

# LANGER RESEARCH ASSOCIATES

SURVEY RESEARCH DESIGN • MANAGEMENT • ANALYSIS

## Digital Promise COVID-19 Student Survey Topline Data Report

This Digital Promise survey was conducted May 13-June 1, 2020, among a random national sample of 1,008 full- or part-time students enrolled in a two- or four-year college or university who took in-person classes or lectures before the coronavirus outbreak began that were then transitioned completely online. The sample includes 620 students who took a STEM course that transitioned completely online. Results have a margin of sampling error of 3.6 points for the full sample, 4.6 points among students who took a STEM course and 5.8 points among those who did not take a STEM course. Error margins are larger for subgroups. At a 50/50 division of opinion, a difference of 8 points between STEM and non-STEM students is needed for significance at the 95 percent confidence level.

The survey was produced for Digital Promise by Langer Research Associates of New York, N.Y., with sampling and data collection by Ipsos Public Affairs via its online, probability-based KnowledgePanel®, which provides internet access to randomly recruited participants.

Full results follow. Unless otherwise noted, \* = <0.5 percent.

Screeners1. Have you taken one or more college courses for credit this year (since Jan. 1, 2020)?

	Yes	No
6/1/20	75	25

Screeners2. [IF YES] Did any of these courses include in-person classes or lectures before the coronavirus outbreak began, and then go completely online?

	Yes	No
6/1/20	81	19

1. Were any of your courses that moved completely online in science, technology, engineering, medical/health science or mathematics, known as STEM subjects?

	No	Yes, I was taking one STEM course that moved online this year	Yes, I was taking more than one STEM course that moved online this year
6/1/20	38	27	36

[IF NO STEM COURSES] For the rest of these questions, please think about the course you took that moved online this year that was most important to you in terms of your future goals. (If multiple courses were equally important, pick one at random.)

[IF ONE STEM COURSE] For the rest of these questions, please think about the STEM course you took that moved online this year.

[IF MORE THAN ONE STEM COURSE] For the rest of these questions, please think about the STEM course you took that moved online this year that was most important to you in terms of your future goals. (If multiple STEM courses were equally important, pick one at random.)

2. [IF ANSWERED Q1] What was the subject of this course?

	----- 6/1/20 -----		
	All	STEM	Non-STEM
STEM course NET	63	100	
Biology	11	17	
Mathematics	10	15	
Computer Science or Technology	8	13	
Engineering or Engineering Technician	8	12	
Chemistry	7	10	
Health Professions including Nursing	7	10	
Statistics or Data Science	3	5	
Environmental Science	3	4	
Physics	2	4	
Information Science or Technology	2	3	
Geology	1	1	
Agricultural Sciences	*	*	
Astronomy	*	*	
Other: STEM course	3	4	
Non-STEM course NET	37		100
Business or Management	5		13
Accounting or Finance	5		12
Psychology	3		9
English	2		7
Music or Performing Arts	2		6
Communications	2		6
Art	2		5
Criminal Justice	2		5
Education	1		4
Political Science	1		4
Anthropology/Sociology	1		4
Foreign Language	1		4
Economics	1		3
History	1		3
Philosophy	1		2
Other: Non-STEM course	5		13
Skipped	0	0	0

3. Thinking back to when this course included in-person classes, before it moved completely online, how satisfied or dissatisfied were you with the course overall?

	----- Satisfied -----			--- Dissatisfied ---			
	NET	Very	Somewhat	NET	Somewhat	Very	Skipped
6/1/20							
All	88	51	36	12	9	3	*
STEM	87	47	40	13	11	2	0
Non-STEM	90	60	30	9	6	4	1

4. After this course moved completely online, how satisfied or dissatisfied were you with the course overall?

	----- Satisfied -----			--- Dissatisfied ---			
	NET	Very	Somewhat	NET	Somewhat	Very	Skipped
6/1/20							
All	59	19	40	40	27	13	1
STEM	57	15	42	42	27	15	1
Non-STEM	63	26	36	36	26	10	1

