INSTRUCTURE INC
Form 10-K
February 10, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2016

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) (Zip code)

Registrant’s telephone number, including area code: (800) 203-6755

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	New York Stock Exchange

Securities registered pursuant to section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

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 (§ 232.405 of this chapter) 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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting 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

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant, based on the closing price of the Registrant's common stock on the New York Stock Exchange on June 30, 2016, the last business day of its most recently completed second fiscal quarter, was $227,189,000. Excludes an aggregate of 16,014,270 shares of the Registrant's common stock held as of such date by officers, directors and stockholders that the Registrant has concluded are or were affiliates of the Registrant. Exclusion of such shares should not be construed to indicate that the holder of any such shares possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the Registrant or that such person is controlled by or under common control with the Registrant.

The number of shares of Registrant's Common Stock outstanding as of February 8, 2017 was 28,658,145.

DOCUMENTS INCORPORATED BY REFERENCE

Part III incorporates information by reference from the Registrant's definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A, not later than 120 days after the end of the fiscal

year covered by this Annual Report on Form 10-K, in connection with the Registrant's 2017 Annual Meeting of Stockholders (the "2017 Proxy Statement").

Instructure, Inc.

Annual Report on Form 10-K

For the Year Ended December 31, 2016

INDEX

PART I		
Item 1.	Business	1
Item 1A.	Risk Factors	11
Item 1B.	Unresolved Staff Comments	31
Item 2.	Properties	31
Item 3.	Legal Proceedings	32
Item 4.	Mine Safety Disclosures	32
PART II		
Item 5.	Market for Registrant's Common Equity, Related Stockholders Matters and Issuer Purchases of Equity Securities	33
Item 6.	Selected Consolidated Financial Data	35
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	39
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	56
Item 8.	Financial Statements and Supplementary Data	57
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	61
Item 9A.	Controls and Procedures	61
Item 9B.	Other Information	61
PART III		
Item 10.	Directors, Executive Officers and Corporate Governance	61
Item 11.	Executive Compensation	62
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	62
Item 13.	Certain Relationships and Related Transactions, and Director Independence	62
Item 14.	Principal Accountant Fees and Services	62
PART IV		
Item 15.	Exhibits and Financial Statement Schedules	62
Item 16.	Form 10-K Summary	62
	Signatures	63

In this Annual Report on Form 10-K, "we," "our," "us," "Instructure," and the "Company" refer to Instructure, Inc. and its wholly-owned subsidiaries.

PART I

Special Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K 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," "estimate," "predict," "potential," "intend" or "continue," 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 Annual Report on Form 10-K 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 Annual Report on Form 10-K 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.

Item 1. Business.

Mission and Vision

Instructure's mission is to make software that makes people smarter. Our vision is to help organizations everywhere leverage technology to maximize the potential of their people.

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.

In today's dynamic, knowledge-driven economy, quality education and constant learning are critical to compete and succeed. Academic institutions recognize that for students to reach their maximum potential, they require a learning environment that is interactive and accessible. Similarly, companies need to deliver seamless and easy learning experiences to better attract, develop and retain talent and compete more effectively.

We develop software that millions of students, teachers and employees use to help achieve their education and learning goals. Our applications enhance academic and corporate learning by providing an engaging, easy-to-use platform for instructors and learners, enabling frequent and open interactions, streamlining workflow, and allowing the creation and sharing of content with anytime, anywhere access to information. Our platform runs on a modern, cloud-based architecture that enables users to teach, learn and engage across a wide variety of application environments, operating systems, devices and locations at any time. Our open standards allow for integration with third-party publishers and software providers to deliver additional learning content and applications. Our platform also provides data analytics capabilities enabling real-time reaction to information and benchmarking in order to

personalize curricula and increase the efficacy of the learning process.

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 launched Canvas in February 2011 and have experienced rapid customer adoption in the education market. To better meet the needs of the corporate market, we leveraged a portion of the foundational code underlying Canvas to develop Bridge, which we launched in February 2015. As of December 31, 2016, we had well over 2,000 customers, representing colleges, universities, K-12 school districts, and companies in more than 40 countries.

For 2016, 2015 and 2014, revenue was $110.9 million, $73.2 million, and $44.4 million, respectively, representing year-over-year growth of 51% and 65%. We have experienced net revenue retention rates of over 100% at each of December 31, 2016, 2015 and 2014. For 2016, 2015 and 2014, our net losses were $53.6 million, $53.0 million and $41.4 million, respectively, as we focused on growing our business.

Our Platform

We designed our platform to enable users to teach, learn and collaborate anytime, anywhere, across a wide variety of application environments, operating systems, devices and locations. We believe our platform offers the following key benefits:

- Intuitive User Experience. Our research-driven approach to design has created elegant and intuitive user interfaces that leverage familiar, consumer web navigation techniques, such as drag and drop, to make it easy to use our platform. We designed our system from the ground up, with modern, web-based design features, to create a differentiated user experience. We enable seamless collaboration among instructors and learners to share feedback and encourage online discussion. These interactive features extend learning beyond the physical classroom and facilitate a more engaging learning experience. For Canvas, users can easily add audio, wikis, online workspaces, social media options and other collaboration tools to their online courses. Furthermore, our video-integrated functionality strengthens instructor-to-student and peer-to-peer online relationships and improves overall retention and usage rates.
- Optimized for Mobile. Our mobile-optimized platform allows users to access their applications anytime and anywhere. We offer a responsive design to ensure an optimal experience on most devices and, for Canvas, we also have iOS and Android native mobile applications available for free download on both phones and tablets.
- High Availability and Uptime. Our software is mission-critical for our users and customers and we focus on maintaining enterprise-grade reliability at all times.
- High Utilization. Millions of instructors, students, and employees have used our software. According to self-reported data in an ECAR 2015 survey, 44% of faculty in higher education use a learning management system to engage students in activities outside the classroom, while our internal analysis of higher education institutions using Canvas shows that 66% of faculty use Canvas to engage students in activities outside the classroom.
- Native Cloud-based Software. Our cloud-based delivery model enables customers to rapidly deploy our applications to experience immediate benefit. Software updates are implemented regularly and transparently. Our single-instance, multi-tenant architecture is designed to scale to support our rapid growth. Our cloud-based platform provides upfront cost savings over on-premise solutions by reducing the need for expensive IT resources and hardware infrastructure.
- Open Access to Data Analytics. For Canvas, we provide users with open application programming interfaces, or API, access to data analytics. We deliver the analytics in an easy to understand and consumable way, that is optimized for independent analysis. This open visibility allows learners to view their own progress in real-time, educators to adjust programs and personalize curricula for maximum effectiveness and organizations to benchmark user data internally and respond to patterns observed.
- Open Platform. We are committed to collaboration and openness. Our open standards allow organizations to easily deliver additional learning content and applications from third-party publishers and software providers. This extends the content, tools and services necessary to satisfy the diverse needs of our customers without sacrificing the innate simplicity of our platform. Canvas users can deploy third-party content and software applications within the application interface or browse our EduAppCenter.com’s growing catalog of approximately 250 integrations. Bridge was specifically designed to integrate easily via open APIs with a variety of enterprise resource planning and human resources information systems.

Our Growth Strategy

We are pursuing the following strategies to grow our business:

- Grow our U.S. Customer Base. We believe that the market for learning management systems remains significantly underserved. K-12 academic institutions have yet to widely adopt learning management systems, while most higher education institutions have adopted legacy systems with which they are often unsatisfied. In the corporate market, there are both greenfield opportunities and opportunities to displace legacy solutions that do not meet customer needs. As a result, we believe there is opportunity to substantially expand our base of U.S. academic and corporate customers. Toward that end, we are making significant investments in growing our direct sales team, particularly focused on the corporate market.

