INSTRUCTURE INC
Form 10-Q
August 02, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2017

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission file number: 001-37629

Instructure, Inc.

(Exact name of registrant as specified in its charter)

Delaware	26-3505687
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

6330 South 3000 East, Suite 700

Salt Lake City, UT 84121

(Address of principal executive offices, including zip code)

(800) 203-6755

(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definition of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company)	Smaller reporting company
Emerging growth company	

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

As of July 28, 2017, there were 29,400,779 shares of the registrant's common stock outstanding.

Instructure, Inc.

Quarterly Report on Form 10-Q

For the Quarter Ended June 30, 2017

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In this Quarterly Report on Form 10-Q, “we,” “our,” “us,” “Instructure,” and the “Company” refer to Instructure, Inc. and its wholly-owned subsidiaries.

PART I. FINANCIAL INFORMATION

Item 1. Consolidated Financial Statements
INSTRUCTURE, INC.

Consolidated Balance Sheets

(in thousands)

	June 30, 2017 (unaudited)	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	$ 25,744	$ 44,539
Short-term marketable securities	—	23,895
Accounts receivalbe—net of allowance of $274 and $241 at June 30, 2017 and December 31, 2016, respectively	72,970	18,072
Prepaid expenses	7,721	5,434
Other current assets	886	936
Total current assets	107,321	92,876
Property and equipment, net	18,913	14,733
Goodwill	989	989
Intangible assets, net	802	760
Noncurrent prepaid expenses	978	984
Other assets	1,051	994
Total assets	$ 130,054	$ 111,336
Liabilities and stockholders' equity (deficit)		
Current liabilities:		
Accounts payable	$ 4,850	$ 5,374
Accrued liabilities	13,303	10,905
Deferred rent	832	773
Deferred revenue	103,018	72,747
Total current liabilities	122,003	89,799
Deferred revenue, net of current portion	4,130	3,144
Deferred rent, net of current portion	7,899	8,372
Warrant liability	108	25
Other long-term liabilities	32	32
Total liabilities	134,172	101,372
Stockholders' equity (deficit):		
Common stock	3	3
Additional paid-in capital	218,328	206,442
Accumulated other comprehensive loss	—	(12)

Accumulated deficit	(222,449)	(196,469)
Total stockholders’ equity (deficit)	(4,118)	9,964
Total liabilities and stockholders’ equity (deficit)	$ 130,054	$ 111,336

See accompanying notes.

INSTRUCTURE, INC.

Consolidated Statements of Operations

(in thousands, except per share amounts)

(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Revenue:				
Subscription and support	$32,650	$22,416	$63,163	$42,993
Professional services and other	5,394	3,474	8,860	6,196
Total revenue	38,044	25,890	72,023	49,189
Cost of revenue:				
Subscription and support	7,967	5,586	15,072	11,023
Professional services and other	3,026	2,049	5,537	3,961
Total cost of revenue	10,993	7,635	20,609	14,984
Gross profit	27,051	18,255	51,414	34,205
Operating expenses:				
Sales and marketing	21,314	18,038	40,300	34,201
Research and development	11,057	8,730	22,239	16,535
General and administrative	7,621	6,003	14,607	11,739
Total operating expenses	39,992	32,771	77,146	62,475
Loss from operations	(12,941)	(14,516)	(25,732)	(28,270)
Other income (expense):				
Interest income	39	61	115	132
Interest expense	(4)	(12)	(18)	(23)
Change in fair value of warrant liability	(76)	—	(83)	62
Other income (expense), net	91	(56)	127	(131)
Total other income (expense), net	50	(7)	141	40
Loss before income taxes	(12,891)	(14,523)	(25,591)	(28,230)
Income tax expense	(105)	(67)	(136)	(99)
Net loss	$(12,996)	$(14,590)	$(25,727)	$(28,329)
Net loss per common share, basic and diluted	$(0.45)	$(0.53)	$(0.89)	$(1.03)
Weighted average common shares used in computing basic and diluted net loss per common share	29,090	27,610	28,909	27,456

See accompanying notes.

INSTRUCTURE, INC.

Consolidated Statements of Comprehensive Loss

(in thousands)

(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Net loss	$(12,996)	$(14,590)	$(25,727)	$(28,329)
Other comprehensive loss:				
Net change in unrealized gains (losses) on marketable securities	2	—	—	—
Comprehensive loss	$(12,994)	$(14,590)	$(25,727)	$(28,329)

See accompanying notes.

INSTRUCTURE, INC.

Consolidated Statements of Cash Flows

(in thousands)

(unaudited)

	Six Months Ended June 30,	
	2017	2016
Operating Activities:		
Net loss	$(25,727)	$(28,329)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation of property and equipment	2,693	1,886
Amortization of intangible assets	259	164
Amortization of deferred financing costs	16	23
Change in fair value of warrant liability	83	(62)
Stock-based compensation	7,440	4,897
Other	(66)	(47)
Changes in assets and liabilities:		
Accounts receivable, net	(55,105)	(31,978)
Prepaid expenses and other assets	(2,280)	133
Accounts payable and accrued liabilities	2,198	1,697
Deferred revenue	31,257	23,794
Deferred rent	(414)	(240)
Other liabilities	—	(330)
Net cash used in operating activities	(39,646)	(28,392)
Investing Activities:		
Purchases of property and equipment	(6,955)	(3,410)
Purchases of intangible assets	(301)	(296)
Proceeds from sale of property and equipment	38	18
Maturities of marketable securities	23,900	325
Net cash provided by (used in) investing activities	16,682	(3,363)
Financing Activities:		
Proceeds from issuance of common stock from employee equity plans	4,316	3,311
Shares repurchased for tax withholdings on vesting of restricted stock	(123)	—
Payments for financing costs	(24)	—
Net cash provided by financing activities	4,169	3,311
Net decrease in cash and cash equivalents	(18,795)	(28,444)
Cash and cash equivalents, beginning of period	44,539	90,471
Cash and cash equivalents, end of period	$25,744	$62,027
Supplemental cash flow disclosure:		
Cash paid for taxes	$175	$31
Non-cash investing and financing activities:		
Capital expenditures incurred but not yet paid	$210	$54
Issuance of common stock for exercise of common stock warrant	$—	$244
Vesting of common stock subject to repurchase	$—	$7

See accompanying notes.

INSTRUCTURE, INC.

Notes to Unaudited Consolidated Financial Statements

1. Description of Business and Basis of Presentation

Organization

Instructure, Inc. provides an innovative, cloud-based learning management platform for academic institutions and companies worldwide. We built our learning management applications, Canvas, for the education market, and Bridge, for the corporate market, to enable our customers to easily develop, deliver and manage engaging face-to-face and online learning experiences. We offer our platform through a Software-as-a-Service, or SaaS, business model. We were incorporated in the state of Delaware in September 2008. We are headquartered in Salt Lake City, Utah, and have wholly-owned subsidiaries in the United Kingdom, Australia, the Netherlands, Hong Kong, Sweden and Brazil.

Basis of Presentation

The accompanying unaudited interim consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States (“GAAP”) applicable to interim periods, under the rules and regulations of the United States Securities and Exchange Commission (“SEC”). In the opinion of management, we have prepared the accompanying unaudited financial statements on a basis substantially consistent with the audited consolidated financial statements of the Company as of and for the fiscal year ended December 31, 2016, and these financial statements include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the results of the interim periods presented. All intercompany balances and transactions have been eliminated in consolidation. The results of operations for the interim periods presented are not necessarily indicative of the results to be expected for any subsequent quarter or for the entire year ending December 31, 2017. The year-end balance sheet data was derived from audited financial statements, but this Form 10-Q does not include all disclosures required under GAAP. Certain information and note disclosures normally included in annual financial statements prepared in accordance with GAAP have been omitted under the rules and regulations of the SEC.

These interim financial statements should be read in conjunction with the audited consolidated financial statements and related notes contained in the Company’s Annual Report on Form 10-K filed with the SEC on February 10, 2017. There have been no changes in the Company’s significant accounting policies from those that were disclosed in the Company’s Annual Report on Form 10-K that have had a material impact on our consolidated financial statements and related notes.

Marketable Securities

We hold investments in marketable securities, consisting of corporate debt securities and commercial paper. We classify our marketable securities as available-for-sale investments as we neither buy and hold securities for the purpose of selling them in the near future nor intend to hold securities to maturity. We classify our marketable securities as short-term on the consolidated balance sheet for all purchased investments with contractual maturities that are less than one year as of the balance sheet date. Our marketable securities are carried at estimated fair value with any unrealized gains and losses, net of taxes, included in accumulated other comprehensive loss in stockholders’ equity. Unrealized losses are charged against other income (expense), net when a decline in fair value is determined to be other-than-temporary. We have not recorded any such impairment charge in the periods presented. We determine realized gains or losses on sale or maturity of marketable securities on a specific identification method, and record such gains or losses as other income (expense), net.

Use of Estimates

The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect reported amounts and disclosures. Accordingly, actual results could differ from those estimates. Such estimates, which we evaluate on an on-going basis, include allowances for doubtful accounts, useful lives for property and equipment and intangible assets, valuation of marketable securities, valuation allowances for net deferred income tax assets, valuation of stock-based compensation and common stock, the best estimate of selling price of deliverables included in multiple-deliverable revenue arrangements and the weighted average customer life used in the recognition of nonrefundable upfront implementation service revenue. We base our estimates on historical experience and on various other assumptions which we believe to be reasonable.

Liability for Common Stock Warrants

We account for freestanding warrants to purchase shares of our common stock that are not considered indexed to our own stock as warrant liabilities on our consolidated balance sheets. Under Accounting Standards Codification ("ASC") 815, we record the liability-classified common stock warrants issued in conjunction with our credit facility at their estimated fair value because they are free standing and the number of shares exercisable under this warrant to purchase our common stock increases if the loan balance exceeds $7,500,000. At the end of each reporting period, changes in the estimated fair value of the warrants to purchase shares of common stock are recorded as a change in fair value of warrant liability in the consolidated statements of operations. A portion of the warrants were exercised in February 2016 (see Note 9—Fair Value of Financial Instruments).

Recent Accounting Pronouncements

Adopted accounting pronouncements

In March 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-09, "Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting", which simplifies several aspects of the accounting for share-based payment transactions. The new guidance requires companies to record excess tax benefits and tax deficiencies as income tax benefit or expense in the statement of operations when the awards vest or are settled, and eliminates the requirement to reclassify cash flows related to excess tax benefits from operating activities to financing activities on the statement of cash flows. We adopted the standard in the three months ended March 31, 2017. Upon adoption, we recognized the previously unrecognized excess tax benefits using the modified retrospective transition method through a cumulative-effect adjustment of $3,039,000. The previously unrecognized excess tax effects were recorded as a deferred tax asset, which was fully offset by a valuation allowance. Because of this full valuation allowance, historically we have not reported any excess tax benefits in our consolidated statements of cash flows. Prospectively when our deferred tax asset is no longer fully offset by a valuation allowance, we will apply the change in presentation to the statement of cash flows and will classify the excess tax benefit in the operating section. In addition, we have elected to account for forfeitures as they occur, rather than estimate expected forfeitures over the course of a vesting period. As a result, we recorded a cumulative-effect adjustment to increase our additional paid-in capital and accumulated deficit by $253,000.

In April 2015, the FASB issued ASU No. 2015-05, Intangibles – Goodwill and Other – Internal-Use Software: Customer's Accounting for Fees Paid in a Cloud Computing Arrangement, which provides guidance to clarify the customer's accounting for fees paid in a cloud computing arrangement. This guidance simplifies entities' processes as it provides criteria to determine whether cloud computing arrangements contain a software license and should be accounted for as internal use software under ASC 350-40. We elected to prospectively adopt the accounting standard in the beginning of our first quarter of 2016. Prior periods in our consolidated financial statements were not retrospectively adjusted. Starting in our first quarter of 2016, if an arrangement included a software license, as defined by this ASU, then we accounted for the software license element of the arrangement in the intangible assets, net line item of the consolidated balance sheets rather than recording the amount in property and equipment, net.