5. Were you satisfied or dissatisfied with each of these aspects of the course after it moved online?

a. The quality of the instruction

	----- Satisfied -----			--- Dissatisfied ---			
	NET	Very	Somewhat	NET	Somewhat	Very	Skipped
6/1/20							
All	68	28	40	31	21	10	1
STEM	66	25	41	34	24	10	*
Non-STEM	72	35	37	27	16	11	2

b. The quality of the course content

	----- Satisfied -----			--- Dissatisfied ---			
	NET	Very	Somewhat	NET	Somewhat	Very	Skipped
6/1/20							
All	71	29	42	28	22	6	1
STEM	70	26	44	30	23	7	*
Non-STEM	73	34	39	26	20	5	1

c. The instructor's preparation

	----- Satisfied -----			--- Dissatisfied ---			
	NET	Very	Somewhat	NET	Somewhat	Very	Skipped
6/1/20							
All	76	37	39	24	17	7	*
STEM	74	35	39	26	19	7	*
Non-STEM	79	40	38	20	13	7	1

d. How well you felt you were learning overall

	----- Satisfied -----			--- Dissatisfied ---			
	NET	Very	Somewhat	NET	Somewhat	Very	Skipped
6/1/20							
All	57	17	40	42	27	15	*
STEM	54	14	39	46	28	18	*
Non-STEM	63	23	41	36	25	11	1

6. Compared with the course when it included in-person classes, was the course after it moved completely online better or worse on each of these items?

a. Your feeling included as a member of the class

	----- Better -----				----- Worse -----			
	NET	Much better online	Better online	About the same	NET	Worse online	Much worse online	Skip.
6/1/20								
All	7	3	4	42	50	35	15	1

STEM	7	3	4	39	53	37	16	1
Non-STEM	8	4	4	47	45	31	14	1

b. Opportunities to collaborate with other students on course work

	----- Better -----				----- Worse -----			
	NET	Much better online	Better online	About the same	NET	Worse online	Much worse online	Skip.
6/1/20								
All	8	3	5	26	65	38	26	1
STEM	8	3	5	25	66	38	28	1
Non-STEM	9	4	5	29	62	39	23	1

c. The instructor's knowledge of your strengths and weaknesses

	----- Better -----				----- Worse -----			
	NET	Much better online	Better online	About the same	NET	Worse online	Much worse online	Skip.
6/1/20								
All	8	3	4	50	41	28	13	1
STEM	7	3	4	49	43	29	14	1
Non-STEM	9	3	6	51	39	27	11	1

d. The availability of help with the course content

	----- Better -----				----- Worse -----			
	NET	Much better online	Better online	About the same	NET	Worse online	Much worse online	Skip.
6/1/20								
All	14	4	10	43	42	32	9	1
STEM	14	4	10	41	44	33	11	1
Non-STEM	15	6	9	47	37	30	7	1

e. Understanding what was expected of you in the course

	----- Better -----				----- Worse -----			
	NET	Much better online	Better online	About the same	NET	Worse online	Much worse online	Skip.
6/1/20								
All	12	4	8	52	34	25	9	1
STEM	12	4	9	51	36	26	10	1
Non-STEM	12	5	7	55	32	24	8	1

f. Keeping you interested in the course content

	----- Better -----				----- Worse -----			
	NET	Much better online	Better online	About the same	NET	Worse online	Much worse online	Skip.
6/1/20								
All	10	4	7	32	57	37	20	1
STEM	9	3	6	31	59	37	21	1
Non-STEM	12	4	8	34	53	37	17	1

7. After this course moved online, did it include any of the following?

a. Live sessions in which students could ask questions and participate in discussions

	Included	Did not include	Skipped
6/1/20			
All	67	32	1

STEM	70	29	1
Non-STEM	64	35	1

b. Live lectures by the instructor, with the class watching in real time

	Included	Did not include	Skipped
6/1/20			
All	60	39	1
STEM	60	39	1
Non-STEM	61	38	1

c. Recorded lectures

	Included	Did not include	Skipped
6/1/20			
All	65	35	1
STEM	70	29	1
Non-STEM	55	44	1

d. Assignments to meet in "breakout groups" during a live class

	Included	Did not include	Skipped
6/1/20			
All	25	74	1
STEM	23	75	2
Non-STEM	27	72	1

e. Assignments to work on group projects separately from the course meetings

	Included	Did not include	Skipped
6/1/20			
All	33	65	2
STEM	33	65	2
Non-STEM	34	64	1

f. Breaking up class activities into shorter pieces than in the previous in-person course