- Further Maximize our Existing Customer Base. The 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. We plan to increase revenue from this customer base by selling additional applications and services. We plan to further penetrate our existing corporate customer base by growing the number of users on our platform and expanding enterprise wide. We believe our user-based pricing model and innovative applications provide us with a substantial opportunity to increase the value of our existing customer base.
- Continue to Expand Internationally. We believe there is a significant opportunity for our cloud-based learning management platform outside of the United States and we intend to expand our direct and indirect sales force to further penetrate international markets. We opened our international headquarters in London in June 2014, and for the year ended December 31, 2016, international customers accounted for 9% of our revenue.
- Continue to Innovate and Offer New Applications. We will continue to make significant investments to further enhance the functionality of our existing applications, expand the number of applications on our extensible learning platform and develop into adjacent markets that will benefit our customers. We take a strategic approach to research and development investment. For example, in February 2015, we launched Bridge to better serve our corporate customers because we saw corporate customers adopt Canvas, due to a lack of suitable alternatives. In October 2016, we announced the launch of Arc, our next generation video platform for interactive learning and intuitive collaboration.

Our Applications

Our applications enhance academic and corporate learning by providing a system of engagement for teachers and learners, enabling frequent and open interactions, streamlining workflow, and allowing the creation and sharing of content with anytime, anywhere access to information. Our applications also provide users with powerful, easy-to-use functionality, to intuitively interact with course content and activities. All of our applications run on our extensible platform, which allows us to easily deploy new applications and features to support the needs of our customers. We use modern mobile technology to provide anytime, anywhere access to our applications from a wide array of devices, including personal computers, tablets and smartphones. We also have iOS and Android native mobile applications for Canvas available for free download.

Canvas

Canvas is designed for our K-12 and higher education customers. Our customers use Canvas's extensive set of flexible content creation, management and delivery tools to support and enhance face-to-face and online instruction.

Canvas enables instructors and learners to:

- communicate through announcements, messages, and conferences;
- collaborate and interact with content, peer and group assignments, and discussions;
- create, deliver, and analyze quizzes and assignments;
- perform outcomes-based assessments;
- choose, manage and change courses;
- automate classroom activities, including the syllabus, attendance and calendar of course events;
- grade assignments, using SpeedGrader, and post grades online;
- facilitate audio and video communications for enhanced teacher and student engagement;
- access an integrated learning object repository;
- analyze course and student data to improve learning outcomes and teaching methods;
- set personalized academic goals and track performance;
- provide parental access to assignments and grades; and

integrate with popular student information systems.

Canvas provides access to a critical set of user activity data. This includes course activity information, assessment and evaluations, discreet page views, user engagement and individual curricula, including user and device characteristics. Data is delivered in a format optimized to perform queries and reporting, making it easier for administrators to benchmark, customize teaching and improve learning outcomes. In addition, Canvas supports standards-based integration with hundreds of third-party publishers and software providers. The extensibility of the Canvas application enables our customers to build the learning and teaching environment that meets their unique organizational needs.

Canvas Network

Canvas Network allows anyone around the world access to open online courses for personal and professional development. Through Canvas Network, academic institutions have the flexibility to offer and deliver courses over the internet to a much broader audience than just their own employees or on-campus students. Some institutions choose to pursue a massive open online course, or MOOC, format, and some choose to pursue a smaller online course format with more interaction. Institutions already using Canvas can easily move courses onto Canvas Network, extending their reach and enhancing their brand.

Canvas Catalog

Canvas Catalog is a white-label, web-based course catalog and registration system that enables organizations to build and maintain a branded marketplace for their online course offerings. Catalog provides a searchable course index, custom course landing pages, collections of courses in specialized programs, automatically distributed certificates and other recognitions of completion, and online payment gateways for student registration and enrollment.

Bridge

Bridge is designed to enable corporate customers to deliver impactful learning to accelerate employee development and address the unique training needs of their workforce. Through Bridge, we have streamlined employee learning by offering a consumerized, mobile-first experience that is easy to use for both administrators and learners.

Bridge enables organizations to:

- create courses and training content;
- deliver and track compliance and regulatory requirements;

- personalize courses based on feedback, need or job;
- align employees to support organizational goals;
- assign required training;
- organize and group courses by various categories;
- track employee learning progress;
- provide a mobile experience to allow course access and management anywhere, from any device; and
- extend training to reseller channels and other distribution networks.

Arc

Arc is a video platform that makes video learning more impactful using contextual comments, robust analytics, and seamless integration with learning management systems such as Canvas. When instructional designers use Arc to organize and deliver video content, viewers learn from each other's insights as well as from the instructor's direction and feedback. As part of the Canvas integration, students can upload Arc videos as assignment submissions, which allows teachers to give more relevant, contextual feedback inside the video.

Technology and Standards

The technologies used to build our platform and applications are native cloud, multi-tenant and designed to scale to millions of users. We utilize a modern technology stack to take advantage of advancements in web-design, open source technologies, scalability, and security. We have implemented industry-standard best security practices to help us protect our servers and our customers' critical information.

Our platform and applications are hosted on cloud infrastructure provided by Amazon Web Services, or AWS. Our hosting services provide full support, rolling release upgrades/updates, backup, and disaster recovery services. We primarily use Elastic Compute Cloud, or EC2, along with load balancing, auto scaling and storage, or S3, provided by AWS. Our infrastructure enables us to scale horizontally and rapidly adjust to variances in usage, at the server, database and file store level. Our applications run on virtualized instances in Tier III and Tier IV AWS data center facilities, which provide industry-standard best security practices. As of December 31, 2016, we used AWS data center facilities located in Virginia, Oregon, Dublin, Ireland, Frankfurt, Germany, Sydney, Australia and Singapore and intend to expand operations to other regions based on market conditions. These facilities have earned multiple certifications including, but not limited to, SOC 2 Type II, ISO9001 and ISO27001.

We designed our platform to be resilient to failure and capable of rapid recovery from component failure. We apply a wide variety of strategies to achieve enterprise-grade reliability. We have automated procedures in place to handle coordinated changes across our various instances and store backups of key databases in multiple redundant and geographically isolated locations.

Our technology stack is a dynamic web application built with our own automated scaling and provisioning technologies. We use Web 2.0 technologies like Ruby on Rails and Node.js, which provide users a familiar web experience. Our platform is built on underlying open source technologies, taking full advantage of advancements in scalability and flexibility. We utilize the Linux operating system, Postgres and Cassandra databases, and Redis value store. Our platform also provides an API that third-parties can use to add new features and functionality.

Keeping the platform secure is a primary focus of our operations team due to the sensitive nature of the data contained within the platform. We maintain a high level of diligence around data security and have chosen to adopt the AICPA SOC2 set of security controls and demonstrate compliance with these controls through annual audits and web application vulnerability assessments.

Customers

As of December 31, 2016, we had well over 2,000 customers representing colleges, universities, school districts, and companies in more than 40 countries. Canvas is used by seven Ivy League schools and we have K-12 customers in all 50 states. The majority of our academic customers implement Canvas widely within their institutions and across school districts. We define a customer as an entity with an active subscription contract. In situations where there is a single contract that applies to entities with multiple subsidiaries or divisions, universities or schools, 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, no single customer represented more than 10% of our revenue.