Issued accounting pronouncements

In January 2017, the FASB issued ASU No. 2017-04, Intangibles-Goodwill and Other: Simplifying the Test for Goodwill Impairment. This guidance simplifies the accounting for goodwill impairment by removing Step 2 of the goodwill impairment test. Under current guidance, Step 2 of the goodwill impairment test requires entities to calculate the implied fair value of goodwill in the same manner as the amount of goodwill recognized in a business combination by assigning the fair value of a reporting unit to all of the assets and liabilities of the reporting unit. The carrying value in excess of the implied fair value is recognized as goodwill impairment. Under the new standard, goodwill impairment is recognized based on Step 1 of the current guidance, which calculates the carrying value in excess of the reporting unit's fair value. The new standard is effective for us beginning February 1, 2020, with early adoption

permitted. We do not believe the adoption of ASU 2017-04 will have a material impact on our consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases, requiring lessees to recognize a right-of-use asset and a lease liability on the balance sheet for all leases with the exception of short-term leases. For lessees, leases will continue to be classified as either operating or finance leases in the financial statements. Lessor accounting is similar to the current model but updated to align with certain changes to the lessee model. Lessors will continue to classify leases as operating, direct financing or sales-type leases. The new standard must be adopted using a modified retrospective transition and requires application of the new guidance at the beginning of the earliest comparative period presented. The updated standard is effective for us beginning in the first quarter of 2019. We are currently evaluating the effect that the updated standard will have on our consolidated financial statements and related disclosures.

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers: Topic 606", as amended, ("ASU 2014-09"). The standard supersedes nearly all existing revenue recognition guidance under GAAP. The core principle of the standard is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received for those goods or services. The standard defines a five-step process to achieve this core principle and, in doing so, it is possible more judgment and estimates may be required within the revenue recognition process than are required under existing GAAP, including identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation, among others. The standard also provides guidance on the recognition of costs related to obtaining customer contracts.

ASU 2014-09 is effective for annual reporting periods beginning after December 15, 2017. We will adopt the new standard effective January 1, 2018. The new standard permits adoption using either of two methods: (1) full retrospective application of the standard to each prior reporting period presented with the option to elect certain practical expedients as defined within the standard, or (2) modified retrospective application of the standard with the cumulative effect of initially applying the standard recognized at the date of initial application and providing certain additional disclosures as defined per the standard. We plan to adopt the new standard using the full retrospective method. Our ability to adopt using the full retrospective method is dependent on several factors, including the significance of the impact of the new standard to our financial results, system readiness and our ability to accumulate and analyze the information necessary to assess the impact on prior period financial statements, as necessary.

We have substantially completed our evaluation of the impact of the new standard on our accounting policies. We are currently in the system implementation stage of adopting the new standard. We have assigned internal resources in addition to the engagement of third party service providers to assist in the implementation of identified system requirements to enable timely and accurate reporting under the new standard.

Under the current revenue recognition guidance, we have historically concluded that nonrefundable upfront fees do not have standalone value, and accordingly, we have recognized those fees over the longer of the contract term or customer life. Under the new standard, we have concluded that nonrefundable upfront fees are not considered a separate performance obligation. As such, the consideration related to the nonrefundable upfront fees would be allocated across the other performance obligations included in the contract. Furthermore, under the current revenue recognition guidance we limit the amount of revenue recognition for delivered elements to the amount that is not contingent on the delivery of future services. Under the new standard, the concept of contingent revenue no longer exists. As a result, the timing of when revenue is recognized could change significantly for nonrefundable upfront fees and our multi-year subscription agreements. We plan to begin quantifying the financial statement impacts resulting from the adoption of the new standard upon completion of the system implementation stage.

As part of our evaluation, we have also considered the impact of the standard's requirements with respect to capitalization and amortization of incremental costs of obtaining a contract. Under our current accounting policy, incremental costs of obtaining a contract are expensed as incurred. The new standard requires the capitalization of all incremental costs that we incur to obtain a contract with a customer that would not have been incurred if the contract had not been obtained, provided we expect to recover those costs.

While we continue to assess all potential impacts under the new standard, including the areas described above, and anticipate this standard could have a material impact on our consolidated financial statements, we do not know or cannot reasonably estimate quantitative information related to the impact of the new standard on the financial statements at this time.

2. Net Loss Per Share

Basic net loss per share is computed by dividing net loss by the weighted average number of common shares outstanding for the period, less the weighted average unvested common stock subject to repurchase or forfeiture.

Diluted net loss per share is computed by giving effect to all potential dilutive common stock equivalents outstanding for the period. For purposes of the diluted net loss per share calculation, options to purchase common stock, common stock warrants and restricted stock units are considered to be common stock equivalents.

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A reconciliation of the denominator used in the calculation of basic and diluted loss per share is as follows (in thousands, except per share amounts):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Numerator:				
Net loss	$(12,996)	$(14,590)	$(25,727)	$(28,329)
Denominator:				
Weighted-average common shares outstanding—basic	29,090	27,625	28,909	27,481
Less: Weighted-average common stock subject to repurchase	—	(15)	—	(25)
Total weighted-average common shares outstanding—basic	29,090	27,610	28,909	27,456
Dilutive effect of share equivalents resulting from stock options, restricted stock units, common stock warrants and common stock subject to repurchase	—	—	—	—
Weighted-average common shares outstanding-diluted	29,090	27,610	28,909	27,456
Net loss per common share, basic and diluted	$(0.45)	$(0.53)	$(0.89)	$(1.03)

For all periods presented, we incurred net losses and, therefore, the effect of our outstanding stock options, restricted stock units, common stock warrants and common stock subject to repurchase was not included in the calculation of diluted loss per share as the effect would be anti-dilutive. The following table contains share totals with a potentially dilutive impact (in thousands):

	As of June 30,	
	2017	2016
Options to purchase common stock	2,784	3,556
Common stock warrants	17	17
Common stock subject to repurchase	—	9
Restricted stock units	1,629	952
Total	4,430	4,534

3. Property and Equipment

Property and equipment consist of the following (in thousands):

	June 30,	December 31,

	2017	2016
Computer and office equipment	$4,765	$ 3,918
Purchased software	1,071	1,074
Capitalized software development costs	11,370	6,947
Furniture and fixtures	2,976	2,701
Leasehold improvements and other	10,455	9,413
Total property and equipment	30,637	24,053
Less accumulated depreciation and amortization	(11,724)	(9,320)
Total	$18,913	$ 14,733

Accumulated amortization for capitalized software development costs was $3,263,000 and $2,355,000 at June 30, 2017 and December 31, 2016, respectively. Amortization expense for capitalized software development costs was $521,000 and $303,000 for the three months ended June 30, 2017 and 2016, respectively and $1,006,000 and $578,000 for the six months ended June 30, 2017 and 2016, respectively. Amortization expense for capitalized software development costs is recorded within cost of revenue on the consolidated statements of operations.

4. Goodwill and Intangible Assets

Goodwill was $989,000 as of June 30, 2017 and December 31, 2016.

Intangible assets consisted of the following (in thousands):

	Average Remaining Useful Life	June 30, 2017	December 31, 2016
Domain names	12 Months	$1,268	$ 1,268
Tradenames and trademarks	2 Months	120	109
Software	28 Months	611	321
Capitalized learning content	55 Months	400	400
Accumulated amortization		(1,597)	(1,338)
Total		$802	$ 760

Amortization expense for intangible assets was $117,000 and $86,000 for the three months ended June 30, 2017 and 2016, respectively and $259,000 and $164,000 for the six months ended June 30, 2017 and 2016, respectively.

Based on the recorded intangible assets at June 30, 2017, estimated amortization expense is expected to be as follows (in thousands):

Years Ending December 31,	Amortization Expense
Remainder of 2017	$ 143
2018	285
2019	216
2020	94
2021	64
Total	$ 802

5. Segment Information and Geographic Data

We operate in a single operating segment, cloud-based learning management systems. Operating segments are defined as components of an enterprise for which separate financial information is regularly evaluated by the chief operating decision makers, or CODMs, which are our chief executive officer and chief financial officer, in deciding how to allocate resources and assess performance. Our CODMs evaluate our financial information and resources and assess the performance of these resources on a consolidated basis. Since we operate in one operating segment, all required financial segment information can be found in the consolidated financial statements.

Revenue by geographic region, based on the physical location of the customer, is (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
United States	$32,839	$23,674	$62,879	$45,269
Foreign	5,205	2,216	9,144	3,920
Total revenue	$38,044	$25,890	$72,023	$49,189
Percentage of revenue generated outside of the United States	14 %	9 %	13 %	8 %

6. Marketable Securities

Our investment policy is consistent with the definition of available-for-sale securities. We do not buy and hold securities principally for the purpose of selling them in the near future nor do we intend to hold securities to maturity. Rather, our policy is focused on the preservation of capital, liquidity and return. From time to time, we may sell certain securities but the objectives are generally not to generate profits on short-term differences in price.

The following tables summarize, by major security type, our assets that are measured at fair value on a recurring basis (in thousands):

	June 30, 2017			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate debt securities	$—	$ —	$ —	$ —

	December 31, 2016			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate debt securities	$23,907	$ —	$ (12)	$ 23,895

There were no investments in an unrealized loss position as of June 30, 2017. The aggregate fair value of investments in an unrealized loss position was $17,906,000 as of December 31, 2016. Because we did not sell or intend to sell investments in an unrealized loss position, we did not consider these investments with an unrealized loss to be other-than-temporarily impaired as of December 31, 2016.

There were no gross realized gains or losses from the sale or maturity of marketable securities during the six months ended June 30, 2017 and 2016.

During the six months ended June 30, 2017, we recognized gross interest income on securities of $89,000. Interest income was offset by amortization expense on securities of $8,000 during the six months ended June 30 2017, and reported net within interest income on the consolidated statements of operations.

During the six months ended June 30, 2016, we recognized no gross interest income or amortization expense on securities.

The estimated fair value of investments by contractual maturity is as follows (in thousands):

	June 30, 2017	December 31, 2016
Due within one year	$ —	$ 23,895
Due after one year and	—	—

through 5 years				
Due after 5 years and through 10 years		—		—
Due after 10 years		—		—
Total	$	—	$	23,895

7. Stockholders' Equity and Stock-Based Compensation

Common Stock

As of June 30, 2017 and December 31, 2016, there were 200,000,000 shares of common stock authorized. As of June 30, 2017, there were 29,380,273 and 29,379,325 shares issued and outstanding. As of December 31, 2016, there were 28,553,808 issued and outstanding. Each share of common stock has the right to one vote on all matters submitted to a vote of stockholders. The holders of common stock are also entitled to receive dividends whenever funds are legally available and if declared by the board of directors, subject to prior rights of holders of all classes of stock outstanding having priority rights as to dividends. No dividends have been declared or paid on the common stock through June 30, 2017.

Employee Equity Plans

Our 2015 Equity Incentive Plan (the "2015 Plan") serves as the successor to our 2010 Equity Incentive Plan (the "2010 Plan"). Accordingly, no shares are available for issuance under the 2010 Plan; however, any outstanding options granted under the 2010 Plan will remain outstanding and subject to the terms of that plan until exercised, terminated or expired by their terms. As of June 30, 2017, options to purchase 2,367,942 shares of common stock remained outstanding under the 2010 Plan. Pursuant to the terms of the 2015 Plan, the share reserve automatically increased by 1,284,921 shares in January 2017. As of June 30, 2017, we had approximately 2,055,150 shares of common stock available for future grants under the 2015 Plan.

We also have a 2015 Employee Stock Purchase Plan ("ESPP"). The ESPP allows eligible employees to purchase shares of our common stock at a discount through payroll deductions of up to 15% of their eligible compensation, subject to any plan limitations. Our board of directors approves the ESPP offerings. The offerings need not be identical, but each offering may not exceed 27 months and may specify one or more shorter purchase periods within the offering. Pursuant to the terms of the ESPP, the share reserve increased by 285,538 shares in January 2017. As of June 30, 2017, 466,683 shares of common stock were available for issuance under the ESPP.

The following two tables show stock-based compensation expense by award type and where the stock-based compensation expense was recorded in our consolidated statements of operations (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Options	$966	$937	$2,184	$2,136
Restricted stock units	2,632	1,194	4,297	1,675
Employee stock purchase plan	469	531	959	1,086
Total stock-based compensation	$4,067	$2,662	$7,440	$4,897

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Subscription and support cost of revenue	$191	$137	$317	$231
Professional services and other cost of revenue	156	136	261	235
Sales and marketing	1,195	789	2,150	1,444
Research and development	1,506	935	2,738	1,720
General and administrative	1,019	665	1,974	1,267
Total stock-based compensation	$4,067	$2,662	$7,440	$4,897

Stock Options

The following table summarizes stock option activity for the six months ended June 30, 2017 (in thousands, except per share data and years):

	Shares Underlying Options	Weighted-Average Exercise Price	Weighted-Average Remaining Life (in years)	Aggregate Intrinsic Value
Outstanding at December 31, 2016	3,106	$ 7.14	7.5	$ 38,558
Granted	185	21.83		
Exercised	(460)	4.19		
Forfeited or cancelled	(47)	9.32		
Outstanding at June 30, 2017	2,784	8.57	7.3	58,280
Vested and expected to vest—June 30, 2017	2,784	8.57	7.3	58,280
Exercisable at June 30, 2017	1,742	6.15	6.8	40,690

As of June 30, 2017, we had $7,244,000 of unrecognized stock-based compensation costs related to non-vested options that are expected to be recognized over a weighted average period of 2.4 years.

