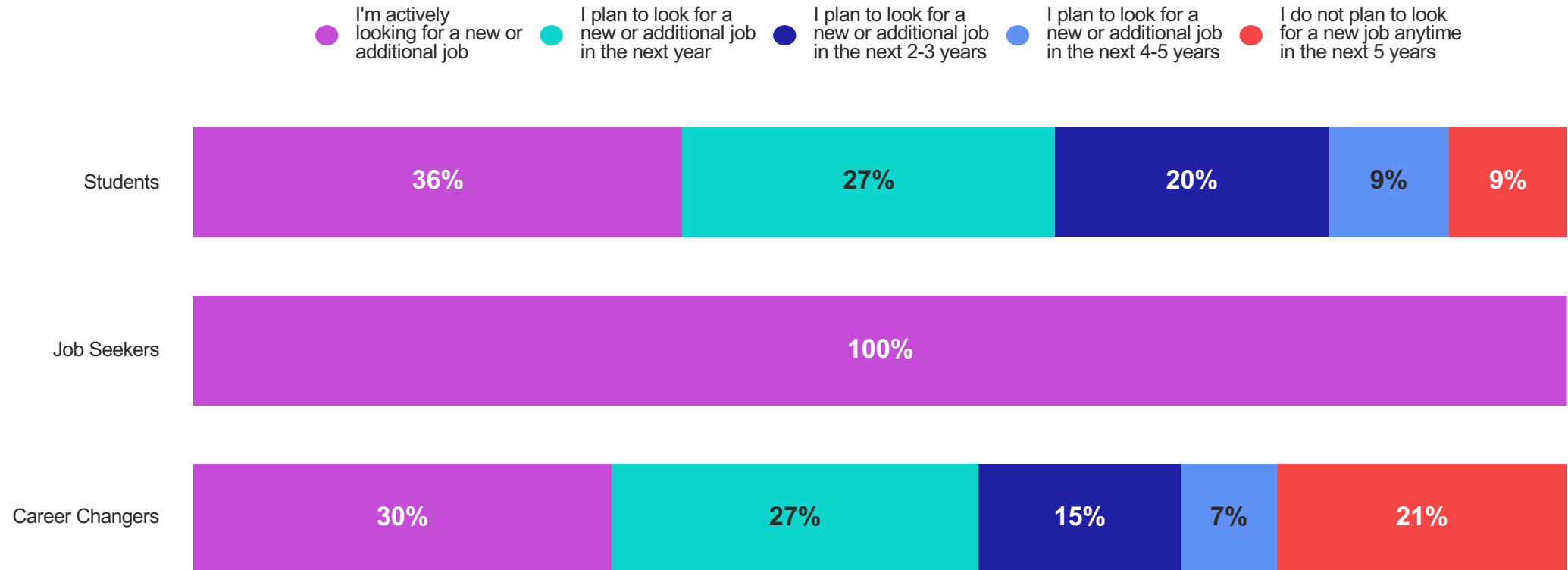
Based on what you know about digital credential programs, which of the following statements do you agree with most, even if neither one is exactly right?  
[Showing Across Students, Job Seekers, and Career Changers]