Sales and Marketing

We sell our applications and services through a direct sales force. Our sales organization includes technical sales engineers who serve as experts in the technical aspects of our applications and customer implementations. Many of our sales efforts require us to respond to request for proposals, particularly in the higher education space and to a lesser extent in K-12, and to a minimal extent in the corporate market. As we grow internationally, we may use reseller partnerships as needed to penetrate certain new markets.

We engage in a variety of traditional and online marketing activities designed to provide sales lead generation and sales support and promote brand awareness. Our specific marketing activities for lead generation include advertising in trade publications, digital advertising, including search engine optimization and search engine marketing, display search and referral marketing. Brand awareness activities include press relations in business, human resources, education publications and blogs, market specific advertising campaigns and speaking engagements, and industry trade-shows and seminars. We also host InstructureCon, our annual user conference for current customers and prospects. Nearly 2,000 people attended InstructureCon 2016 in Keystone, Colorado.

Customer Success

We view strong customer support and services as essential for customer retention even though our applications are easy to adopt and use. The majority of our services and support is offered by phone and online audio and video conferencing rather than in person, resulting in a more efficient and cost effective business model for us and our customers. Our Customer Success department, responsible for all customer post-sale interaction, consists of employees located in the United States, the United Kingdom, Brazil and Australia. Our services and support efforts include the following:

- Customer Success Management. We have created a strong Customer Success Management team to assist customers throughout the deployment and production lifecycle. They provide coverage available to all customers as part of their standard subscription as well as other service offerings.
- Implementation Services. We believe that a positive onboarding experience leads to more satisfied customers, longer customer relationships and greater lifetime value. 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 online audio and video conferencing.
- Training Services. Also critical to customer success is our customers' comfort level with the features and functionality of our applications. We include training with every implementation and offer additional training for a fee. The training offered is intended to engender confidence among users so they can be successful with our platform. Most training is performed remotely by online audio and video conferencing.
- Consulting Services. In addition to our implementation and training offerings, we provide 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 Instructure, which we believe increases brand loyalty and lifetime value.
- Support. We provide standard support services, which can be upgraded to our premium support services to include 24/7 coverage and a more stringent service level agreement. Our Tier 1 offering includes our premium support services as well as direct support to users by our agents. We also provide extensive user guides and online videos for the ongoing education and assistance of our users.

Information about Segments and Geographic Revenue

The Company operates as one operating segment. Operating segments are defined as components of an enterprise for which separate financial information is regularly evaluated by the chief operating decision makers ("CODMs"), which are the Company's chief executive officer and chief financial officer, in deciding how to allocate resources and assess performance. The Company's CODMs evaluate the Company's financial information and resources and assess the performance of these resources on a consolidated basis. Since the Company operates in one operating segment, all required financial segment information can be found in the consolidated financial statements. See footnotes to the consolidated financial statements for information by geographic area.

Partner Ecosystem and Integration

We are committed to enabling our customers to build an ecosystem for successful learning. Our open platform is central to both our technology and our strategy.

From a technological perspective, we remain focused on implementing industry standards like IMS Global Learning Consortium's Learning Tools Interoperability and Caliper, allowing for robust integrations between Canvas and a large spectrum of third-party solutions to be offered to our customers.

Our partnership program invites third-party software, service and content providers, through an extensive library of APIs, to easily integrate with our applications and at no or minimal charge to the partner. This allows us to broaden and efficiently extend the functionality of our applications. We have over 100 partners, including Pearson, Cengage, Gooru, Ex Libris, Panopto, AspirEdu, Boundless Learning, iParadigms, Verificient Technologies, Microsoft and Harvard Business Publishing.

Research and Development

Our product, customer success, and sales and marketing teams operate cross-functionally and regularly engage with customers, partners and industry analysts to understand customer needs and general industry trends to enhance our existing applications. Additionally, our research and education team analyzes user data and current online learning trends and collaborates with customers to inform application development and growth into adjacent markets. Once application improvements are identified, the entire development organization works closely together to design, develop, test and launch new functionality and application updates. We have made, and will continue to make, significant investments to strengthen our existing applications, and expand the number of applications on our extensible learning platform that will benefit our customers and allow us to expand into new markets. For the years ended December 31, 2016, 2015, and 2014, we recorded $36.0 million, $24.2 million, and $21.3 million, respectively, in research and development expenses.

Culture and Employees

We are passionate about making learning and working more engaging and accessible for people everywhere and we apply that same vision at Instructure every day. We maintain seven values that we believe set us apart, define our company culture and serve as a strategic advantage as they are directly aligned with the experience we strive to provide to our customers.

- Customer Experience. We aspire to create an awesome customer experience in every interaction with our applications and people.
- Openness. Instructure is built on openness—it's part of who we are. Open doors. Open office. Open source. We have created an open work environment without offices to increase collaboration and transparency—and to reflect the open learning platform environment we provide to our customers.
- Ownership. Everyone's an owner because each of us can have a significant impact on our ability to succeed. Full-time Instructure employees receive equity grants and can participate in the success and growth of the company.
- Trust. We have a clear "tell us if we're doing something stupid" policy. Everyone is encouraged to offer input and feedback regardless of level of experience or position. Questioning the status quo is part of our DNA and supports us in continuing to disrupt and transform our markets.
- Integrity. Simply put, we say what we're going to do and then we do it. We hold people accountable for results and commitments. Our objectives and commitments are openly shared throughout the company.
- Excellence. Achieving excellence isn't easy. But we believe it can be simple. Instructure pursues the leading edge of innovation in our technology, support, and business operations. We do this by hiring smart, creative, passionate people and giving them opportunities to create awesome.
- Simplicity. Our platform is designed to make teaching, learning, and engaging easier. Everything we do—from designing software to how we communicate—should reflect that. Keep it simple and easy to understand.

Since our founding, we have worked hard to retain our open and engaging culture with people who are passionate about improving learning. We have received multiple "best places to work" awards and have maintained high ratings on recruiting websites. As of December 31, 2016, we had 949 employees.

Competition

We operate in highly competitive markets. Canvas primarily competes with systems offered by Blackboard, D2L and Moodle in the education market. 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.

We may face future competition in our markets from other large, established companies, as well as from smaller specialized companies.

The principal competitive factors in our markets include the following:

- usability and features;
- pricing;
- reliability and uptime;

- service and support for users and staff;
- software integration and third-party publisher partnerships;
- mobile capabilities;
- data analytics; and
- collaboration and engagement.

We believe that we compete favorably on the basis of these factors. Our ability to remain competitive will depend to a great extent upon our ongoing performance in the areas of product development, partner ecosystem development and customer support. In addition, many of our competitors, particularly the large software companies named above, may have greater name recognition, longer operating histories and significantly greater resources. Some competitors may be able to devote greater resources to the development, promotion and sale of their products than we can to ours, which could allow them to respond more quickly than we can to changes in customer needs. We cannot assure you that our competitors will not offer or develop products or services that are superior to ours or achieve greater market acceptance.

Intellectual Property

We rely on a combination of trade secret, copyright, and trademark laws, a variety of contractual arrangements, such as license agreements, assignment agreements, confidentiality and non-disclosure agreements, and confidentiality procedures and technical measures to gain rights to and protect the intellectual property used in our business. We actively pursue registration of our trademarks, logos, service marks, and domain names in the United States and in other key jurisdictions, but we have not, to date, applied for patent protection for any of our inventions. We are the registered holder of a variety of U.S. and international domain names that include the term Instructure, Canvas and Bridge.