As of June 30, 2017, we had $862,000 of unrecognized stock-based compensation expense related to our ESPP that is expected to be recognized over the term of the offering period ending November 30, 2017.

Restricted Stock Units

The following table summarizes the activity of restricted stock units ("RSUs") for the six months ended June 30, 2017 (in thousands, except per share data):

	RSUs Outstanding	
	Shares	Weighted-Average Grant Date Fair Value Per Share
Unvested and outstanding at December 31, 2016	1,133	$ 18.36
Granted	792	22.76
Vested	(231)	18.32
Cancelled	(65)	19.66
Unvested and outstanding at June 30, 2017	1,629	20.45

As of June 30, 2017, we had $31,625,000 of unrecognized stock-based compensation costs related to outstanding RSUs that are expected to be recognized over a weighted average period of 3.2 years.

8. Income Taxes

Utilization of the net operating loss carryforwards and credits may be subject to substantial annual limitation due to the ownership change limitations provided by Section 382 of the Internal Revenue Code of 1986, as amended, and similar state provisions. The annual limitation may result in the expiration of net operating losses and credits before utilization.

We file tax returns in the United States, the United Kingdom, Australia, the Netherlands, Hong Kong, Sweden, Brazil and various state jurisdictions. All of our tax years remain open to examination by major taxing jurisdictions to which we are subject, as carryforward attributes generated in past years may still be adjusted upon examination by the Internal Revenue Service or state and foreign tax authorities if they have or will be used in future periods.

We believe that we have provided adequate reserves for our income tax uncertainties in all open tax years. We do not expect our gross unrecognized tax benefits to change significantly in the next 12 months.

9. Fair Value of Financial Instruments

The fair value of a financial instrument is the amount that could be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. The fair value hierarchy prioritizes the quality and reliability of the information used to determine fair values. Categorization within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. The fair value hierarchy is defined into the following three categories:

Level 1: Quoted market prices in active markets for identical assets or liabilities.

Level 2: Observable market based inputs or unobservable inputs that are corroborated by market data.

Level 3: Unobservable inputs that are not corroborated by market data.

There were no transfers between Level 1 and Level 2 of the fair value measurement hierarchy during the six months ended June 30, 2017 and the year ended December 31, 2016. Assets and liabilities measured at fair value on a recurring basis as of June 30, 2017, were as follows (in thousands):

	June 30, 2017			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds	$9,616	$ —	$—	$9,616
Corporate debt securities	—	—	—	—
Total Assets	$9,616	$ —	$—	$9,616
Liabilities:				
Common stock warrant liability	$—	$ —	$108	$108

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2016, were as follows (in thousands):

	December 31, 2016			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds	$17,394	$—	$ —	$17,394
Corporate debt securities	—	23,895	—	23,895
Total assets	$17,394	$23,895	$ —	$41,289
Liabilities:				
Common stock warrant liability	$—	$—	$ 25	$25

Fair value is a market-based measurement that should be determined based on the assumptions that market participants would use in pricing an asset or liability. The hierarchy level assigned to each security in our marketable securities portfolio and cash equivalents is based on our assessment of the transparency and reliability of the inputs used in the valuation of such instrument at the measurement date. The fair value of cash equivalents included in the Level 1 category is based on quoted prices that are readily and regularly available in an active market. The fair value of the marketable securities included in the Level 2 category is based on observable inputs, such as quoted prices for similar assets at the measurement date; quoted prices in markets that are not active; or other inputs that are observable, either directly or indirectly. These values were obtained from an independent pricing service and were evaluated using pricing models that vary by asset class and may incorporate available trade, bid and other market information and price quotes from well-established independent pricing vendors and broker-dealers.

The carrying amount of our cash, receivables and payables approximates fair value because of the short-term nature of these items.

The following table sets forth a summary of the changes in the estimated fair value of the warrant liability. Changes in the fair value are recognized in the change in fair value of warrant liability line item on the consolidated statements of operations. The following balance is measured at fair value on a recurring basis using significant unobservable inputs (Level 3) (in thousands):

	Common Stock Warrant Liability
Balance at January 1, 2017	$ 25
Recognized expense	83
Balance at June 30, 2017	$ 108

In November 2012, we issued a warrant to purchase 70,000 shares of common stock to our lender in connection with our line of credit. The warrant was fully exercisable and had a ten-year term with an exercise price of $0.99 per share. In April 2014, we issued our lender an additional warrant to purchase up to 33,332 shares of common stock in connection with an amendment of our line of credit at an exercise price of $4.47 per share. 16,666 of these shares were exercisable without a contingency. The additional 16,666 shares (the “contingent common stock warrant”) may become

exercisable if our aggregate outstanding balance of the credit facility exceeds $7,500,000. We anticipate the probability that the contingent common stock warrant becomes exercisable is 25%. On February 2, 2016, warrants for 86,666 shares were exercised. At the lender's request, we withheld 8,260 shares to cover the warrant exercise costs and we issued 78,406 shares. In connection with the exercise of the warrant, the warrant liability was marked to market as of the settlement date. As a result of the exercise, a portion of the warrant liability equal to $244,000 was reversed and recorded as additional paid-in capital. The remaining contingent common stock warrant to purchase 16,666 shares had an estimated common stock warrant liability balance of $108,000 at June 30, 2017. The contingent common stock warrant expires April 1, 2024.

The fair values of these outstanding warrants are measured using an option pricing model and probability weighted expected return model. Inputs used to determine estimated fair value include the estimated fair value of the underlying common stock at the valuation measurement date, the estimated time to exit, risk-free interest rates, expected dividends, probability of contingent event, and estimated volatility. In addition to the above, significant inputs to the common stock warrant also includes the estimated likelihood of the exercise contingency being met. Estimated volatility is based on the volatility of a peer group. We monitor the historical volatility of peer group companies on a quarterly basis and adjust the estimated volatility when significant changes in the peer group volatilities occur. Generally, increases (decreases) in the fair value of the underlying common stock would result in a directionally similar impact to the fair value measurement.

10. Commitments and Contingencies

Litigation

We are involved in legal proceedings from time to time arising in the normal course of business. Management believes that the outcome of these proceedings will not have a material impact on our financial position, results of operations or liquidity.

Lease Commitments

We lease office space under non-cancelable operating leases that contain rent escalation clauses and renewal options. We recognize rent expense on a straight-line basis over the lease period and have accrued for rent expense incurred but not paid. We are also committed to pay a portion of the actual operating expenses under certain of these lease agreements.

Rent expense under operating leases was $1,332,000 and $1,104,000 for the three months ended June 30, 2017 and 2016, respectively, and $2,533,000 and $2,234,000 for the six months ended June 30, 2017 and 2016, respectively.

Item 2.Management's Discussion and Analysis of Financial Condition and Results of Operations.

Forward-Looking Statements

The following discussion of our financial condition and results of operations contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements are based on our management's beliefs and assumptions and on information currently available to our management. All statements other than statements of historical facts are "forward-looking statements" for purposes of these provisions, including those relating to future events or our future financial performance and financial guidance. In some cases, you can identify forward-looking statements by terminology such as "may," "might," "will," "should," "expect," "plan," "anticipate," "project," "believe," "estir "predict," "potential," "intend" or "continue," the negative of terms like these or other comparable terminology, and other words or terms of similar meaning in connection with any discussion of future operating or financial performance. These statements are only predictions. All forward-looking statements included in this Quarterly Report on Form 10-Q are based on information available to us on the date hereof, and we assume no obligation to update any such forward-looking statements. Any or all of our forward-looking statements in this document may turn out to be wrong. Actual events or results may differ materially. Our forward-looking statements can be affected by inaccurate assumptions we might make or by known or unknown risks, uncertainties and other factors. We discuss many of these risks, uncertainties and other factors in this Quarterly Report on Form 10-Q in greater detail under the heading "Item 1A—Risk Factors." We caution investors that our business and financial performance are subject to substantial risks and uncertainties. In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this Quarterly Report on Form 10-Q, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

You should read the following discussion and analysis together with the financial statements and the related notes to those statements included elsewhere in this report. This discussion contains forward-looking statements that involve risks and uncertainties. As a result of many factors, such as those set forth in the section of this report captioned "Risk Factors" and elsewhere in this report, our actual results may differ materially from those anticipated in these forward-looking statements.

Overview

We provide an innovative, cloud-based learning management platform for academic institutions and companies worldwide. We built our learning management applications, Canvas, for the education market, and Bridge, for the corporate market, to enable our customers to easily develop, deliver and manage engaging face-to-face and online learning experiences. Our platform combines powerful, elegant and easy-to-use functionality with the reliability, security, scalability and support required by our customers. We also provide a video platform, Arc, that makes video learning more impactful using contextual comments, robust analytics, and seamless integration with learning management systems such as Canvas and Bridge.

We offer our platform through a Software-as-a-Service, or SaaS, business model. Customers can rapidly deploy our applications with minimal upfront implementation. Customers also benefit from automatic software updates with virtually no downtime. Our SaaS business model substantially reduces the need for our customers to buy and support a broad range of IT infrastructure, and significantly reduces the cost, complexity and disruptions associated with implementations and upgrades of on-premise software.

We were founded in 2008, and in 2011, we launched Canvas, with the goal to make teaching and learning easier. Initially, we focused on the U.S. higher education market, targeting colleges and universities. In 2012, we expanded

our focus to include the K-12 market in the United States. We opened our international headquarters in London, England in June 2014 and have offices in Sydney, Australia, Hong Kong and Sao Paulo, Brazil. To date, a substantial majority of our revenue has been derived from our sales of Canvas to the U.S. education market. While our initial efforts were focused on the education market, we discovered that companies also needed a cloud-based learning management platform to enable them to better train their employees. Our initial corporate customers licensed Canvas for this purpose. In February 2015, we launched Bridge to enable companies to further realize the benefits of our cloud-based platform with an application specifically designed to address their needs.

We sell our applications and services primarily through a direct sales force and we engage in a variety of traditional and online marketing activities designed to provide sales lead generation, sales support and market awareness. A majority of our academic customers implement Canvas widely within their institutions and across school districts. This approach to wide initial deployments allows us to efficiently and broadly promote adoption and utilization of Canvas by students and faculty. Our corporate customers generally implement Bridge, by way of initial deployments across a functional area, before purchasing additional seats and expanding within the organization. We believe there is a significant opportunity to continue to penetrate our existing corporate customers and expand the use of Bridge within these customers. We also believe there is significant opportunity to continue to expand internationally.

As of June 30, 2017, we have grown to serve more than 3,000 customers, representing colleges, universities, K-12 school districts, and companies in more than 50 countries. Our customers range from a single school to large corporations and academic institutions and accordingly our total contract values range from thousands of dollars to several million dollars. We generally define a customer as an entity with a subscription contract as of the measurement date. In situations where there is a single contract that applies to entities with multiple subsidiaries or divisions, universities, or governmental organizations, only the entity that has contracted for our platform is counted as a customer. For example, a contracting school district is counted as a single customer even though the school district encompasses multiple schools. In 2016 and the six months ended June 30, 2017, no single customer represented more than 10% of our revenue.

Our subscription fee includes the use of our platform and our technical support and is based on the number of users. We also generate revenue from training, implementation services and other types of professional services. We have experienced net revenue retention rates of over 100% at June 30, 2017 and 2016. Our revenue was $38.0 million and $25.9 million for the three months ended June 30, 2017 and 2016, respectively, representing year-over-year growth of 47%, and $72.0 million and $49.2 million for the six months ended June 30 2017 and 2016, respectively, representing year-over-year growth of 46%. Our net losses were $13.0 million and $14.6 million for the three months ended June 30, 2017 and 2016, respectively, and $25.7 and $28.3 for the six months ended June 30, 2017 and 2016, respectively.

Key Factors Affecting Our Performance

Investment in Sales and Marketing Organization

We continue to invest in our sales and marketing organization to drive additional revenue and support the growth of our customer base. Any investments we make in our sales and marketing organization will occur in advance of experiencing any benefits from such investments, so it may be difficult for us to determine if we are efficiently allocating our resources in this area. We plan to continue to expand sales and marketing to grow our customer base and increase sales to existing customers. This expansion is expected to include adding sales personnel and expanding our marketing activities to continue to generate additional leads and build brand awareness.