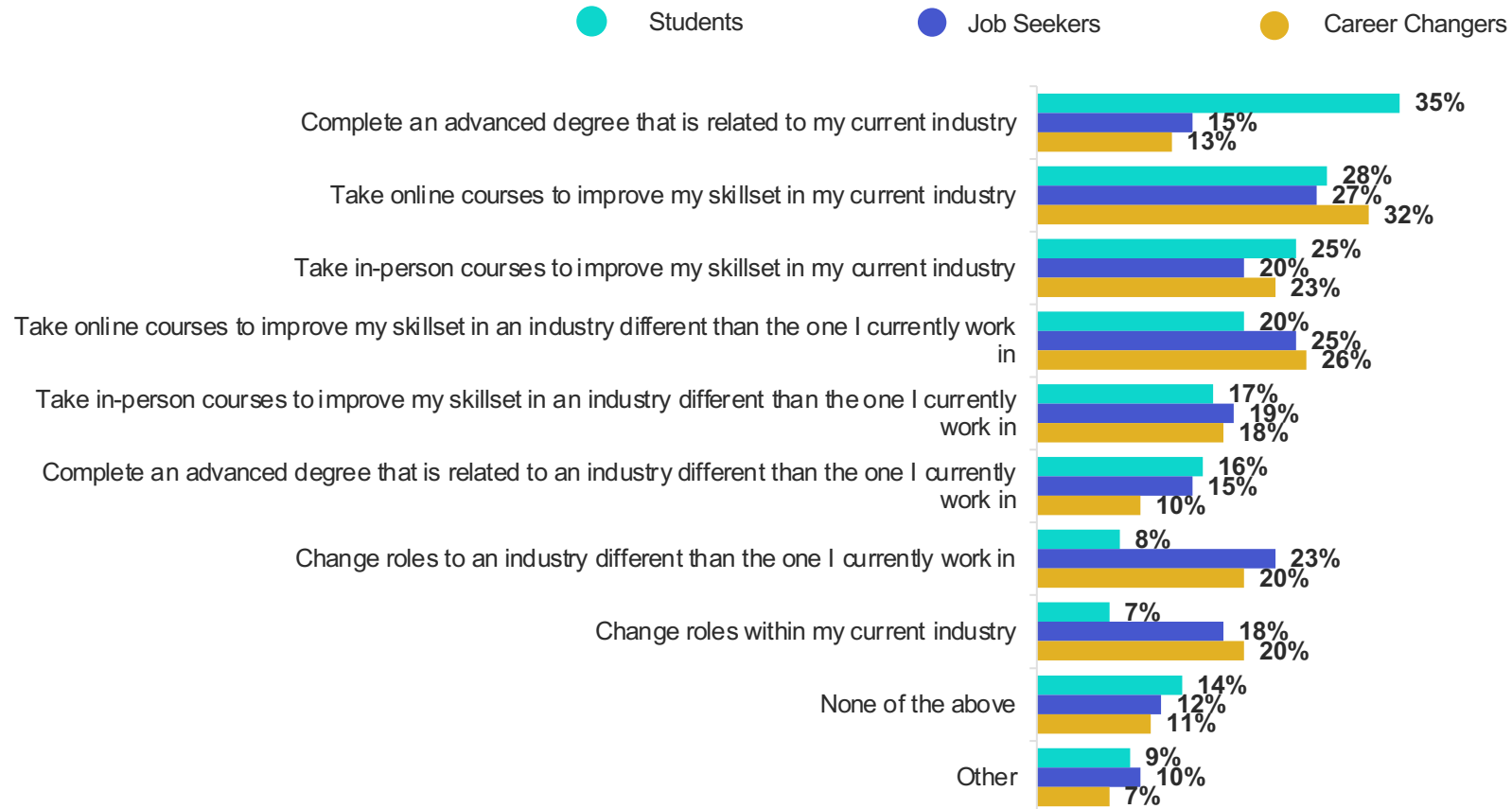
## 61% of Students and Career Changers are actively looking for a new job or plan to within the next year

Which best describes your current situation?