A substantial portion of our Canvas application, including the base code, uses “open source” software we license from third parties. Open source software is made available to the general public on an “as-is” basis under the terms of a non-negotiable license. Open source software is generally freely accessible, usable and modifiable. Certain open source licenses, like the GNU Affero General Public License may require us to offer the components of our software that incorporate the open source software for no cost, make available source code for modifications or derivative works we create based upon incorporating or using the open source software, and license such modifications or derivative works under the terms of the particular open source license. We also rely on certain intellectual property rights that we license from third parties under proprietary licenses. Though such third-party technologies may not continue to be available to us on commercially reasonable terms, we believe that alternative technologies would be available to us.

To promote our open platform philosophy, we make available 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 GNU Affero General Public License. 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.

We control access to and use of our proprietary technology and other confidential information through the use of internal and external controls, including contractual protections with employees, contractors, customers, and partners, and our software is protected by U.S. and international copyright laws. Our policy is to require employees and independent contractors to sign agreements assigning to us any inventions, trade secrets, works of authorship, developments and other processes generated by them on our behalf and agreeing to protect our confidential information, and all of our key employees and contractors have done so. In addition, we generally enter into confidentiality agreements with our vendors and customers. We also control and monitor access to, and distribution of

our software, documentation and other proprietary information. In addition, we intend to expand our international operations, and effective copyright, trademark, and trade secret protection may not be available to us in every country in which our software is available.

Regulatory

The legal environment of internet-based businesses is evolving rapidly in the United States and elsewhere. The manner in which existing laws and regulations are applied in this environment, and how they will relate to our business in particular, both in the United States and internationally, is often unclear. For example, we sometimes cannot be certain which laws will be deemed applicable to us given the global nature of our business, including with respect to such topics as data privacy and security, pricing, credit card fraud, advertising, taxation, content regulation, and intellectual property ownership and infringement. Moreover, our academic customers are regulated at the state and federal levels by legislatures, administrative agencies and other policymaking bodies that can directly impact their ability to procure and deploy technology products.

Our customers, and those with whom they communicate using our applications, upload and store customer data onto our platform. This presents legal challenges to our business and operations, such as rights of privacy or intellectual property rights related to the content loaded onto our platform. Both in the United States and internationally, we must monitor and comply with a wide variety of laws and regulations regarding the data stored and processed on our platform as well as the operation of our business.

Data Privacy and Security Laws

Data privacy and security with respect to the collection of personally identifiable information, or PII, continues to be the focus of worldwide legislation and regulation. We are subject to data privacy and security regulation by data protection authorities in the U.S. (including the states in which we conduct our business) and potentially in other countries.

In recent years, there have been a number of well-publicized data breaches involving the unauthorized use and disclosure of individuals' PII. Many states have responded to these incidents by enacting laws requiring holders of personal information to maintain safeguards and to take certain actions in response to a data breach, such as providing prompt notification of the breach to affected individuals and state officials or amending existing laws to expand compliance obligations. Federal laws are also under consideration that may create additional compliance obligations and penalties. In the European Union, where companies must meet specified privacy and security standards, the Data Protection Directive 95/46/EC and data protection laws of each of the European Member countries require comprehensive information privacy and security protections for consumers with respect to PII collected about them. We have in the past relied on compliance with adherence to the U.S. Department of Commerce's Safe Harbor Privacy Principles and compliance with the U.S.-EU and U.S.-Swiss Safe Harbor Frameworks as agreed to and set forth by the U.S. Department of Commerce, and the European Union and Switzerland, concerning U.S. companies doing business in Europe, collecting PII from European citizens, and transferring such PII to the United States under the Safe Harbor Framework. As a result of the October 6, 2015 European Union Court of Justice, or ECJ, opinion in Case C-362/14 (Schrems v. Data Protection Commissioner) regarding the adequacy of the U.S.-EU Safe Harbor Framework, the U.S.-EU Safe Harbor Framework is now considered, within the EU, to be an invalid means of legitimizing data transfers to the United States under the Data Protection Directive and its implementations into EU member state national law. In light of the ECJ opinion in Case C-362/14, we are engaged in efforts to legitimize data transfers from the European Economic Area, such as the use of so-called 'model contract clauses' developed by the European Commission. On July 12, 2016, the European Commission adopted the new EU-U.S. "Privacy Shield" to replace the U.S.-EU Safe Harbor Framework and starting on August 1, 2016, the Privacy Shield was made available to companies for self-certification. In addition, on May 4, 2016, the EU formally adopted the General Data Protection Regulation ("GDPR"), which will apply to all EU member states from May 25, 2018 and will replace the Data Protection Directive 95/46/EC on that date. The GDPR introduces new data protection requirements in the EU and substantial fines for breaches of data protection rules. In light of these developments, we plan to evaluate Privacy Shield to determine whether it is appropriate for our data transfers and any additional mechanisms necessary to ensure compliance with

the GDPR. We post on our website our privacy policies and practices concerning the processing, use and disclosure of PII. Our publication of our privacy policy and other statements we publish that provide promises and assurances about privacy and security can subject us to potential state and federal action if they are found to deceptive or misrepresentative of our practices.

Through contractual obligations with our customers we sometimes agree to certain obligations related to The Family Educational Rights and Privacy Act, or FERPA, which generally prohibits educational institutions that receive federal funding from disclosing PII from a student's education records without the student's consent. We are also subject to the Children's Online Privacy Protection Act, or COPPA, which applies to operators of commercial websites and online services directed to U.S. children under the age of 13 that collect personal information from children, and to operators of general audience websites with actual knowledge that they are collecting information from U.S. children under the age of 13. Also, certain laws and regulations that protect the collection, use and disclosure of particular types of data may hinder our ability to provide services to customers and potential customers subjected to such laws.

Copyrights

U.S. and international copyright and trademark laws protect the rights of third parties from infringement of their works of authorship. Our customers and users can generally use our platform to upload and present a wide variety of content. We maintain an active copyright infringement policy and respond to takedown requests by third-party intellectual property right owners that might result from content uploaded to our platform. As our business expands to other countries, we must also respond to regional and country-specific intellectual property considerations, including takedown and cease-and-desist notices in foreign languages, and we must build infrastructure to support these processes. The Digital Millennium Copyright Act, or DMCA, also applies to our business. This statute includes a safe harbor that is intended to reduce the liability of online service providers for hosting content provided by users that infringes copyrights of others. The copyright infringement policies that we have implemented for our platform are intended to satisfy the DMCA safe harbor.

Corporate Information

We were incorporated in Delaware in September 2008. Our principal executive offices are located at 6330 South 3000 East, Suite 700, Salt Lake City, UT 84121 and our telephone number is (800) 203-6755. Our corporate website address is www.instructure.com. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this Annual Report on Form 10-K.

We file electronically with the Securities and Exchange Commission our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended. We make available on our website at www.instructure.com, free of charge, through a hyperlink on our website, copies of these reports, as soon as reasonably practicable after electronically filing such reports with, or furnishing them to, the Securities and Exchange Commission.

Item 1A. Risk Factors.

You should carefully consider the following risk factors, in addition to the other information contained in this report on Form 10-K, including the section of this report titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and related notes. If any of the events described in the following risk factors and the risks described elsewhere in this report occurs, our business, operating results and financial condition could be seriously harmed. This report on Form 10-K 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 report.

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 $110.9 million, $53.0 million, and $41.4 million 2016, 2015, and 2014, respectively. We had an accumulated deficit of $196.5 million at December 31, 2016. 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 Annual Report on Form 10-K, factors that may affect our 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 in the education market. 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, many of our competitors 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 planned further expansion of our business outside the United States exposes us to risks associated with international operations.