We intend to expand and continue to invest in our international sales and marketing organization, which we believe will be an important factor in our continued growth. As we grow internationally, we may use reseller partnerships as needed to penetrate new markets. During the three months ended June 30, 2017 and 2016, 14% and 9% of our revenue was derived from outside the United States, respectively. During the six months ended June 30, 2017 and 2016, 13% and 8% of our revenue was derived from outside the United States, respectively. Our international operations are relatively new and we have limited experience operating in international markets, which increases the risk that our international expansion efforts may not be successful.

Investment in Technology

We have aggressively invested, and intend to continue to invest, in developing technology to support our growth. We expect our research and development expenses to increase as we expand headcount. While we invest heavily in research and development, we have also built a foundation for innovation through our approach to the learning

management system as a learning platform. However, our investments in research and development may result in enhancements or new applications that may not achieve market adoption, are more expensive to develop than anticipated, may take longer to generate revenue or may generate less revenue than we anticipate.

Net Revenue Retention Rate

We calculate our net revenue retention rate by dividing the total revenue obtained from a particular customer in a given month by the total revenue from that customer from the same month in the immediately preceding year. This calculation contemplates all changes to revenue for the designated customer, which includes customer terminations, changes in quantities of users, changes in pricing, additional applications purchased or applications no longer used. We calculate the net revenue retention for our entire customer base at a given point in time. We believe our net revenue retention rate is an important metric to measure the long-term value of customer agreements and our ability to retain our customers. Our net revenue retention rate was over 100% at each of June 30, 2017 and 2016.

Focus on Free Cash Flow

We define free cash flow as net cash provided by (used in) operating activities less purchases of property and equipment and intangible assets, net of proceeds from disposals of property and equipment. We consider free cash flow to be an important measure that we are focused on to run our business. For more information about free cash flow, see the section titled "Non-GAAP Financial Measures."

Financial Operations Overview

Revenue

We generate revenue primarily from two main sources: (1) subscription and support revenue, which is comprised of SaaS fees from customers accessing our learning management systems and from customers purchasing additional support beyond the standard support that is included in the basic SaaS fees; and (2) related professional services revenue, which is comprised of training, implementation services and other types of professional services.

Subscription revenue is derived from customers using our cloud-based learning platform and is driven primarily by the number of customers, the number of users at each customer, the price of our applications, and to a lesser extent historically, renewal rates. Support revenue is derived from customers purchasing additional support beyond the standard support that is included in the basic SaaS fee. Our contracts typically vary in length between one and five years. Subscriptions and support are non-cancelable and are billed in advance on an annual basis. All subscription and support fees billed are initially recorded in deferred revenue and recognized ratably over the subscription term. Amounts that have not been billed are not reflected in our consolidated financial statements.

Professional services and other revenue are derived primarily from implementation, training, and other consulting fees. Implementation services includes training and consulting services that generally take anywhere from 30 to 90 days to complete depending on customer-side complexity and timelines. It includes regularly scheduled and highly-structured activities to ensure customers progress toward better utilizing our applications. Most of these interactions take place over the phone and through the use of web meeting technology. Implementation services are recognized upon completion. Implementation services also include nonrefundable upfront fees, which are recorded over the longer of the contract term or the estimated customer life.

We include training with every implementation and offer additional training for a fee. The training offered is focused on creating confidence among users so they can be successful with our applications. Most training is performed remotely using web meeting technology. Because we have an established standalone value, we record training revenue upon the delivery of the training. Subscription training was introduced in 2016 and is recognized ratably in the same manner as subscription and support revenue described above.

In addition to our implementation and training offerings, we provide consulting services for custom application development, integrations, content services and change management consulting. These services are architected to boost customer adoption of our applications and to drive usage of features and capabilities that are unique to our

company. We have an established standalone value for these services. In situations where we are unable to utilize the proportional performance method, for example due to either the lack of adequate documentation of time incurred or to be incurred, we recognize revenue based on the milestone method if individual milestones with substantive value to the customer exist. If neither of these two methods is able to be utilized, revenue recognition is deferred until the contract is completed.

Cost of Revenue

Cost of subscription and support revenue consists primarily of the costs of our managed hosting provider and other third-party service providers, employee-related costs including payroll, benefits and stock-based compensation expense for our operations and customer support teams, amortization of capitalized software development costs and acquired technology, and allocated overhead costs, which we define as rent, facilities and costs related to information technology, or IT.

Cost of professional services and other revenue consists primarily of personnel costs of our professional services organization, including salaries, benefits, travel, bonuses and stock-based compensation, as well as allocated overhead costs.

Operating Expenses

Sales and Marketing. Sales and marketing expenses consist primarily of personnel costs of our sales and marketing employees, including sales commissions and incentives, benefits and stock-based compensation expense, marketing programs, including lead generation, costs of our annual InstructureCon user conference and allocated overhead costs. We immediately expense sales commissions related to acquiring new customers and upsells from existing customers. We expect sales and marketing expenses will increase as a result of hiring net new quota-carrying sales representatives inside and outside the United States, adding to the marketing staff and expanding our annual InstructureCon user conference and potentially adding other annual conferences. Over time, we expect sales and marketing expenses will decline as a percentage of total revenue.

Research and Development. Research and development expenses consist primarily of personnel costs of our development team, including payroll, benefits and stock-based compensation expense and allocated overhead costs. We capitalize certain software development costs that are attributable to developing new applications, features and adding incremental functionality to our platform and amortize such costs as costs of subscription revenue over the estimated life of the new application or incremental functionality, which is generally three years. We expect research and development expenses to increase in absolute dollars as we continue to increase the functionality of our software platform.

General and Administrative. General and administrative expenses consist of personnel costs and related expenses for executive, finance, legal, human resources, recruiting, employee-related information technology, administrative personnel, including payroll, benefits and stock-based compensation expense; professional fees for external legal, accounting and other consulting services; and allocated overhead costs. We expect that general and administrative expenses will increase on an absolute dollar basis but decrease as a percentage of total revenue as we focus on processes, systems and controls to enable our internal support functions to scale with the growth of our business. We also anticipate increases to general and administrative expenses as we incur the costs of compliance associated with being a publicly-traded company, including legal, audit and consulting fees.

Other Income (Expense)

Other income (expense) consists primarily of interest expense and the change in fair value of warrant liability, which is subject to mark-to-market adjustments as of each reporting period. We have historically had a minimal amount of debt outstanding on which we pay interest. As we have expanded our international operations, our exposure to fluctuations in foreign currencies has increased.

Income Tax Expense

We are subject to income taxes in the United States and foreign jurisdictions in which we do business. These foreign jurisdictions have statutory tax rates different from those in the United States. Accordingly, our effective tax rates will vary depending on the relative proportion of foreign to U.S. income and changes in tax laws. Income tax expense consists primarily of state income taxes in the United States and income taxes in certain foreign jurisdictions in which we conduct business.

Results of Operations

The following tables set forth our results of operations for the periods presented and as a percentage of our total revenue for those periods. The data has been derived from the unaudited consolidated financial statements contained in this Quarterly Report on Form 10-Q which include, in our opinion, all adjustments, consisting only of normal recurring adjustments, that we consider necessary for a fair presentation of the financial position and results of operations for the interim periods presented. The period-to-period comparison of financial results is not necessarily indicative of financial results to be achieved in future periods.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(in thousands)			
Revenue:				
Subscription and support	$32,650	$22,416	$63,163	$42,993
Professional services and other	5,394	3,474	8,860	6,196
Total revenue	38,044	25,890	72,023	49,189
Cost of revenue:				
Subscription and support[1]	7,967	5,586	15,072	11,023
Professional services and other[1]	3,026	2,049	5,537	3,961
Total cost of revenue	10,993	7,635	20,609	14,984
Gross profit	27,051	18,255	51,414	34,205
Operating expenses:				
Sales and marketing[1][3]	21,314	18,038	40,300	34,201
Research and development[1][2][3]	11,057	8,730	22,239	16,535
General and administrative[1][3]	7,621	6,003	14,607	11,739
Total operating expenses	39,992	32,771	77,146	62,475
Loss from operations	(12,941)	(14,516)	(25,732)	(28,270)
Other income (expense):				
Interest income	39	61	115	132
Interest expense	(4)	(12)	(18)	(23)
Change in fair value of warrant liability	(76)	—	(83)	62
Other income (expense), net	91	(56)	127	(131)
Total other income (expense), net	50	(7)	141	40
Loss before income taxes	(12,891)	(14,523)	(25,591)	(28,230)
Income tax expense	(105)	(67)	(136)	(99)
Net loss	$(12,996)	$(14,590)	$(25,727)	$(28,329)

(1) Includes stock-based compensation as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(in thousands)			
Cost of revenue:				

Subscription and support	$191	$137	$317	$231
Professional services and other	156	136	261	235
Sales and marketing	1,195	789	2,150	1,444
Research and development	1,506	935	2,738	1,720
General and administrative	1,019	665	1,974	1,267
Total stock-based compensation	$4,067	$2,662	$7,440	$4,897

(2) Includes amortization of acquisition-related intangibles as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(in thousands)			
Cost of revenue:				
Subscription and support	$—	$ —	$ —	$ —
Professional services and other	—	—	—	—
Sales and marketing	—	—	—	—
Research and development	—	2	—	4
General and administrative	—	—	—	
Total amortization of acquisition-related intangibles	$—	$ 2	$ —	$ 4

(3) Includes reversal of tax expense on secondary stock purchase transactions due to the reduction of the estimated liability as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(in thousands)			
Cost of revenue:				
Subscription and support	$—	$—	$—	$—
Professional services and other	—	—	—	—
Sales and marketing	(256)	(57)	(256)	(57)
Research and development	(256)	(57)	(256)	(57)
General and administrative	(22)	(103)	(22)	(103)
Total payroll tax expense	$(534)	$(217)	$(534)	$(217)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(as a percentage of total revenue)			
Revenue:				
Subscription and support	86 %	87 %	88 %	87 %
Professional services and other	14	13	12	13
Total revenue	100	100	100	100
Cost of revenue:				
Subscription and support	21	22	21	22
Professional services and other	8	8	8	8
Total cost of revenue	29	30	29	30

Gross profit	71	70	71	70
Operating expenses:				
Sales and marketing	56	70	56	70
Research and development	29	34	31	34
General and administrative	20	23	20	24
Total operating expenses	105	127	107	128
Loss from operations	(34)	(57)	(36)	(58)
Other income (expense):				
Interest income	0	0	0	0
Interest expense	(0)	(0)	(0)	(0)
Change in fair value of warrant liability	(0)	—	(0)	0
Other income (expense), net	0	(0)	0	(0)
Total other expense, net	0	(0)	0	0
Loss before income taxes	(34)	(57)	(36)	(58)
Income tax expense	(0)	(0)	(0)	(0)
Net loss	(34)%	(57)%	(36)%	(58)%

Three and Six Months Ended June 30, 2017 Compared to the Three and Six Months Ended June 30, 2016

Revenue

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2017	2016	Amount	%	2017	2016	Amount	%
	(dollars in thousands)							
Subscription and support	$32,650	$22,416	$10,234	46%	$63,163	$42,993	$20,170	47%
Professional services and other	5,394	3,474	1,920	55	8,860	6,196	2,664	43
Total revenue	$38,044	$25,890	$12,154	47	$72,023	$49,189	$22,834	46

Three month and six month change

Subscription and support revenue increased $10.2 million and $20.2 million for the three and six months ended June 30, 2017, respectively, primarily due to an increase in the total number of customers, which has grown to over 3,000 as of June 30, 2017, net revenue retention in excess of 100% as of June 30, 2017 and continued growth in international revenue, which contributed over 10% of total revenue for both the three and six months ended June 30, 2017.

Professional services and other revenue increased $1.9 million and $2.7 million for the three and six months ended June 30, 2017, respectively, primarily due to the increase in new customers discussed above.

Cost of Revenue and Gross Margin

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2017	2016	Amount	%	2017	2016	Amount	%
	(dollars in thousands)							
Cost of revenue:								
Subscription and support	$7,967	$5,586	$2,381	43%	$15,072	$11,023	$4,049	37%
Professional services and other	3,026	2,049	977	48	5,537	3,961	1,576	40
Total cost of revenue	$10,993	$7,635	$3,358	44	$20,609	$14,984	$5,625	38
Gross margin percentage:								
Subscription and support revenue	76 %	75 %			76 %	74 %		
Professional services and other	44	41			38	36		
Total gross margin	71	71			71	70		

Three month change

Total cost of revenue increased $3.4 million for the three months ended June 30, 2017 primarily due to an increase in employee-related costs, web hosting and third-party software license costs, amortization of developed technology and outside contractor costs. Total gross margin increased due to the impact of improved leverage of our web hosting costs relative to the growth in total revenue.