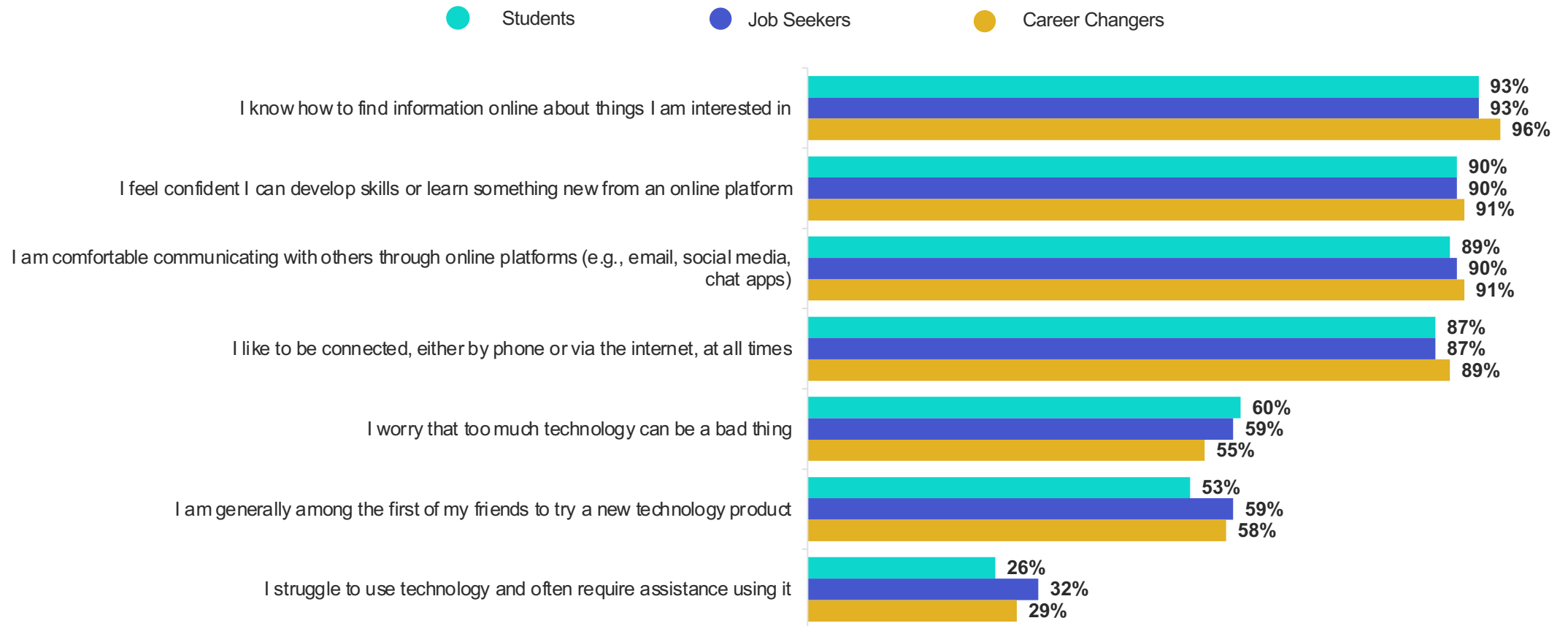
## More than one-quarter of each audience say they plan to take online courses to improve their skillset in their current industry in the next 2 years

Do you plan to do any of the following in the next 2 years? Please select all that apply.



## At least 90% of respondents across all audiences and countries are confident they can develop skills or learn something new from an online platform

To what extent do you agree with the following statements? [Showing % Strongly + Somewhat Agree]



## UAE Students and US Students report the highest levels of familiarity with STEM jobs while Japan Students report feeling the least familiar

How familiar would you say you are with the idea of STEM jobs?

*“STEM stands for Science, Technology, Engineering, Math and a STEM job is one that relies on any of those fields.”*

	Very + Somewhat Familiar	Very familiar	Somewhat familiar	A little familiar	Not at all familiar
Students (Global)	49%	18%	30%	25%	26%
Brazil	52%	19%	34%	29%	18%
Canada	52%	22%	30%	23%	25%
Egypt	48%	24%	23%	25%	28%
France	22%	3%	18%	30%	48%
Germany	52%	20%	32%	26%	22%
India	50%	19%	31%	30%	20%
Japan	19%	3%	16%	30%	50%
Mexico	34%	8%	26%	33%	33%
Singapore	52%	8%	43%	28%	20%
Spain	43%	11%	32%	24%	33%
UAE	72%	26%	46%	18%	10%
UK	69%	34%	35%	18%	14%
US	71%	34%	36%	19%	10%

## Egypt Job Seekers, India Job Seekers, and Singapore Job Seekers report the highest levels of familiarity with STEM jobs

How familiar would you say you are with the idea of STEM jobs?

*“STEM stands for Science, Technology, Engineering, Math and a STEM job is one that relies on any of those fields.”*

	Very + Somewhat Familiar	Very familiar	Somewhat familiar	A little familiar	Not at all familiar
Job Seekers (Global)	44%	17%	27%	23%	32%
Brazil	46%	16%	31%	35%	18%
Canada	43%	15%	28%	24%	33%
Egypt	63%	29%	34%	14%	23%
France	22%	8%	14%	22%	56%
Germany	37%	14%	23%	27%	37%
India	67%	42%	25%	20%	14%
Japan	31%	6%	25%	25%	43%
Mexico	36%	9%	27%	27%	37%
Singapore	62%	25%	37%	18%	20%
Spain	36%	12%	23%	24%	41%
UAE	46%	17%	29%	18%	35%
UK	51%	17%	35%	20%	28%
US	54%	22%	32%	20%	26%

## India Career Changers report the highest level of familiarity with STEM jobs

How familiar would you say you are with the idea of STEM jobs?