Our growth strategy involves the further expansion of our operations and customer base internationally. For the year ended December 31, 2016, 9% 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 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 has announced that it intends to deliver a notice of withdrawal by the end of 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.

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 767 employees as of December 31, 2015 to 949 employees as of December 31, 2016. 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.

17

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;
- our ability to retain existing customers and obtain new customers;
- our ability to maintain high customer satisfaction;
- the quality and perceived value of our applications;
- our ability to successfully differentiate our applications from those of our competitors;
- actions of competitors and other third parties;
- our ability to provide customer support and professional services;
- any misuse or perceived misuse of our applications;
- positive or negative publicity;

- interruptions or delays on our platform or applications;
- cyber-attacks on or security breaches of our platform and applications or the platforms of certain of our subcontractors; and
- litigation, legislative or regulatory-related developments.

If our brand promotion activities are not successful, our operating results and growth may be harmed. Furthermore, negative publicity, whether or not justified, relating to events or activities attributed to us, our employees, our partners or others associated with any of these parties, may tarnish our reputation and reduce the value of our brand. Damage to our reputation and loss of brand equity may reduce demand for our applications and have an adverse effect on our business, operating results and financial condition. Moreover, any attempts to rebuild our reputation and restore the value of our brands may be costly and time consuming, and such efforts may not ultimately be successful.

We rely upon Amazon Web Services to operate certain aspects of our service and any disruption of or interference with our use of Amazon Web Services could impair our ability to deliver our learning management platform and applications to our customers, resulting in customer dissatisfaction, damage to our reputation, loss of customers and harm to our business.

Amazon Web Services, or AWS, provides a distributed computing infrastructure platform for business operations, or what is commonly referred to as a cloud computing service. We have designed our software and computer systems to use data processing, storage capabilities and other services provided by AWS. Currently, our cloud service infrastructure is run on AWS. Given this, we cannot easily switch our AWS operations to another cloud provider, so any disruption of or interference with our use of AWS would impact our operations and our business would be adversely impacted. AWS provides us with computing and storage capacity pursuant to an agreement that continues until terminated by either party. AWS may terminate the agreement without cause by providing 90 days' prior written notice, and may terminate the agreement with 30 days prior written notice for cause, including any material default or breach of the agreement by us that we do not cure within the 30 day period. The agreement requires AWS to provide us their standard computing and storage capacity and related support in exchange for timely payment by us. If any of our arrangements with AWS is terminated, we could experience interruptions in our software as well as delays and additional expenses in arranging new facilities and services.

We utilize third-party data center hosting facilities operated by AWS, located in various sites within the states of Virginia and Oregon. For international customers, we utilize third-party data center hosting facilities operated by AWS located in Dublin, Ireland, Frankfurt, Germany, Sydney, Australia and Singapore.

Our operations depend, in part, on AWS's abilities to protect these facilities against damage or interruption from natural disasters, power or telecommunications failures, criminal acts and similar events. Despite precautions taken at our data centers, the occurrence of spikes in usage volume, a natural disaster, an act of terrorism, vandalism or sabotage, a decision to close a facility without adequate notice, or other unanticipated problems at a facility could result in lengthy interruptions in the availability of our platform. Even with current and planned disaster recovery arrangements, our business could be harmed. Also, in the event of damage or interruption, our insurance policies may not adequately compensate us for any losses that we may incur. These factors in turn could further reduce our revenue, subject us to liability and cause us to issue credits or cause customers to fail to renew their subscriptions, any of which could harm our business.

We are dependent on the continued availability of the internet and third-party computer and communications systems.

Our ability to provide our platform and applications to our customers depends on our ability to communicate with our customers through the public internet and third-party computer and communications systems. A severe disruption of one or more of these systems could impair our ability to process information, which could impede our ability to provide services to our customers, harm our reputation, result in a loss of customers and harm our business and

operating results.

Real or perceived errors, failures, or bugs in our learning management platform or applications could adversely affect our operating results and growth prospects.

We push updates to our platform on a frequent basis. Despite testing by us, errors, failures or bugs may not be found in our learning management platform or applications until after they are deployed to our customers. We have discovered and expect we will continue to discover software errors, failures and bugs in our learning management platform or applications and anticipate that certain of these errors, failures and bugs will only be discovered and remediated after deployment to customers. Real or perceived errors, failures or bugs in our platform and applications could result in negative publicity, loss of or delay in market acceptance of our platform and applications, loss of competitive position, or claims by customers for losses sustained by them. In such an event, we may be required, or may choose, for customer relations or other reasons, to expend additional resources in order to help correct the problem.

We implement bug fixes and upgrades as part of our regular system maintenance, which may lead to system downtime. Even if we are able to implement the bug fixes and upgrades in a timely manner, any history of defects or inaccuracies in the data we collect for our customers, or the loss, damage or inadvertent release of confidential data could cause our reputation to be harmed, and customers may elect not to purchase or renew their agreements with us or we may incur increased insurance costs. The costs associated with any material defects or errors in our software or other performance problems may be substantial and could harm our operating results.

Because many of our customers use our applications to store and retrieve critical information, we may be subject to liability claims if our applications do not work properly. We cannot be certain that the limitations of liability set forth in our licenses and agreements would be enforceable or would otherwise protect us from liability for damages. A material liability claim against us, regardless of its merit or its outcome, could result in substantial costs, significantly harm our business reputation and divert management’s attention from our operations.

We are subject to governmental laws, regulation and other legal obligations, particularly related to privacy, data protection and information security, and any actual or perceived failure to comply with such obligations could harm our business.

Personal privacy and information security are significant issues in the United States and the other jurisdictions where we offer our applications. The legislative and regulatory framework for privacy and security issues worldwide is rapidly evolving and is likely to remain uncertain for the foreseeable future. Our handling of data is subject to a variety of laws and regulations, including regulation by various government agencies, including the FTC, and various state, local and foreign agencies. We collect personally identifiable information, or PII, and other data from our customers and users. We use this information to provide services to our customers and users and to support, expand and improve our business. We may also share customers’ or users’ PII with third parties as allowed by applicable law and agreements, authorized by the customer, or as described in our privacy policy.

The U.S. federal and various state and foreign governments have adopted or proposed limitations on the collection, distribution, use and storage of PII. In the United States, the FTC and many state attorneys general are applying federal and state consumer protection laws as imposing standards for the online collection, use and dissemination of data. Furthermore, many states have enacted laws that apply directly to the operators of online services that are intended for K-12 school purposes that limit the collection, distribution, use and storage of student information that go beyond what may be applicable to other individuals. Many foreign countries and governmental bodies, including the European Union, Canada, Australia and other relevant jurisdictions, have laws and regulations concerning the collection and use of PII obtained from their residents or by businesses operating within their jurisdiction. These laws and regulations often are more restrictive than those in the United States. Laws and regulations in these jurisdictions apply broadly to the collection, use, storage, disclosure and security of data that identifies or may be used to identify

or locate an individual, such as names, email addresses and, in some jurisdictions, Internet Protocol, or IP, addresses. In the European Union, where companies must meet specified privacy and security standards, Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, commonly referenced as the Data Protection Directive, and EU member state implementations of the Data Protection Directive, require comprehensive information privacy and security protections for consumers with respect to PII, collected about them.