Subscription and support cost of revenue increased $2.4 million for the three months ended June 30, 2017 primarily due to an increase in web hosting and third-party software license costs, employee-related costs, amortization of developed technology and overhead allocations. Web hosting and third-party software license costs increased $1.3 million due to the increase in total customers. Employee-related costs increased $0.7 million as we continued to grow our customer support organization to support our customer growth and improve service levels and offerings. Amortization of capitalized software development costs increased $0.2 million due to the continued development of our software platform. Allocated overhead expenses and other insignificant items increased $0.2 million primarily due to higher rent and communication expense.

Professional services and other costs of revenue increased $1.0 million for the three months ended June 30, 2017 primarily due to an increase in employee-related costs of $0.6 million, as we continued to grow our professional services organization to support our customer growth and improve service levels and offerings, travel and outside contractor costs of $0.3 million, as customer growth increases the demand for training and professional services and other insignificant items of $0.1 million.

Six month change

Total cost of revenue increased $5.6 million for the six months ended June 30, 2017 primarily due to an increase in employee-related costs, web hosting costs and amortization of developed technology. Total gross margin increased due to the impact of improved leverage of our web hosting costs relative to the growth in subscription and support revenue.

Subscription and support cost of revenue increased $4.0 million for the six months ended June 30, 2017 primarily due to an increase in web hosting costs, employee-related costs, amortization of developed technology and overhead allocations. Web hosting costs and third-party license costs increased $2.1 million due to the increase in total customers. Employee-related costs increased $1.2 million as we continued to grow our customer support organization to support our customer growth and improve service levels and offerings. Amortization of capitalized software development costs increased $0.4 million due to the continued development of our software platform. Allocated overhead expenses and other insignificant items increased $0.3 million primarily due to higher rent and communication expense.

Professional services and other costs of revenue increased $1.6 million for the six months ended June 30, 2017 primarily due to an increase in employee-related costs, travel, outside services and third-party software costs. Employee-related costs increased $0.9 million as we continued to grow our professional services organization to support our customer growth and improve service levels and offerings. Travel and outside services costs increased $0.5 million, as customer growth increases the demand for training and professional services and third-party software costs increased $0.2 million.

Operating Expenses

Sales and Marketing

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2017	2016	Amount	%	2017	2016	Amount	%
	(dollars in thousands)							
Sales and marketing	$21,314	$18,038	$3,276	18%	$40,300	$34,201	$6,099	18%

Three month change

Sales and marketing expenses increased $3.3 million for the three months ended June 30, 2017 primarily due to an increase in employee-related costs, travel, third-party software and overhead allocations. Employee-related costs increased $2.7 million as a result of hiring of additional employees domestically and internationally to continue to grow our customer base. Travel costs increased by $0.3 million as we continue to expand our sales and marketing organization and grow our customer base. Third-party software costs increased by $0.1 and allocated overhead expenses and other insignificant items increased $0.2 million primarily due to higher rent and communication expense.

Six month change

Sales and marketing expenses increased $6.1 million for the six months ended June 30, 2017 primarily due to an increase in employee-related costs, travel, outside services, information technology and overhead allocations. Employee-related costs increased $4.8 million as a result of hiring additional employees domestically and

internationally to continue to grow our customer base. Travel costs increased $0.6 million as we continue to expand our sales and marketing organization. Outside services increased $0.2 million due to international consultants working in new jurisdictions. Third-party software expense increased $0.2 million as we continue to automate our internal systems. Allocated overhead expenses and other insignificant items increased $0.3 million primarily due to higher rent expense.

Research and Development

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2017	2016	Amount	%	2017	2016	Amount	%
	(dollars in thousands)							
Research and development	$11,057	$8,730	$2,327	27%	$22,239	$16,535	$5,704	34%

Three month change

Research and development expenses increased $2.3 million for the three months ended June 30, 2017 due to an increase in employee-related costs, outside contractor costs, information technology expenses and overhead allocations. Employee-related costs increased $1.3 million as we continue to grow our engineering organization. Outside contractor costs increased by $0.3 million due to outsourced development. Information technology expenses increased $0.3 million due to third-party software license costs to equip and support our engineering organization. Travel expense increased by $0.2 million as we have significant development offices in Chicago and Seattle. Overhead allocations and other insignificant items increased by $0.2 million primarily due to higher rent and communication expense.

Six month change

Research and development expenses increased $5.7 million for the six months ended June 30, 2017 primarily due to an increase in employee-related costs, information technology, outside contractors, overhead allocations and travel. Employee-related costs increased $3.8 million as we continue to grow our engineering organization. Information technology expenses increased $0.5 million due to third-party software license costs to equip and support our engineering organization. Outside contractor costs increased by $0.7 million due to outsourced development. Allocated overhead expenses increased $0.3 million primarily due to higher rent and communication expense and travel expense and other insignificant items increased by $0.2 million as we have significant development offices in Chicago and Seattle. Depreciation and other insignificant items increased by $0.2 million due to increased headcount.

General and Administrative

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2017	2016	Amount	%	2017	2016	Amount	%
	(dollars in thousands)							
General and administrative	$7,621	$6,003	$1,618	27%	$14,607	$11,739	$2,868	24%

Three month change

General and administrative expenses increased $1.6 million for the three months ended June 30, 2017 primarily due to an increase in employee-related costs, information technology and overhead allocations. Employee-related costs increased $1.0 million as a result of recruiting and hiring additional employees to support our growth. Depreciation, amortization and other insignificant items increased $0.3 million due to increased headcount. Allocated overhead costs increased $0.2 million due to higher rent expense. Information technology expenses increased $0.1 million as we continued to automate our internal systems.

Six month change

General and administrative expenses increased $2.9 million for the six months ended June 30, 2017 primarily due to an increase in employee-related costs, information technology, and overhead allocations. Employee related costs increased $2.0 million as a result of recruiting and hiring additional employees to support our growth. Information technology increased $0.4 million as we continue to invest in and automate our internal systems. Depreciation, amortization and other insignificant items increased $0.3 million due to increased headcount. Allocated overhead costs increased $0.2 million due to higher rent expense.

Other Income (Expense)

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2017	2016	Amount	%	2017	2016	Amount	%
	(dollars in thousands)							
Other Income, net	$50	$ (7)	$57	(814)%	$141	$ 40	$101	253%

Three and Six month change

Other income (expense), net includes interest income and expense, the change in fair value of warrant liability and the impact of foreign currency transaction gains and losses. Other income (expense), net increased slightly for the three and six months ended June 30, 2017 primarily as a result of fluctuations in foreign exchange rates during the period and the change in the fair value of the warrant liability.

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Liquidity and Capital Resources

As of June 30, 2017, we had $25.7 million of cash and cash equivalents. We believe our cash and cash equivalents, cash flows from operations and available borrowings under our credit facility will be sufficient to support our planned operations for at least the next 12 months. Our future capital requirements will depend on many factors including our growth rate, net revenue retention rates, the timing and extent of spending to support the expansion of sales and marketing and research and development activities, the introduction of new and enhanced offerings, and the continuing market acceptance of our platform. We may in the future enter into arrangements to acquire or invest in complementary businesses, services and technologies, and intellectual property rights. We may be required to seek additional equity or debt financing. If additional financing is required from outside sources, we may not be able to raise it on terms acceptable to us or at all. If we are unable to raise additional capital when desired, our business, operating results and financial condition may be adversely affected.

In June 2017, we entered into an amended and restated loan and security agreement, or credit facility, with Silicon Valley Bank (“SVB”). The agreement provides for up to $15.0 million in revolving borrowings (subject to increase to $35.0 million in the lender’s sole discretion). Availability is subject to a formula based on our monthly recurring revenue. Advances under the credit facility accrue interest at a floating per year rate equal to the prime rate plus 0.5%. The credit facility terminates in June 2018, at which time the principal amount of all outstanding advances becomes due and payable. We are obligated to pay a fee equal to 0.25% per year, payable quarterly in respect of any unused borrowing capacity under the credit facility. As of June 30, 2017, we did not have any outstanding borrowing under the credit facility.

To secure our obligations under the credit facility, we granted SVB a security interest in substantially all of our tangible and intangible assets, excluding intellectual property. The credit facility contains customary events of default, conditions to borrowing, and covenants, including restrictions on our ability to dispose of assets, make acquisitions, incur debt, incur liens and make distributions and dividends to stockholders. The agreement also includes a financial covenant requiring the achievement of minimum bookings on a trailing three-month basis, tested quarterly. During the continuance of an event of default, SVB may accelerate amounts outstanding, terminate the credit facility and foreclose on the collateral. As of June 30, 2017, we were in compliance with all covenants under the terms of the credit facility.

The following table shows our cash flows for the six months ended June 30, 2017 and 2016:

	Six Months Ended June 30,	
	2017	2016
	(in thousands)	
Net cash used in operating activities	$ (39,646)	$ (28,392)
Net cash provided by (used in) investing activities	16,682	(3,363)
Net cash provided by financing activities	4,169	3,311

Our cash flows are subject to seasonal fluctuations. A significant portion of our contracts have terms that coincide with our academic customers’ typical fiscal year-end of June 30. Historical experience has shown an increase in new and renewed contracts as well as anniversary billings, all of which immediately precede the beginning of our academic customers’ typical fiscal year-end. We typically invoice SaaS fees annually upfront with credit terms of net 30 or 60 days. In turn, our cash flows from operations are affected by this seasonality and are typically reflected in higher cash flow, accounts receivable and deferred revenue balances for the second and third quarter of each year.

Operating Activities

Net cash used in operating activities consists primarily of net loss adjusted for certain non-cash items, including stock-based compensation, depreciation and amortization and other non-cash charges, net.

Net cash used in operating activities during the six months ended June 30, 2017 was $39.6 million, which primarily reflected our net loss of $25.7 million, offset by non-cash expenses that included $7.4 million of stock-based compensation and $3.0 million of depreciation and amortization. Working capital uses of cash included a net decrease of $23.8 million in deferred revenue and accounts receivable due to the seasonality of our business where a significant number of customer agreements occur in the second and third quarter of each year. Additional uses of cash include an increase in prepaids and other assets of $2.3 million, a decrease in deferred rent of $0.4 million; offset by an increase in accounts payable and accrued liabilities of $2.2 million.

Net cash used in operating activities during the six months ended June 30, 2016 was $28.4 million, which primarily reflected our net loss of $28.3 million, offset by non-cash expenses that included $4.9 million of stock-based compensation and $2.1 million of depreciation and amortization. Working capital uses of cash included a net decrease of $8.2 million due to the increase in deferred revenue and accounts receivable due to the seasonality of our business where a significant number of customer agreements occur in the second and third quarter of each year, and $0.6 million due to the decrease in deferred rent and other liabilities; offset by a $1.7 million increase in accounts payable and accrued liabilities.

Investing Activities

Our investing activities have consisted primarily of property and equipment purchases for computer-related equipment and capitalization of software development costs. Capitalized software development costs are related to new applications or improvements to our existing software platform that expand the functionality for our customers. As our business grows, we expect that we will continue to invest in the expansion of, and improvements to, our leased spaces, both domestically and internationally.

Net cash provided by investing activities during the six months ended June 30, 2017 was $16.7 million, consisting primarily of $23.9 million of cash maturities from our marketable securities and $0.1 from proceeds from disposals. This was offset by $7.3 million of purchased property and equipment and intangibles.

Net cash used in investing activities during the six months ended June 30, 2016 was $3.4 million, consisting primarily of $3.7 million of purchased property and equipment and software licenses classified within intangible assets. These uses were offset by $0.3 million of cash maturities from our marketable securities.

Financing Activities

Our financing activities have consisted primarily of proceeds from the issuance of common stock from employee equity plans.

Net cash provided by financing activities for the six months ended June 30, 2017 was $4.2 million and consisted of $4.3 million in proceeds received from the issuance of common stock under employee equity plans, including the exercise of stock options and the purchase of common stock under our employee stock purchase plan; offset by $0.1 million in shares repurchased for tax withholdings on vesting of restricted stock.

Net cash provided by financing activities for the six months ended June 30, 2016 was $3.3 million and consisted of proceeds received from the issuance of common stock under employee equity plans, including the exercise of stock options and the purchase of common stock under our employee stock purchase plan.