	Included	Did not include	Skipped
6/1/20			
All	34	65	1
STEM	32	67	1
Non-STEM	39	60	1

g. The instructor using examples from the real world to illustrate the course content

	Included	Did not include	Skipped
6/1/20			
All	66	33	1
STEM	64	34	1
Non-STEM	70	30	1

h. Frequent quizzes or other assessments

	Included	Did not include	Skipped
6/1/20			
All	64	35	1
STEM	68	31	1
Non-STEM	58	41	1

i. Assignments having you express what you had learned and what you still needed to learn

	Included	Did not include	Skipped
6/1/20			
All	49	50	1
STEM	46	52	1
Non-STEM	53	45	2

j. Personal messages from the instructor about how you were doing in the course or to make sure you could access course materials

	Included	Did not include	Skipped
6/1/20			
All	54	45	1
STEM	50	49	1
Non-STEM	62	37	1

k. Pre-recorded videos from external sources (e.g., YouTube)

	Included	Did not include	Skipped
6/1/20			
All	55	44	1
STEM	55	44	1
Non-STEM	55	44	1

8. In your own words, what would you say was your greatest challenge in learning from this course after it went online?

*See separate attachment.*

9. Were these a problem for you, or not a problem, in taking this course after it moved online?

a. Fitting the course in with your home/family responsibilities

	NET	Problem	Problem	Not a problem	Skipped
		Major	Minor		
6/1/20					
All	54	17	37	45	1
STEM	56	18	38	44	*
Non-STEM	51	14	37	48	1

b. Fitting the course in with your work schedule, if you work for pay

	NET	Problem	Problem	Not a problem	Skipped
		Major	Minor		
6/1/20					
All	32	8	23	68	1
STEM	31	8	23	69	1
Non-STEM	33	9	24	66	1

c. Feeling too unwell, physically or emotionally, to participate

	NET	Problem	Problem	Not a problem	Skipped
		Major	Minor		
6/1/20					
All	45	14	31	54	1
STEM	45	14	32	54	1

Non-STEM	44	15	29	55	1
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d. Not knowing where to get help with the course

	NET	Major	Minor	Not a problem	Skipped
6/1/20					
All	54	16	38	45	1
STEM	58	18	40	41	1
Non-STEM	48	14	34	51	1

e. Finding a quiet place where you could do the course online

	NET	Major	Minor	Not a problem	Skipped
6/1/20					
All	55	20	35	44	1
STEM	56	21	35	43	1
Non-STEM	54	18	35	45	1

f. Staying motivated to do well in the course

	NET	Major	Minor	Not a problem	Skipped
6/1/20					
All	79	42	37	20	1
STEM	82	45	37	17	*
Non-STEM	74	37	37	25	1

10. What kind of computing device did you use most often for accessing this course after it moved online?

	NET	Desktop computer	Laptop	Tablet	Smartphone	Skipped
6/1/20						
All	95	15	79	3	2	*
STEM	95	16	80	3	2	*
Non-STEM	93	15	78	3	3	1

11. [IF ANSWERED Q10] Which best describes this device:

	NET	A personal device only used by you	A personal device you shared with others	A shared device in a public place	Skp.
6/1/20					
All	99	89	10	1	1
STEM	99	92	7	*	1
Non-STEM	99	85	13	1	1

12. [IF PERSONAL DEVICE SHARED WITH OTHERS] How many people did you share this device with?