*“STEM stands for Science, Technology, Engineering, Math and a STEM job is one that relies on any of those fields.”*

	Very + Somewhat Familiar	Very familiar	Somewhat familiar	A little familiar	Not at all familiar
Career Changers (Global)	36%	12%	24%	23%	41%
Brazil	36%	13%	23%	33%	31%
Canada	38%	11%	27%	23%	40%
Egypt	42%	21%	21%	16%	41%
France	15%	5%	10%	18%	67%
Germany	30%	5%	25%	20%	50%
India	67%	37%	30%	19%	14%
Japan	22%	4%	18%	27%	51%
Mexico	26%	8%	18%	29%	45%
Singapore	40%	13%	27%	25%	35%
Spain	28%	7%	21%	27%	45%
UAE	32%	12%	20%	25%	44%
UK	43%	13%	31%	17%	40%
US	49%	19%	30%	19%	32%

## UAE Students have the highest interest in working in STEM jobs

Which of the following would you say describes you?

	I currently work in a STEM job	I am interested in working in a STEM job but I don't currently	I am not interested in working in a STEM job
Students (Global)	5%	51%	44%
Brazil	5%	59%	36%
Canada	4%	46%	50%
Egypt	20%	36%	43%
France	3%	34%	62%
Germany	6%	46%	48%
India	5%	61%	34%
Japan	2%	40%	58%
Mexico	2%	64%	34%
Singapore	3%	59%	38%
Spain	2%	51%	46%
UAE	4%	73%	23%
UK	2%	50%	48%
US	5%	47%	48%

## Egypt Career Changers, India Career Changers, Mexico Career Changers, and UAE Career Changers are more interested in working in a STEM job

Which of the following would you say describes you?

	I currently work in a STEM job	I am interested in working in a STEM job but I don't currently	I am not interested in working in a STEM job
Career Changers (Global)	10%	50%	39%
Brazil	6%	59%	35%
Canada	9%	44%	46%
Egypt	10%	62%	28%
France	3%	41%	55%
Germany	8%	38%	54%
India	26%	62%	12%
Japan	8%	48%	44%
Mexico	9%	64%	27%
Singapore	15%	56%	29%
Spain	8%	51%	42%
UAE	10%	64%	26%
UK	9%	42%	49%
US	10%	44%	46%



## More than 70% of Students in Brazil, Canada, Egypt, India, Singapore, UK, and US think career opportunities in STEM jobs will increase over the next 10 years

Over the next 10 years, do you think career opportunities in STEM jobs will:

	Increase Significantly + Slightly	Increase significantly	Increase slightly	Stay the same	Decrease slightly	Decrease significantly
<b>Students (Global)</b>	<b>67%</b>	31%	36%	24%	5%	3%
<b>Brazil</b>	<b>80%</b>	38%	42%	14%	3%	2%
<b>Canada</b>	<b>71%</b>	36%	35%	22%	5%	3%
<b>Egypt</b>	<b>80%</b>	49%	31%	13%	3%	4%
<b>France</b>	<b>43%</b>	16%	27%	38%	11%	8%
<b>Germany</b>	<b>68%</b>	37%	30%	22%	7%	3%
<b>India</b>	<b>76%</b>	38%	38%	17%	3%	4%
<b>Japan</b>	<b>50%</b>	10%	39%	37%	7%	6%
<b>Mexico</b>	<b>69%</b>	30%	39%	21%	6%	4%
<b>Singapore</b>	<b>77%</b>	38%	40%	19%	3%	1%
<b>Spain</b>	<b>67%</b>	31%	36%	25%	6%	2%
<b>UAE</b>	<b>60%</b>	22%	38%	35%	3%	2%
<b>UK</b>	<b>73%</b>	34%	40%	19%	6%	3%
<b>US</b>	<b>71%</b>	32%	38%	22%	5%	2%



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