Contractual Obligations and Commitments

As of June 30, 2017, there were no material changes in our contractual obligations and commitments from those disclosed in the Annual Report on Form 10-K filed with the SEC on February 10, 2017 other than a new lease agreement that we entered into during the three months ended June 30, 2017 in Sydney, Australia. The lease commences July 1, 2018 for a term of six years ending June 30, 2023, with one option to renew for an additional three-year period. The base annual rent payment is $1.1 million and is subject to an annual rent escalation of 4%. In connection with the new lease, we obtained four letters of credit valuing $1.4 million in lieu of refundable deposits. Two of the letters of credit will expire once the equivalent of the tenant improvement allowance is paid for in rent, or $647,000. The remaining two letters of credit will remain in place through June 30, 2023.

As of June 30, 2017, we have no material commitments for capital expenditures.

Off-Balance Sheet Arrangements

Through June 30, 2017, we did not have any relationships with any entities or financial partnerships, such as structured finance or special purpose entities established for the purpose of facilitating off-balance sheet arrangements or other purposes.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses, and related disclosures. On an ongoing basis, we evaluate our estimates and assumptions. Our actual results may differ from these estimates under different assumptions or conditions.

There have been no material changes to our critical accounting policies and estimates during the six months ended June 30, 2017 from those disclosed in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in our Annual Report on Form 10-K for the year ended December 31, 2016.

Recent Accounting Pronouncement

For information on recent accounting pronouncements, see Recent Accounting Pronouncements in the notes to the consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q.

Non-GAAP Financial Measures

In addition to our results determined in accordance with GAAP, we believe the following non-GAAP measures are useful in evaluating our operating performance. We regularly review the measures set forth below as we evaluate our business.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(in thousands)			
Other Financial Data:				
Non-GAAP operating loss [1]	(9,408)	(12,069)	(18,826)	(23,586)
Free cash flow [2]	(15,695)	(10,819)	(46,864)	(32,080)

(1) We define non-GAAP operating loss as operating loss before stock-based compensation, accrual and reversal of payroll tax expense on secondary stock purchase transactions and amortization of acquisition-related intangibles.
(2) We define free cash flow as net cash used in operating activities less purchases of property and equipment and intangible assets, net of proceeds from disposals of property and equipment.

We believe non-GAAP operating loss and free cash flow provide investors and other users of our financial information consistency and comparability with our past financial performance and facilitates period-to-period comparisons of operations and liquidity. We believe non-GAAP operating loss is useful in evaluating our operating performance compared to that of other companies in our industry, as this metric generally eliminates the effects of certain items that may vary for different companies for reasons unrelated to overall operating performance. We consider free cash flow to be an important measure because it measures the amount of cash we generate and reflects changes in working capital. We use non-GAAP operating loss and free cash flow in conjunction with traditional GAAP measures as part of our overall assessment of our performance, including the preparation of our annual operating budget and quarterly forecasts, to evaluate the effectiveness of our business strategies and to communicate with our board of directors concerning our financial performance and liquidity.

Our definitions may differ from the definitions used by other companies and therefore comparability may be limited. In addition, other companies may not publish these or similar metrics. Thus, our non-GAAP operating loss and free cash flow should be considered in addition to, not as substitutes for, or in isolation from, measures prepared in accordance with GAAP.

We compensate for these limitations by providing investors and other users of our financial information, reconciliations of non-GAAP operating loss to the related GAAP financial measure, loss from operations and reconciliations of free cash flow to the related GAAP financial measure net cash used in operating activities. We encourage investors and others to review our financial information in its entirety, not to rely on any single financial measure and to view non-GAAP operating loss and free cash flow in conjunction with the related GAAP financial

measure.

The following table provides a reconciliation of loss from operations to non-GAAP operating loss:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(in thousands)			
Loss from operations	$(12,941)	$(14,516)	$(25,732)	$(28,270)
Stock-based compensation	4,067	2,662	7,440	4,897
Reversal of payroll tax expense on secondary stock purchase transactions	(534)	(217)	(534)	(217)
Amortization of acquisition related intangibles	—	2	—	4
Non-GAAP operating loss	$(9,408)	$(12,069)	$(18,826)	$(23,586)

The following table provides a reconciliation of net cash used in operating activities to free cash flow, a non-GAAP measure:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(in thousands)		(in thousands)	
Net cash used in operating activities	$(11,897)	$(9,542)	$(39,646)	$(28,392)
Less: purchases of property and equipment and intangible assets	3,821	1,287	7,256	3,706
Plus: proceeds from disposals of property and equipment	23	10	38	18
Free cash flow	$(15,695)	$(10,819)	$(46,864)	$(32,080)

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Management believes there have been no material changes to our quantitative and qualitative disclosures about market risks during the six months ended June 30, 2017 compared to those discussed in our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on February 10, 2017.

Item 4. Controls and Procedures

Evaluation of disclosure controls and procedures. Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer have evaluated our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) prior to the filing of this Quarterly Report on Form 10-Q. Based on that evaluation, our Chief Executive Officer and our Chief Financial Officer have concluded that, as of the end of the period covered by this Quarterly Report on Form 10-Q, our disclosure controls and procedures were, in design and operation, effective at a reasonable assurance level.

Changes in internal control over financial reporting. There were no changes in our internal control over financial reporting during the quarter ended June 30, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent limitation on the effectiveness of internal control. The effectiveness of any system of internal control over financial reporting, including ours, is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, any system of internal control over financial reporting, including ours, no matter how well designed and operated, can only provide reasonable, not absolute assurances. In addition, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. We intend to continue to monitor and upgrade our internal controls as necessary or appropriate for our business, but cannot assure you that such improvements will be sufficient to provide us with effective internal control over financial reporting.

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Part II. Other Information

Item 1. Legal Proceedings

We are, and from time to time may be, party to litigation and subject to claims incident to the ordinary course of business. As our growth continues, we may become party to an increasing number of litigation matters and claims. The outcome of litigation and claims cannot be predicted with certainty, and the resolution of these matters could materially affect our future results of operations, cash flows or financial position. We are not presently party to any legal proceedings that in the opinion of management, if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, financial condition or cash flows.

Item 1A. Risk Factors

You should carefully consider the following risk factors, in addition to the other information contained in this Quarterly Report on Form 10-Q, including our condensed consolidated financial statements and related notes. If any of the events described in the following risk factors occurs, our business, operating results and financial condition could be seriously harmed. The risks described below are not the only ones we face. Additional risks not currently known to us or that we currently deem to be not material also may have an adverse effect on our business, operating results or financial condition. This Quarterly Report on Form 10-Q also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of factors that are described below and elsewhere in this Quarterly Report on Form 10-Q.

We have marked with an asterisk (*) those risks described below that reflect substantive changes from, or additions to, the risks described in our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC.

Risks Related to Our Business and Industry

We have a history of losses and anticipate that we will continue to incur losses for the foreseeable future and may not achieve or maintain profitability in the future.*

We have incurred net losses of $53.6 million, $53.0 million and $41.4 million in 2016, 2015 and 2014, respectively, and $25.7 million and $28.3 million in the six months ended June 30, 2017 and 2016, respectively. We had an accumulated deficit of $222.4 million at June 30, 2017. We must generate and sustain higher revenue levels in future periods to become profitable, and, even if we do, we may not be able to maintain or increase our profitability. We expect to continue to incur losses for the foreseeable future as we expend substantial financial and other resources on, among other things:

- sales and marketing, including expanding our direct sales organization and marketing programs, particularly for larger customers;
- investments in our research and development team, and the development of new applications and new features for, and enhancements of, our existing applications;
- expansion of our operations and infrastructure, both domestically and internationally; and
- general administration, including legal, accounting, and other expenses related to being a public company.

These expenditures may not result in additional revenue or the growth of our business. We also expect that our revenue growth rate will decline over time. Accordingly, we may not be able to generate sufficient revenue to offset our expected cost increases and achieve and sustain profitability. If we fail to achieve and sustain profitability, the market price of our common stock could decline.

We have a limited operating history, which makes it difficult to evaluate our prospects and future operating results.

We launched Canvas in February 2011 and launched Bridge in February 2015. Our limited operating history makes our ability to forecast future operating results difficult and subjects us to a number of uncertainties, including our ability to plan and model future growth. Our revenue grew 51%, 65%, and 70% in 2016, 2015, and 2014, respectively,

compared to the prior year; however, our historical revenue growth is not necessarily indicative of our future performance. We expect our revenue growth rates to slow in future periods due to a number of reasons, which may include the maturation of our business, slowing demand for our platform and applications, increasing competition, a decrease in the growth of our overall markets, or if we fail, for any reason, to continue to capitalize on growth opportunities, our relative lack of experience with renewals or a decline in available opportunities as a result of our increased market penetration in one or more of our markets.

We have encountered and will encounter risks and uncertainties frequently experienced by growing companies in rapidly changing industries, such as determining appropriate investments of our limited resources, market adoption of our current and future applications, competition from other companies, acquiring and retaining customers, hiring, integrating, training and retaining skilled personnel, developing new applications, determining prices and contract terms for our applications, unforeseen expenses and challenges in forecasting accuracy. If our assumptions regarding these risks and uncertainties, which we use to plan our business, are incorrect or change, or if we do not address these risks successfully, our prospects, operating results and business could be harmed.

We depend on new customer acquisition and expansion and customer renewals to grow our business.

We derive, and expect to continue to derive, a substantial majority of our revenue from the sale of new subscriptions or renewals of subscriptions to our learning management platform and applications. Our growth today is primarily driven by new subscriptions. Our contracts typically vary in length between one and five years and our customers have no obligation to renew their subscriptions after the expiration of their initial subscription periods. Our customers may elect not to renew or may seek to renew for lower subscription amounts or for shorter contract lengths. Our renewal rates may decline or fluctuate as a result of a number of factors, including limited customer resources, pricing changes, adoption and utilization of our applications and services by our customers, customer satisfaction with our learning management platform and applications, the acquisition of our customers by other companies, procurement or budgetary decisions from legislative or other regulatory bodies, and deteriorating general economic conditions. As our customer base continues to grow, renewals will become an increasingly important part of our results. If our customers do not renew their subscriptions for our learning management platform and applications, or decrease the amount they spend with us, our revenue will decline and our business will be harmed.

Because our recent growth has resulted in the rapid expansion of our business, we do not have a long history upon which to base forecasts of customer renewal rates or future revenue. As a result, our future operating results may be significantly below the expectations of investors, which could harm the market price of our common stock.

We have a limited history with our subscription and pricing models and changes in our models could adversely affect our revenue, gross profit and financial position.

We have limited experience with respect to determining the optimal prices and contract length for our learning management platform and applications, in particular with Bridge, and as a result, we have in the past and expect in the future that we will need to change our pricing model or contract length from time to time. For example, in March 2016, we raised our subscription prices for Canvas for higher education institutions. As the market for our learning management platform and applications grows, as new competitors introduce new competitive applications or services, or as we enter into new international markets, we may be unable to attract new customers at the same price or based on the same pricing models we have historically used, or for contract lengths consistent with our historical averages. Pricing and contract length decisions may also impact the mix of adoption among our applications and negatively impact our overall revenue. Moreover, larger organizations may demand substantial price concessions or shorter contract duration. As a result, in the future we may be required to reduce our prices or offer shorter contract durations, which could adversely affect our revenue, gross profit and financial position.

We may experience quarterly fluctuations in our operating results due to a number of factors, which makes our future results difficult to predict and could cause our operating results to fall below expectations.

Our quarterly operating results have fluctuated in the past and we expect them to fluctuate in the future due to a variety of factors, many of which are outside of our control. As a result, our past results may not be indicative of our future performance, and comparing our operating results on a period-to-period basis may not be meaningful. In addition to the other risks described in this Quarterly Report on Form 10-Q, factors that may affect our quarterly operating results include:

- changes in spending on learning management systems by our current or prospective customers;
- pricing our applications effectively so that we are able to attract and retain customers without compromising our operating results;
- attracting new customers and increasing our existing customers’ use of our applications;
- customer renewal rates and the amounts for which agreements are renewed;
- awareness of our brands;
- changes in the competitive dynamics of our market, including consolidation among competitors or customers and the introduction of new applications or application enhancements;
- changes to the commission plans, quotas and other compensation-related metrics for our sales representatives;

- the amount and timing of payment for operating expenses, particularly research and development, sales and marketing expenses and employee benefit expenses;
- our ability to manage our existing business and future growth, including increases in the number of customers on our platform and the introduction and adoption of our platform in new markets outside of the United States;
- unforeseen costs and expenses related to the expansion of our business, operations and infrastructure, including disruptions in our hosting network infrastructure and privacy and data security;
- foreign currency exchange rate fluctuations; and
- general economic and political conditions in our domestic and international markets.