	One	Two	Three or more	Skipped
6/1/20	27	34	39	0

*Insufficient sample sizes for STEM (n=48) and non-STEM (n=47) students.*

13. [IF ANY PERSONAL DEVICE] Was this device:

	Owned by you	Provided by the school	Owned by someone else (other than the school)	Skipped
6/1/20				
All	92	3	5	1
STEM	92	4	4	1
Non-STEM	92	2	6	*

14. How did you usually get internet access for this course after it moved online?

	Internet access you had at home already	Internet access at or near your home provided by the school	Internet access at the school	Public access in another location	Skp.
6/1/20					
All	95	1	2	1	1
STEM	95	1	2	1	1
Non-STEM	94	1	2	1	2

15. In accessing this course after it moved online, how often, if at all, did you experience serious internet connectivity problems that interfered with your ability to attend or participate?

	----- Often -----				--- Rarely/never ---			
	NET	Very often	Often	Occasionally	NET	Rarely	Never	Skipped
6/1/20								
All	16	6	10	29	55	36	20	*
STEM	15	6	9	31	54	37	18	0
Non-STEM	17	6	11	25	57	34	23	1

16. How often, if at all, did you experience serious hardware or software problems that interfered with your ability to attend or participate in this course after it moved online?

	----- Often -----				--- Rarely/never ---			
	NET	Very often	Often	Occasionally	NET	Rarely	Never	Skipped
6/1/20								
All	8	2	6	15	75	33	42	2
STEM	7	2	5	16	75	35	40	2
Non-STEM	9	3	6	15	75	28	46	2

17. During the period that this course was being held online, did any of these get better or worse over time?

a. The quality of the course overall

	Got better over time	No change	Got worse over time	Skipped
6/1/20				
All	19	55	25	1
STEM	18	55	27	*
Non-STEM	21	55	23	1

b. Technical problems

	Got better over time	No change	Got worse over time	Skipped
6/1/20				

All	21	67	11	1
STEM	21	67	11	*
Non-STEM	20	66	11	2

c. The instructor's online teaching skill

	Got better over time	No change	Got worse over time	Skipped
6/1/20				
All	29	56	14	1
STEM	29	55	16	*
Non-STEM	28	59	11	2

d. Your satisfaction with the course

	Got better over time	No change	Got worse over time	Skipped
6/1/20				
All	18	53	29	1
STEM	16	53	31	0
Non-STEM	21	53	25	2

18. In your opinion, which of these do you think was more responsible for any problems you may have experienced with the course after it moved online?

	The problems mostly reflected the unplanned move of the course online	The problems mostly reflected inherent limitations of online learning	I did not experience any problems with the course after it moved online	Skipped
6/1/20				
All	45	37	16	2
STEM	47	39	13	1
Non-STEM	42	35	21	2

19. When this course was held in person, how were you taking it?

	For a letter grade	Pass/fail	Skipped
6/1/20			
All	92	8	*
STEM	92	8	*
Non-STEM	91	8	1

20. [IF FOR A LETTER GRADE] When this course moved online, was it...

	Graded, with no option for pass/fail	Pass/fail, with no option for a grade	Your choice of whether to take it graded or pass/fail	Skipped
6/1/20				
All	34	6	60	*
STEM	33	7	60	*
Non-STEM	35	5	59	*

19/20 NET:

	NET	Initially taking class for letter grade, Graded, with no option for pass/fail	Pass/fail, with no option for a grade	Your choice	Skip. Q20	Initially taking class pass/fail	Skip. Q19
6/1/20							
All	92	31	6	55	*	8	*

STEM	92	30	6	56	*	8	*
Non-STEM	91	32	5	54	*	8	1

21. [IF PASS/FAIL WITH NO OPTION FOR LETTER GRADE IN Q20] How, if at all, did this change in the grading system affect your motivation to work hard in the course?