We have in the past relied on adherence to the U.S. Department of Commerce's Safe Harbor Privacy Principles and compliance with the U.S.-EU and U.S.-Swiss Safe Harbor Frameworks as agreed to and set forth by the U.S. Department of Commerce, and the European Union and Switzerland, which established a means for legitimating the transfer of PII by U.S. companies doing business in the EU from the European Economic Area to the U.S. As a result of the October 6, 2015 European Union Court of Justice, or ECJ, opinion in Case C-362/14 (Schrems v. Data Protection Commissioner) regarding the adequacy of the U.S.-EU Safe Harbor Framework, the U.S. - EU Safe Harbor Framework is no longer deemed to be a valid method of compliance with restrictions set forth in the Data Protection Directive (and member states' implementations thereof) regarding the transfer of data outside of the European Economic Area. In light of the ECJ opinion in Case C-362/14, we are engaged in efforts to legitimize data transfers from the European Economic Area, such as the use of so-called 'model contract clauses' developed by the European Commission. We may be unsuccessful in establishing additional legitimate means of transferring data from the European Economic Area, we may experience hesitancy, reluctance, or refusal by European or multi-national customers to continue to use our services due to the potential risk exposure to such customers as a result of the ECJ ruling, and we and our customers are at risk of enforcement actions taken by an EU data protection authority until such point in time that we ensure that all data transfers to us from the European Economic Area are legitimized. On July 12, 2016, the European Commission adopted the new EU-U.S. "Privacy Shield" to replace the U.S.-EU Safe Harbor Framework and starting on August 1, 2016, the Privacy Shield was made available to companies for self-certification. In addition, on May 4, 2016, the EU formally adopted the General Data Protection Regulation ("GDPR"), which will apply to all EU member states from May 25, 2018 and will replace the Data Protection Directive 95/46/EC on that date. The GDPR introduces new data protection requirements in the EU and substantial fines for breaches of data protection rules. It is difficult to predict whether this new agreement will provide an appropriate means for us to legitimize data transfers from the European Economic Area to the U.S. or whether compliance with the GDPR will prove to be more burdensome than the data Protection Directive 95/46/EC. In light of these developments, we plan to evaluate Privacy Shield to determine whether it is appropriate for our data transfers and any additional mechanisms necessary to ensure compliance with the GDPR. We may find it necessary to establish systems to maintain EU-origin data in the European Economic Area, which may involve substantial expense and distraction from other aspects of our business. We publicly post our privacy policies and practices concerning our processing, use and disclosure of PII. Our publication of our privacy policy and other statements we publish that provide promises and assurances about privacy and security can subject us to potential state and federal action if they are found to be deceptive or misrepresentative of our practices.

Although we are working to comply with those federal, state, and foreign laws and regulations, industry standards, contractual obligations and other legal obligations that apply to us, those laws, regulations, standards and obligations are evolving and may be modified, interpreted and applied in an inconsistent manner from one jurisdiction to another, and may conflict with one another, other requirements or legal obligations, our practices or the features of our applications or platform. Any failure or perceived failure by us to comply with federal, state or foreign laws or regulations, industry standards, contractual obligations or other legal obligations, or any actual or suspected security incident, whether or not resulting in unauthorized access to, or acquisition, release or transfer of PII or other data, may result in governmental enforcement actions and prosecutions, private litigation, fines and penalties or adverse publicity and could cause our customers to lose trust in us, which could have an adverse effect on our reputation and business. Any inability to adequately address privacy and security concerns, even if unfounded, or comply with applicable laws, regulations, policies, industry standards, contractual obligations, or other legal obligations could result in additional cost and liability to us, damage our reputation, inhibit sales, and adversely affect our business.

We also expect that there will continue to be new proposed laws, regulations and industry standards concerning privacy, data protection and information security in the United States, the European Union and other jurisdictions, and we cannot yet determine the impact such future laws, regulations and standards may have on our business. Future laws, regulations, standards and other obligations, and changes in the interpretation of existing laws, regulations, standards and other obligations could impair our or our customers' ability to collect, use or disclose information

relating to consumers, which could decrease demand for our applications, increase our costs and impair our ability to maintain and grow our customer base and increase our revenue. New laws, amendments to or re-interpretations of existing laws and regulations, industry standards, contractual obligations and other obligations may require us to incur additional costs and restrict our business operations. Such laws and regulations may require companies to implement privacy and security policies, permit users to access, correct and delete personal information stored or maintained by such companies, inform individuals of security breaches that affect their personal information, and, in some cases, obtain individuals' consent to use PII for certain purposes. In addition, a foreign government could require that any PII collected in a country not be disseminated outside of that country, and we are not currently equipped to comply with such a requirement. Other proposed legislation could, if enacted, impose additional requirements and prohibit the use of certain technologies that track individuals' activities on web pages or that record when individuals click through to an internet address contained in an email message. Such laws and regulations could require us to change features of our software or restrict our customers' ability to collect and use email addresses, page viewing data and personal information, which may reduce demand for our software. If we fail to comply with federal, state and international data privacy laws and regulations our ability to successfully operate our business and pursue our business goals could be harmed.

We also may find it necessary or desirable to join industry or other self-regulatory bodies or other privacy- or data protection-related organizations that require compliance with their rules pertaining to privacy and data protection. We also may be bound by additional, more stringent contractual obligations relating to our collection, use and disclosure of personal, financial and other data.

We are subject to contractual clauses that require us to comply with certain provisions of the Family Educational Rights and Privacy Act and we are subject to the Children's Online Privacy Protection Act, and if we fail to comply with these laws, our reputation and business could be harmed.

The Family Educational Rights and Privacy Act, or FERPA, generally prohibits educational institutions that receive federal funding from disclosing PII from a student's education records without the student's consent. Through Canvas, our academic learning management application, our customers and users disclose to us certain information that may originate from or comprise a student education record, as the term is defined under FERPA. As an entity that provides services to institutions, we are often subject to contractual clauses that impose restrictions derived from FERPA on our ability to collect, process, transfer, disclose, and store student data, under which we may not transfer or otherwise disclose any PII from a student record to another party other than in a manner permitted under the statute. If we violate our obligations to any of our educational institution customers relating to the privacy of student records subject to FERPA, such a violation could constitute material breach of contract with one or more of our customers and could harm our reputation. Further, in the event that we disclose student information in a manner that results in a violation of FERPA by one of our educational customers, the U.S. Department of Education could require that customer to suspend our access to the customer's student information that is covered under FERPA for a period of at least five years.

We are subject to the Children's Online Privacy Protection Act, or COPPA, which applies to operators of commercial websites and online services directed to U.S. children under the age of 13 that collect personal information from children, and to operators of general audience websites with actual knowledge that they are collecting information from U.S. children under the age of 13. Canvas is directed, in part, at children under the age of 13. Through Canvas and other means, we collect certain personal information, including names and email addresses from children. COPPA is subject to interpretation by courts and other governmental authorities, including the FTC, and the FTC is authorized to promulgate, and has promulgated, revisions to regulations implementing provisions of COPPA, and provides non-binding interpretive guidance regarding COPPA that changes periodically with little or no public notice. Although we strive to ensure that our platform and applications are compliant with applicable COPPA provisions, these provisions may be modified, interpreted, or applied in new manners that we may be unable to anticipate or prepare for appropriately, and we may incur substantial costs or expenses in attempting to modify our systems, platform, applications, or other technology to address changes in COPPA or interpretations thereof. If we fail to accurately anticipate the application, interpretation or legislative expansion of COPPA we could be subject to governmental enforcement actions, litigation, fines and penalties or adverse publicity and we could be in breach of our customer contracts and our customers could lose trust in us, which could harm our reputation and business.

Third-party claims that we are infringing the intellectual property rights of others, whether successful or not, could subject us to costly and time-consuming litigation or require us to expensive licenses, and our business could be harmed.