We may not be able to accurately forecast the amount and mix of future subscriptions, size or duration of contracts, revenue and expenses and, as a result, our operating results may fall below our estimates or the expectations of public market analysts and investors. If our revenue or operating results fall below the expectations of investors, or below any estimates we may provide, the market price of our common stock could decline.

Our business is subject to seasonal sales and customer growth fluctuations which could result in volatility in our operating results.

We have historically experienced a pattern of higher sales and new academic customers in the second and third quarters, as a result of school procurement periods, which are typically based on a fiscal year ending June 30. This has resulted in lower sequential sales and customer growth in the other quarters of the year. As we attempt to expand the number of our corporate customers, we may see changes to this pattern of seasonality. Seasonality may cause our sales and customer growth to vary from quarter-to-quarter depending on the variability in the volume and timing of sales and renewals. These factors, among other things, make forecasting more difficult and may adversely affect our ability to predict financial results accurately, which could result in volatility or adversely affect the market price of our common stock.

We could lose revenue if there are changes in the spending policies or budget priorities for government funding of colleges, universities, schools and other education providers.

Our Canvas customers include colleges, universities, K-12 schools and other education providers, many of which depend substantially on government funding. Accordingly, any general decrease, delay or change in federal, state or local funding for colleges, universities, schools and other education providers could cause our current and potential customers to reduce their purchases of Canvas and related services, or decide not to renew their subscriptions, any of which could cause us to lose customers and revenue. In addition, a specific reduction in governmental funding support for learning management systems could also cause us to lose customers and revenue.

Because we generally recognize revenue from subscriptions ratably over the term of the agreement, near term changes in sales may not be reflected immediately in our operating results.

We offer our learning management platform and applications primarily through multi-year subscription agreements and generally recognize revenue ratably over the related subscription period. As a result, much of the revenue we report in each quarter is derived from agreements entered into during prior quarters or years. A decline in new or renewed subscriptions in any one quarter is not likely to be reflected immediately in our revenue results for that quarter. However, declines would negatively affect our revenue and deferred revenue balances in future periods, and the effect of significant downturns in sales and market acceptance of our platform and applications, and potential changes in our rate of renewals, may not be fully reflected in our results of operations until future periods. Our subscription model also makes it difficult for us to rapidly increase our total revenue and deferred revenue balance through additional sales in any period, as revenue from new customers is recognized over the applicable subscription term.

Because we expense commissions associated with sales of our applications immediately upon the execution of a subscription agreement with a customer, our operating income in any period may not be indicative of our financial health and future performance.

We expense commissions paid to our sales personnel in the period in which we enter into an agreement for the sale of our applications. In contrast, we generally recognize the revenue associated with a sale of our applications ratably over the related subscription period. Although we believe higher sales is a positive indicator of the long-term health of our business, higher sales increases our operating expenses and could decrease earnings in any particular period. Thus, we may report poor operating results due to higher sales commissions in a period in which we experience strong sales of our applications. Alternatively, we may report better operating results due to the reduction of sales commissions in a period in which we experience a slowdown in sales. Therefore, you should not necessarily rely on our operating income during any one quarter as an indication of our financial health and potential future performance.

If the market for our applications develops more slowly than we expect, our growth may slow or stall, and our operating results would be harmed.

The market for learning management systems is still evolving, and we depend on continued growth of this market. We do not know whether the trend of adoption of cloud-based learning management systems we have experienced with our academic customers in the past will continue in the future. To date, we have derived a substantial majority of our revenue from Canvas. A critical factor for our continued growth is our ability to sell Canvas to new customers in K-12 and higher education. The adoption trend for our academic customers is subject to influence from federal, state and local policymakers. We launched Bridge in February 2015. Given our limited history with corporate customers, we do not know whether companies will adopt cloud-based learning management systems, or what prices or contract terms to which they will agree. We will incur substantial operating costs, particularly in sales and marketing and research and development, in attempting to develop these markets. If the market for Canvas does not continue to grow, or grows more slowly than we expect, or if the market for Bridge does not develop as we anticipate, our operating results would be harmed.

If we fail to effectively develop and expand our sales and marketing capabilities, our ability to increase our customer base and increase the market share of our learning management platform and applications could be harmed.

To increase the number of customers and increase the market share of our learning management platform and applications, we will need to expand our sales and marketing operations, including our domestic and international sales force. We will continue to dedicate significant resources to sales and marketing programs. The effectiveness of our inbound sales and marketing has varied over time and, together with the effectiveness of any international resellers we may engage, may vary in the future. Our business will be harmed if our efforts do not generate a correspondingly significant increase in revenue. We may not achieve anticipated revenue growth from expanding our sales force if we are unable to hire, develop and retain talented sales personnel, if our new sales personnel are unable to achieve desired productivity levels in a reasonable period of time or if our sales and marketing programs are not effective.

We face significant competition from both established and new companies offering learning management systems, which may harm our ability to gain new customers, retain existing customers and grow our business.

The learning management systems market is evolving, highly competitive and significantly fragmented, particularly in the K-12 and corporate markets. With the introduction of new technologies and the potential entry of new competitors into the market, we expect competition to persist and intensify in the future, which could harm our ability to increase sales, maintain or increase renewals and maintain our prices.

We face intense competition from other software companies that develop learning management systems. Canvas primarily competes with systems offered by Blackboard, D2L and Moodle. Bridge primarily competes with systems

offered by Cornerstone OnDemand, Saba Software and SumTotal Systems (owned by Skillsoft) along with dozens of small, specialized systems for specific industries to large, generalized systems provided as part of a larger human resources management suite. Competition could significantly impede our ability to sell or renew subscriptions to our learning management platform and applications on terms favorable to us. Our current and potential competitors may develop and market new technologies that render our existing or future applications less competitive, unmarketable or obsolete. In addition, if these competitors develop applications with similar or superior functionality to our software, we may need to decrease the prices or accept less favorable terms for our subscriptions in order to remain competitive. If we are unable to maintain our pricing due to competitive pressures, margins will be reduced and operating results will be negatively affected.

Current competitors have, and potential competitors may have, significantly more financial, technical, marketing and other resources than us, and may be able to devote greater resources to the development, promotion, sale and support of their applications and services, have more extensive customer bases and broader customer relationships, and longer operating histories and greater name recognition than us. As a result, these competitors may be better able to respond quickly to new technologies and to undertake more extensive marketing campaigns. In a few cases, these vendors may also be able to offer additional software at little or no additional cost by bundling them with their existing suite of applications. To the extent any competitor has existing relationships with potential customers for other applications, those customers may be unwilling to purchase our software because of their existing relationships with the competitor. If we are unable to compete with such companies, the demand for our platform and applications could be adversely affected.

In addition, if one or more competitors were to merge or partner with another competitor, our ability to compete effectively could be adversely affected. Competitors may also establish or strengthen cooperative relationships with current or future distribution or technology partners or other parties with whom we have relationships, thereby limiting our ability to sell our applications. We may not be able to compete successfully against current or future competitors, and competitive pressures may harm our business, operating results and financial condition.

If we fail to adapt and respond effectively to rapidly changing technology, evolving industry standards and changing customer needs or requirements, our learning management platform and applications may become less competitive.

Our future success depends on our ability to adapt and enhance our learning management platform and applications. To attract new customers and increase revenue from existing customers, we need to continue to enhance and improve our application offerings, features and enhancements to meet customer needs at prices that our customers are willing to pay. Such efforts will require adding new functionality and responding to technological advancements, which will increase our research and development costs. If we are unable to develop applications that address customers’ needs, or enhance and improve our platform in a timely manner, we may not be able to maintain or increase market acceptance of our platform and applications. Further, our competitors may expend a considerably greater amount of funds on their research and development programs, and those that do not may be acquired by larger companies that would allocate greater resources to our competitors’ research and development programs. If we fail to maintain adequate research and development resources or compete effectively with the research and development programs of our competitors our business could be harmed. Our ability to grow is also subject to the risk of future disruptive technologies. Access and use of our learning management platform and applications is provided via the internet, which, itself, was disruptive to the previous enterprise software model. If new technologies emerge that are able to deliver learning management software and related applications at lower prices, more efficiently, more conveniently or more securely, such technologies could adversely affect our ability to compete.

The length and unpredictability of the sales cycle for our platform and applications could delay new sales and cause our revenue for any given quarter to fail to meet our estimates or market expectations.

The sales cycle between our initial contact with a potential customer and the signing of a subscription agreement varies. As a result of the variability and length of the sales cycle, we have only a limited ability to forecast the timing of sales. A delay in or failure to complete sales could harm our business and financial results, and could cause our financial results to vary significantly from period to period. Our sales cycle varies widely, reflecting differences in potential customers’ decision-making processes, procurement requirements and budget cycles, and is subject to significant risks over which we have little or no control, including:

- customers’ budgetary constraints and priorities;
- the timing of customers’ budget cycles;
- the need by some customers for lengthy evaluations that often include both their administrators and faculties; and
- the length and timing of customers’ approval processes.

Potential customers typically conduct extensive and lengthy evaluations before committing to our applications and services and generally require us to expend substantial time, effort and money educating them as to the value of our offerings.

Our business outside the United States exposes us to risks associated with international operations.*

For the six months ended June 30, 2017, 13% of our revenue was derived from outside the United States. We opened our international headquarters in London, England in June 2014 and have offices in Sydney, Australia, Hong Kong and Sao Paulo, Brazil. Our growth strategy involves the further expansion of our operations and customer base internationally. Our current international operations and future initiatives will involve a variety of risks, including:

- more stringent regulations relating to data security and the unauthorized use of, or access to, commercial and personal information, particularly in the European Union;
- technical or latency issues in delivering our platform and applications;
- dependence on certain third parties, including potentially resellers with whom we do not have extensive experience;
- unexpected changes in regulatory requirements, taxes or trade laws;
- differing labor regulations, especially in the European Union, where labor laws are generally more advantageous to employees as compared to the United States, including deemed hourly wage and overtime regulations in these locations;
- challenges inherent in efficiently managing an increased number of employees over large geographic distances, including the need to implement appropriate systems, policies, benefits and compliance programs;
- difficulties in maintaining our company culture with a dispersed and distant workforce;
- difficulties in managing a business in new markets with diverse cultures, languages, customs, legal systems, alternative dispute systems and regulatory systems;
- currency exchange rate fluctuations and the resulting effect on our revenue and expenses, and the cost and risk of entering into hedging transactions if we choose to do so in the future;
- limitations on our ability to reinvest earnings from operations in one country to fund the capital needs of our operations in other countries;
- limited or insufficient intellectual property protection;
- political instability or terrorist activities;
- requirements to comply with foreign privacy and information security laws and regulations and the risks and costs of non-compliance;
- likelihood of potential or actual violations of domestic and international anticorruption laws, such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, or of U.S. and international export control and sanctions regulations, which likelihood may increase with an increase of sales or operations in foreign jurisdictions and operations in certain industries; and
- adverse tax burdens and foreign exchange controls that could make it difficult to repatriate earnings and cash.

For example, in June 2016, the electorate in the United Kingdom voted in favor of leaving the European Union (commonly referred to as “Brexit”). The withdrawal of the U.K. from the European Union will take effect either on the effective date of the withdrawal agreement or, in the absence of agreement, two years after the United Kingdom provides a notice of withdrawal pursuant to the EU Treaty. The U.K. government delivered a notice of withdrawal in March 2017. It is likely that the withdrawal of the U.K. from the European Union will involve a process of lengthy negotiations between the U.K. and European Union member states to determine the future terms of the U.K.’s relationship with the European Union. Depending on the terms of Brexit, the U.K., where we operate our international headquarters, could lose the benefits of global trade agreements negotiated by the European Union on behalf of its members, which may result in increased trade barriers which could make our doing business in Europe more difficult. In addition, currency exchange rates for the British Pound and the Euro with respect to each other and the U.S. dollar have already been affected by Brexit. Should this foreign exchange volatility continue, it could cause volatility in our quarterly financial results. In any event, we cannot predict to what extent these changes will impact our business or results of operations, or our ability to conduct operations in Europe.

Our limited experience in operating our business internationally increases the risk that any potential future expansion efforts that we may undertake will not be successful. If we invest substantial time and resources to expand our international operations and are unable to do so successfully and in a timely manner, our business and operating results will be harmed.