*Insufficient sample size (n=51).*

22. About how many students were enrolled in this course?

	Fewer than 35	35 to 75	NET	More than 75	Not sure
				-----	
6/1/20				More than 125	
All	56	26	17	8	9
STEM	50	28	21	10	11
Non-STEM	67	22	11	6	5

23. What kind of school offered this course?

	4-year college or university	2-year or community college	Other	Skipped
6/1/20				
All	69	29	2	0
STEM	70	29	1	0
Non-STEM	67	30	3	0

24. Is this a public institution (like a county or state school) or a private school/institute?

	Public	Private	Skipped
6/1/20			
All	84	16	0
STEM	84	16	0
Non-STEM	84	16	0

25. Which best describes your course of study:\*

	-----	6/1/20	-----
	All	STEM	Non-STEM
I am majoring in a STEM subject	42	63	4
I am majoring in a different subject, not STEM	45	29	72
I have not declared a major	7	5	11
Does not apply	7	4	13
Skipped	0	0	0

\*Respondents could select both STEM and non-STEM major

26. Before this March, had you previously taken any college courses completely online?

	No, none	NET	Yes, one	Yes, two to three	Yes, four or more	Skip.
6/1/20						
All	43	56	21	22	13	1
STEM	43	57	20	24	13	1
Non-STEM	44	56	22	21	13	1

27. Will you graduate before the fall semester starts?

		-- Graduated or will in the summer --						
		Yes, I graduated this semester	Yes, I will graduate in the summer	No, I will not graduate before the fall semester	Does not apply	Skip		
NET								
6/1/20								
All	18	12	6	77	4	*		
STEM	17	11	6	79	3	1		
Non-STEM	18	13	5	75	6	*		

28. [IF NOT GRADUATING BEFORE FALL SEMESTER OR DOES NOT APPLY] Looking ahead to next fall, how likely are you to take another course from the same institution if all its courses are offered online only, at the same cost as in-person courses?

		----- Likely -----		----- Unlikely -----			
		Very	Somewhat	Somewhat	Very	Skipped	
NET							
6/1/20							
All	70	45	26	29	16	14	*
STEM	70	44	26	29	15	14	*
Non-STEM	70	45	25	30	16	13	*

29. [IF NOT GRADUATING BEFORE FALL SEMESTER OR DOES NOT APPLY] Compared with an in-person course, what do you think is a fair price to pay for a completely online course from this institution?

		----- 6/1/20 -----		
		All	STEM	Non-STEM
Would take another completely online course at this institution NET		94	94	93
The same price (100%) as the in-person course		8	7	10
Three-quarters (75%) of the price of the in-person course		31	29	33
Half (50%) the price of the in-person course		46	49	40
One-quarter (25%) of the price of the in-person course		10	10	9
Wouldn't take another completely online course at this institution regardless of price		5	5	7
Skipped		1	1	*

30. If this institution offers online courses next fall, how do you think they will differ, if at all, from your experience this spring? Do you expect online courses in the fall to be...

		----- Better -----		About the same	----- Worse -----			
		Much	Somewhat		Somewhat	Much	Skipped	
NET								
6/1/20								
All	50	11	39	40	10	7	3	1
STEM	49	10	40	40	11	7	3	*
Non-STEM	50	13	37	40	9	6	2	1

31. While you were taking this college course completely online, did you also work for pay?

		Yes	No	Skipped
6/1/20				
All	46	54	*	
STEM	46	54	*	

Non-STEM    46    54    \*

32. [IF WORKED FOR PAY] How many hours per week did you usually work for pay while you were also taking this college course completely online?

	----- Number of hours -----						
	1-10	11-20	21-30	31 or more	Skipped	Mean	Median
6/1/20							
All	22	31	21	25	1	22.9	20.0
STEM	26	30	22	22	1	21.8	20.0
Non-STEM	16	33	19	31	1	24.9	20.0

33. While you were taking this college course completely online, were there any children under age 18 living with you?

	Yes	No	Skipped
6/1/20			
All	33	66	1
STEM	33	66	1
Non-STEM	34	65	1

34. [IF LIVING WITH ANY CHILDREN UNDER 18] Were you responsible for providing care for that child/those children?

	Yes	No	Skipped
6/1/20			
All	33	67	*
STEM	33	67	*
Non-STEM	34	66	0

33/34 NET:

	----- Living with children under 18 -----					
	No children under 18	NET	Responsible for care	Not responsible for care	Skipped Q34	Skipped Q33
6/1/20						
All	66	33	11	22	*	1
STEM	66	33	11	22	*	1
Non-STEM	65	34	11	22	0	1

\*\*\* END \*\*\*