The software industry is characterized by the existence of a large number of patents, copyrights, trademarks, trade secrets and other intellectual property rights. Companies in the software industry must often defend against litigation claims based on allegations of infringement or other violations of intellectual property rights. Third parties, including our competitors, may own patents or other intellectual property rights that cover aspects of our technology or business methods and may assert patent or other intellectual property rights within the industry. Moreover, in recent years, individuals and groups that are non-practicing entities, commonly referred to as "patent trolls," have purchased patents and other intellectual property assets for the purpose of making claims of infringement in order to extract settlements. From time to time, we may receive threatening letters, notices or "invitations to license," or may be the subject of claims that our services or software and underlying technology infringe or violate the intellectual property rights of others. Responding to such claims, regardless of their merit, can be time consuming, costly to defend in litigation, divert management's attention and resources, damage our reputation and brand and cause us to incur significant expenses.

Our technologies may not be able to withstand any third-party claims against their use. Claims of intellectual property infringement might require us to stop using technology found to be in violation of a third party's rights, redesign our application, which could require significant effort and expense, and cause delays of releases, enter into costly settlement or license agreements or pay costly damage awards, or face a temporary or permanent injunction prohibiting us from marketing or selling our software. If we cannot or do not license the infringed technology on reasonable terms or at all, or substitute similar technology from another source, we could be forced to limit or stop selling our software, we may not be able to meet our obligations to customers under our customer contracts, our revenue and operating results could be adversely impacted, and we may be unable to compete effectively. Additionally, our customers may not purchase our learning management applications if they are concerned that they may infringe third-party intellectual property rights. The occurrence of any of these events may harm our business.

In our subscription agreements with our customers, we generally agree to indemnify our customers against any losses or costs incurred in connection with claims by a third party alleging that the customer's use of our services or software infringes the intellectual property rights of the third party. Our customers who are accused of intellectual property infringement may seek indemnification from us. If any claim is successful, or if we are required to indemnify or defend our customers from any of these or other claims, these matters could be disruptive to our business and management and result in additional legal expenses.

The success of our business depends in part on our ability to protect and enforce our intellectual property rights.

Our success is dependent, in part, upon protecting our proprietary technology. We do not own any patents and we rely on a combination of copyrights, trademarks, service marks, trade secret laws and contractual restrictions to establish and protect our proprietary rights in our applications and services. However, the steps we take to protect our intellectual property may be inadequate. We will not be able to protect our intellectual property if we are unable to enforce our rights or if we do not detect unauthorized use of our intellectual property. Any of our trademarks or other intellectual property rights may be challenged by others or invalidated through administrative process or litigation. Furthermore, legal standards relating to the validity, enforceability and scope of protection of intellectual property rights are uncertain. Despite our precautions, it may be possible for unauthorized third parties to copy our technology and use information that we regard as proprietary to create applications and services that compete with ours. Some license provisions protecting against unauthorized use, copying, transfer and disclosure of our offerings may be unenforceable under the laws of certain jurisdictions and foreign countries. Our corporate name and the name of our platform and applications have not been trademarked in each market where we operate and plan to operate. If we do not secure registrations for our trademarks, we may encounter more difficulty in enforcing them against third parties. Effective copyright, trademark and trade secret protection may not be available in every country in which our platform and applications are available. The laws of some foreign countries may not be as protective of intellectual property rights as those in the United States, and mechanisms for enforcement of intellectual property rights may be inadequate. To the extent we expand our international operations, our exposure to unauthorized copying and use of our technology and proprietary information may increase. Accordingly, despite our efforts, we may be unable to prevent third parties from infringing upon or misappropriating our technology and intellectual property.

Although we enter into confidentiality and invention assignment agreements with our employees and consultants and enter into confidentiality agreements with the parties with whom we have strategic relationships and business alliances, no assurance can be given that these agreements will be effective in controlling access to and distribution of our applications and proprietary information or prevent reverse engineering. Further, these agreements may not prevent our competitors from independently developing technologies that are substantially equivalent or superior to our software and offerings, and we may be unable to prevent this competition.

We may be required to spend significant resources to monitor and protect our intellectual property rights. Litigation may be necessary in the future to enforce our intellectual property rights and to protect our trade secrets. Such litigation could be costly, time consuming and distracting to management and could result in the impairment or loss of portions of our intellectual property. Furthermore, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims and countersuits attacking the validity and enforceability of our intellectual property rights. We may not prevail in any lawsuits that we initiate. Any litigation, whether or not resolved in our favor, could subject us to substantial costs, divert resources and the attention of management and technical personnel from our business and adversely affect our business. Our inability to protect our proprietary technology against unauthorized copying or use, as well as any costly litigation, could delay further sales or the implementation of our software and offerings, impair the functionality of our software and offerings, delay introductions of new features or enhancements, result in our substituting inferior or more costly technologies into our software and offerings, or injure our reputation.

We could face liability, or our reputation might be harmed, as a result of the activities of our customers or users, the content in our platform or the data they store on our servers.

As a provider of cloud-based learning management software, we may be subject to potential liability for the activities of our customers or users on or in connection with the data they store on our servers. Although our customer terms of use prohibit illegal use of our services by our customers and permit us to take down content or take other appropriate actions for illegal use, customers may nonetheless engage in prohibited activities or upload or store content with us in violation of applicable law or the customer's own policies, which could subject us to liability or harm our reputation.

Various U.S. federal statutes may apply to us with respect to various customer activities. The Digital Millennium Copyright Act of 1998, or DMCA, provides recourse for owners of copyrighted material who believe that their rights under U.S. copyright law have been infringed on the internet. Under the DMCA, based on our current business activity as an internet service provider that does not own or control website content posted by our customers, we generally are not liable for infringing content posted by our customers or other third parties, provided that we follow the procedures for handling copyright infringement claims set forth in the DMCA. Generally, if we receive a proper notice from, or on behalf, of a copyright owner alleging infringement of copyrighted material located on websites we host, and we fail to expeditiously remove or disable access to the allegedly infringing material or otherwise fail to meet the requirements of the safe harbor provided by the DMCA, the copyright owner may seek to impose liability on us. Technical mistakes in complying with the detailed DMCA take-down procedures, or if we fail to otherwise comply with the other requirements of the safe harbor, could subject us to liability for copyright infringement.

Although statutes and case law in the United States have generally shielded us from liability for customer activities to date, court rulings in pending or future litigation may narrow the scope of protection afforded us under these laws. In addition, laws governing these activities are unsettled in many international jurisdictions, or may prove difficult or impossible for us to comply with in some international jurisdictions. Also, notwithstanding the exculpatory language of these bodies of law, we may become involved in complaints and lawsuits which, even if ultimately resolved in our favor, add cost to our doing business and may divert management's time and attention. Finally, other existing bodies of law, including the criminal laws of various states, may be deemed to apply or new statutes or regulations may be adopted in the future, any of which could expose us to further liability and increase our costs of doing business.

Additionally, our customers could use our platform or applications to store or process PII, including sensitive PII, without our knowledge of such storage or processing. In the event that our systems experience a data security incident, or an individual or entity accesses information without, or in excess of, proper authorization, we could be subject to data security incident notification laws, as described elsewhere, which may require prompt remediation and notification to individuals. If we are unaware of the data and information stored on our systems, we may be unable to appropriately comply with all legal obligations, and we may be exposed to governmental enforcement or prosecution actions, private litigation, fines and penalties or adverse publicity and these incidents could cause our customers to lose trust in us, which could harm our reputation and business.

Future acquisitions could disrupt our business and may divert management's attention and if unsuccessful, harm our business.