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If we fail to offer high-quality professional services and support, our business and reputation may suffer.

High-quality professional services and support, including training, implementation and consulting services, are important for the successful marketing, sale and use of our learning management platform and applications and for the renewal of existing customers. The importance of high-quality professional services and support will increase as we expand our business and pursue new customers. If we do not provide effective ongoing support, our ability to sell additional functionality and services to, or to retain, existing customers may suffer and our reputation with existing or potential customers may be harmed.

If we fail to manage our growth effectively or our business does not grow as we expect, our operating results may suffer.*

Our employee base and operations have grown substantially in a relatively short period of time. Our full-time employee base grew from 847 employees as of June 30, 2016 to 1,099 employees as of June 30, 2017. Our growth has placed, and will continue to place, a significant strain on our operational, financial and management infrastructure. We anticipate further increases in headcount will be required to support increases in our application offerings and continued expansion. To manage this growth effectively, we must continue to improve our operational, financial and management systems and controls by, among other things:

- effectively attracting, training and integrating a large number of new employees, particularly technical personnel and members of our management and sales teams;
- further improving our key business systems, processes and information technology infrastructure to support our business needs;
- enhancing our information and communication systems to ensure that our employees are well-coordinated and can effectively communicate with each other and our customers; and
- improving our internal control over financial reporting and disclosure controls and procedures to ensure timely and accurate reporting of our operational and financial results.

If we fail to manage our expansion or implement new systems, or if we fail to implement improvements or maintain effective internal controls and procedures, costs and expenses may increase more than expected and we may not expand our customer base, increase renewal rates, enhance existing applications, develop new applications, satisfy customers, respond to competitive pressures, or otherwise execute our business plan. If we are unable to effectively manage our growth, our operating results will be harmed.

We rely on our management team and other key employees, and the loss of one or more key employees could harm our business.

Our success and future growth depend upon the continued services of our management team, including Joshua Coates, our Chief Executive Officer, and other key employees in the areas of engineering, marketing, sales, services and general and administrative functions. From time to time, there may be changes in our management team resulting from the hiring or departure of executives, which could disrupt our business. We also are dependent on the continued service of our existing software engineers and information technology personnel because of the complexity of our software, technologies and infrastructure. We may terminate any employee’s employment at any time, with or without cause, and any employee may resign at any time, with or without cause. We do not maintain any “key man” insurance for any employee. The loss of one or more of our key employees could harm our business.

If we fail to attract and retain additional qualified personnel we may be unable to execute our business strategy.

To execute our business strategy, we must attract and retain highly qualified personnel. In particular, we compete with many other companies for software developers with high levels of experience in designing, developing and managing cloud-based software, as well as for skilled information technology, marketing, sales and operations professionals, and we may not be successful in attracting and retaining the professionals we need, in particular in Utah, where we are

headquartered. We have from time to time experienced, and we expect to continue to experience, difficulty in hiring and retaining highly skilled employees with appropriate qualifications which may, among other things, impede our ability to execute our software development and sales strategies. Many of the companies with which we compete for experienced personnel have greater resources than we do. In addition, in making employment decisions, particularly in the software industry, job candidates often consider the value of the stock options or other equity incentives they are to receive in connection with their employment. If the price of our stock declines, or experiences significant volatility, our ability to attract or retain qualified employees will be adversely affected. If we fail to attract new personnel or fail to retain and motivate our current personnel, our growth prospects could be harmed.

If we cannot maintain our company culture as we grow, we could lose the innovation, teamwork, passion and focus on execution that we believe contribute to our success and our business may be harmed.

We believe that a critical component to our success has been our company culture, which is based on dedication to customer experience, openness, ownership, trust, integrity, excellence and simplicity. We have invested substantial time and resources in building our team within this company culture. If we fail to preserve our culture our ability to retain and recruit personnel and to effectively focus on and pursue our corporate objectives could be harmed. As we grow and develop the infrastructure of a public company, we may find it difficult to maintain these important aspects of our company culture. If we fail to maintain our company culture, our business may be harmed.

If we do not maintain the compatibility of our learning management platform with third-party applications that our customers use in their businesses or schools, our revenue will decline.

A significant percentage of our customers choose to integrate our learning management platform with certain capabilities of third-party publishers and software providers using application programming interfaces, or APIs. The functionality and popularity of our platform depends, in part, on our ability to integrate our platform with third-party applications and software. Third-party providers of applications may change the features of their applications and software, restrict our access to their applications and software or alter the terms governing use of their applications and access to those applications and software in an adverse manner. Such changes could functionally limit or terminate our ability to use these third-party applications and software in conjunction with our learning management platform, which could negatively impact our offerings and harm our business. If we fail to integrate our platform with new third-party applications and software that our customers utilize, we may not be able to offer the functionality that our customers need, which would negatively impact our ability to generate revenue and adversely impact our business.

If our network or computer systems are breached or unauthorized access to customer data is otherwise obtained, our learning management platform and applications may be perceived as insecure and we may lose existing customers or fail to attract new customers, our reputation may be damaged and we may incur significant liabilities.

Use of our learning management platform and applications involve the storage, transmission and processing of our customers' data, including personal or identifying information regarding their students or employees. Cyber-attacks and other malicious internet-based activities continue to increase generally, and cloud-based platform providers of software and services have been targeted. If any unauthorized access to or security breaches of our platform, or those of our service providers, occurs, or is believed to have occurred, such an event or perceived event could result in the loss of data, loss of intellectual property or trade secrets, loss of business, severe reputational or brand damage adversely affecting customer or investor confidence, regulatory investigations and orders, litigation, indemnity obligations, damages for contract breach, penalties for violation of applicable laws, regulations, or contractual obligations, and significant costs for remediation that may include liability for stolen assets or information and repair of system damage that may have been caused, incentives offered to customers or other business partners in an effort to maintain business relationships after a breach, and other liabilities. Additionally, any such event or perceived event could impact our reputation, harm customer confidence, hurt our sales and expansion into existing and new markets, or cause us to lose existing customers. We could be required to expend significant capital and other resources to alleviate problems caused by such actual or perceived breaches and to remediate our systems, we could be exposed to a risk of loss, litigation or regulatory action and possible liability, and our ability to operate our business may be impaired. Additionally, actual, potential or anticipated attacks may cause us to incur increasing costs, including costs to deploy additional personnel and protection technologies, train employees and engage third-party experts and consultants.

In addition, if the security measures of our customers are compromised, even without any actual compromise of our own systems, we may face negative publicity or reputational harm if our customers or anyone else incorrectly attributes the blame for such security breaches to us or our systems. If customers believe that our platform and

applications do not provide adequate security for the storage of personal or other sensitive information or its transmission over the internet, our business will be harmed. Customers' concerns about security or privacy may deter them from using our platform for activities that involve personal or other sensitive information.

Our errors and omissions insurance covering certain security and privacy damages and claim expenses may not be sufficient to compensate for all liability. Although we maintain liability insurance for liabilities incurred as a result of some security and privacy damages, we cannot be certain that our coverage will be adequate for liabilities actually incurred or that insurance will continue to be available to us on economically reasonable terms, or at all. Because the techniques used and vulnerabilities exploited to obtain unauthorized access or to sabotage systems change frequently and generally are not identified until they are launched against a target, we may be unable to anticipate these techniques or vulnerabilities or implement adequate preventative measures. We may also experience security breaches that may remain undetected for an extended period.

Because data security is a critical competitive factor in our industry, we make public statements in our privacy policies describing the security of our platform. Should any of these statements be untrue, become untrue, or be perceived to be untrue, even if through circumstances beyond our reasonable control, we may face claims, including claims of unfair or deceptive trade practices, brought by the U.S. Federal Trade Commission, or FTC, state, local, or foreign regulators, and private litigants.

Interruptions or performance problems associated with our technology and infrastructure may adversely affect our business and operating results.

Our continued growth depends in part on the ability of our existing and potential customers to access our applications at any time. We have experienced, and may in the future experience, disruptions, outages, and other performance problems due to a variety of factors, including infrastructure changes, introductions of new functionality, human or software errors, distributed denial of service attacks, or other security related incidents. In some instances, we may not be able to identify the cause or causes of these performance problems within an acceptable period of time. It may become increasingly difficult to maintain and improve our performance, especially during peak usage times and as our platform becomes more complex and our user traffic increases. If our learning management platform and applications are unavailable or if our users are unable to access our applications within a reasonable amount of time or at all, our business will be harmed.

Moreover, our standard customer agreements include performance guarantees and service level standards that obligate us to provide credits or termination rights in the event of a significant disruption in our platform. To the extent that our third-party service providers experience outages, or to the extent we do not effectively address capacity constraints, upgrade our systems as needed, and continually develop our technology and network architecture to accommodate actual and anticipated changes in technology, our business and operating results may be adversely affected.

Our use of "open source" software could negatively affect our ability to offer our learning management platform and applications and subject us to possible litigation.

Our applications, in particular a substantial portion of Canvas, use "open source" software that we, in some cases, have obtained from third parties. Open source software is generally freely accessible, usable and modifiable, and is made available to the general public on an "as-is" basis under the terms of a non-negotiable license. Use and distribution of open source software may entail greater risks than use of third-party commercial software. Open source licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the code. In addition, certain open source licenses, like the GNU Affero General Public License, or AGPL, may require us to offer for no cost the components of our software that incorporate the open source software, to make available source code for modifications or derivative works we create based upon incorporating or using the open source software, or to license our modifications or derivative works under the terms of the particular open source license. If we are required, under the terms of an open source license, to release the source code of our proprietary software to the public, our competitors could create similar applications with lower development effort and time, which ultimately could result in a loss of sales for us.

We may also face claims alleging noncompliance with open source license terms or infringement or misappropriation of proprietary software. These claims could result in litigation, require us to purchase a costly license or require us to devote additional research and development resources to change our software, any of which would have a negative effect on our business and operating results, including being enjoined from the offering of the components of our software that contained the open source software. In addition, if the license terms for open source software that we use change, and we cannot continue to use the version of such software that we had been using, we may be forced to re-engineer our applications, incur additional costs, or discontinue the sale of applications or services if re-engineering could not be accomplished on a timely basis.

We could also be subject to suits by parties claiming ownership of what we believe to be open source software. Litigation could be costly for us to defend, have a negative effect on our operating results and financial condition and require us to devote additional research and development resources to change our applications. Although we monitor our use of open source software to avoid subjecting our applications to unintended conditions, few courts have interpreted open source licenses, and there is a risk that these licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to commercialize our applications. We cannot guarantee that we have incorporated open source software in our software in a manner that will not subject us to liability, or in a manner that is consistent with our current policies and procedures.

We make a substantial portion of the source code for Canvas available under the terms of an open source license, and accept contributions of modifications to that source code, each of which could negatively affect our ability to offer our learning management platform and applications and subject us to possible litigation.

To promote our open platform philosophy, we make a substantial portion of the source code for Canvas available to the public on the "GitHub" platform for no charge, under the terms of the AGPL. An individual or entity with the appropriate technical and human resources may choose to use this open source version of Canvas to try to self-host the platform to avoid paying any fees to us. In addition, some individuals or entities may try to use the open source version of Canvas for commercial purposes and directly compete with us for customers. We are aware of a few entities that currently self-host the platform and are aware of some entities that are currently selling hosting and support services. If more customers decide to self-host or other entities use the base code to compete with us, we may experience lower revenue and our business may be harmed.

We accept modifications of the source code for Canvas from contributors who agree to the terms of our contributor agreement. Our contributor agreement provides for assignment of joint ownership in the copyright to the contribution, and a license to any patent rights of the contributor. Contributors must also represent that it is an original work and that the contribution does not violate any third-party intellectual property right. However, we cannot ensure that any of these contributions is free of all third-party rights and claims of intellectual property infringement or misappropriation. By incorporating any contribution into our code base, we may be subject to intellectual property infringement or misappropriation claims, which as discussed elsewhere, are costly to defend and could require costly re-writing of our code base or licensing of replacement third-party solutions. Third-party alternatives may not be available to us on commercially reasonable terms.

Our business is dependent upon our brand recognition and reputation, and if we fail to maintain or enhance our brand recognition or reputation, our business could be harmed.

We believe that maintaining and enhancing our brands and our reputation are critical to our relationships with our customers and to our ability to attract new customers. We also believe that our brands and reputation will be increasingly important as competition in our market continues to develop. Our success in this area will depend on a wide range of factors, some of which are beyond our control, including the following:

- the efficacy of our marketing efforts;
- our ability to continue to offer high-quality, innovative and error- and bug-free applications;