We may choose to expand by making acquisitions that could be material to our business. To date, we have only completed one acquisition and our ability as an organization to successfully acquire and integrate technologies or businesses is unproven and limited. Acquisitions involve many risks, including the following:

- an acquisition may negatively affect our results of operations and financial condition because it may require us to incur charges or assume substantial debt or other liabilities, may cause adverse tax consequences or unfavorable accounting treatment, may expose us to claims and disputes by third parties, including intellectual property claims and disputes, or may not generate sufficient financial return to offset additional costs and expenses related to the acquisition;
- we may encounter difficulties or unforeseen expenditures in integrating the business, technologies, products, personnel or operations of any company that we acquire, particularly if key personnel of the acquired company decide not to work for us;
- an acquisition may disrupt our ongoing business, divert resources, increase our expenses and distract our management;
- an acquisition may result in a delay or reduction of customer purchases for both us and the company we acquired due to customer uncertainty about continuity and effectiveness of service from either company;

- we may encounter difficulties in, or may be unable to, successfully sell any acquired products;
- an acquisition may involve the entry into geographic or business markets in which we have little or no prior experience or where competitors have stronger market positions;
- challenges inherent in effectively managing an increased number of employees in diverse locations;
- the potential strain on our financial and managerial controls and reporting systems and procedures;
- potential known and unknown liabilities associated with an acquired company;
- our use of cash to pay for acquisitions would limit other potential uses for our cash;
- if we incur debt to fund such acquisitions, such debt may subject us to material restrictions on our ability to conduct our business as well as financial maintenance covenants;

- the risk of impairment charges related to potential write-downs of acquired assets or goodwill in future acquisitions;
- to the extent that we issue a significant amount of equity or equity-linked securities in connection with future acquisitions, existing stockholders may be diluted and earnings per share may decrease; and
- managing the varying intellectual property protection strategies and other activities of an acquired company.

We may not succeed in addressing these or other risks or any other problems encountered in connection with the integration of any acquired business. The inability to integrate successfully the business, technologies, products, personnel or operations of any acquired business, or any significant delay in achieving integration, could harm our business and operating results.

Our ability to raise capital in the future may be limited, and if we fail to raise capital when needed, we could be prevented from growing.

Our business and operations may consume resources faster than we anticipate. While 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, in the future, we may need to raise additional funds to invest in future growth opportunities. Additional financing may not be available on favorable terms, if at all. If adequate funds are not available on acceptable terms, we may be unable to invest in future growth opportunities, which could harm our business and operating results. If we incur debt, the debt holders would have rights senior to common stockholders to make claims on our assets. In addition, our credit facility imposes, and future debt instruments may impose, restrictions on our ability to dispose property, make changes in our business, engage in mergers or acquisitions, incur additional indebtedness, and make investments and distributions. Furthermore, if we issue additional equity securities, stockholders will experience dilution, and the new equity securities could have rights senior to those of our common stock. Because our decision to issue securities in any future offering will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of our future offerings. As a result, stockholders bear the risk that future securities offerings reduce the market price of our common stock and dilute their interest.

We may be subject to additional obligations to collect and remit sales tax and other taxes, and we may be subject to tax liability for past sales, which could harm our business.

State, local and foreign jurisdictions have differing rules and regulations governing sales, use, value added and other taxes, and these rules and regulations are subject to varying interpretations that may change over time. In particular, the applicability of such taxes to our learning management software in various jurisdictions is unclear. Further, these jurisdictions' rules regarding tax nexus are complex and vary significantly. As a result, we could face the possibility of tax assessments and audits, and our liability for these taxes and associated penalties could exceed our original estimates. A successful assertion that we should be collecting additional sales, use, value added or other taxes in those jurisdictions where we have not historically done so and do not accrue for such taxes could result in substantial tax liabilities and related penalties for past sales, discourage customers from purchasing our application or otherwise harm our business and operating results.

Changes in tax laws or regulations that are applied adversely to us or our customers could increase the costs of learning management software and adversely impact our business.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time. Any new taxes could adversely affect our domestic and international business operations, and our business and financial performance. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us. These events could require us or our customers to pay additional tax amounts on a prospective or retroactive basis, as well as require us or our customers to pay fines or penalties and interest for past amounts deemed to be due. If we raise our prices to offset the costs of these changes, existing and potential future

customers may elect not to continue or purchase our learning management platform or applications in the future. Additionally, new, changed, modified or newly interpreted or applied tax laws could increase our customers' and our compliance, operating and other costs, as well as the costs of our software. Any or all of these events could harm our business and operating results.

We are a multinational organization faced with increasingly complex tax issues in many jurisdictions, and we could be obligated to pay additional taxes in various jurisdictions.

As a multinational organization, we are subject to taxation in several jurisdictions around the world with increasingly complex tax laws, the application of which can be uncertain. The amount of taxes we pay in these jurisdictions could increase substantially as a result of changes in the applicable tax principles, including increased tax rates, new tax laws or revised interpretations of existing tax laws and precedents, which could harm our liquidity and operating results. In addition, the authorities in these jurisdictions could review our tax returns and impose additional tax, interest and penalties, and the authorities could claim that various withholding requirements apply to us or our subsidiaries or assert that benefits of tax treaties are not available to us or our subsidiaries, any of which could adversely affect our operating results.

Risks Related to Our Common Stock

Our stock price has been and will likely continue to be volatile and may decline regardless of our operating performance.

The trading price of our common stock has been, and is likely to continue to be, volatile for the foreseeable future. For example, during 2016, our common stock's daily closing price on the New York Stock Exchange has ranged from $13.79 to $26.66. The market price of our common stock may fluctuate significantly in response to numerous factors, many of which are beyond our control, including:

- actual or anticipated fluctuations in our revenue and other operating results, including as a result of the addition or loss of any number of customers;
- announcements by us or our competitors of new products or applications, significant technical innovations, acquisitions, strategic partnerships, joint ventures or capital commitments;
- the financial projections we may provide to the public, any changes in these projections or our failure to meet these projections;
- failure of securities analysts to maintain coverage of us, changes in ratings and financial estimates and the publication of other news by any securities analysts who follow our company, or our failure to meet these estimates or the expectations of investors;
- changes in operating performance and stock market valuations of cloud-based software or other technology companies, or those in our industry in particular;
- the size of our public float;
- price and volume fluctuations in the trading of our common stock and in the overall stock market, including as a result of trends in the economy as a whole;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business or industry, including data privacy and data security;
- lawsuits threatened or filed against us for claims relating to intellectual property, employment issues or otherwise;
- changes in our board of directors or management;
- short sales, hedging and other derivative transactions involving our common stock;
- sales of large blocks of our common stock including sales by our executive officers, directors and significant stockholders; and
- other events or factors, including changes in general economic, industry and market conditions and trends, as well as any natural disasters that may affect our operations.

In addition, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many technology companies, including providers of cloud-based software. Stock prices of many technology companies have fluctuated in a manner unrelated or disproportionate to the operating performance of those companies.

In the past, stockholders have instituted securities class action litigation following periods of market volatility. If we were to become involved in securities litigation, it could subject us to substantial costs, divert resources and the attention of management and harm our business.

Future sales of shares by stockholders could cause our stock price to decline.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amounts of our common stock in the public market, the market price of our common stock could decline. We are unable to predict the effect that such sales may have on the prevailing market price of our common stock.

As of December 31, 2016, we had options outstanding that, if fully exercised, would result in the issuance of 3,106,738 shares of common stock and RSUs outstanding that, upon vesting, would result in the issuance of 1,132,768 shares of common stock. In addition, as of December 31, 2016, there were 1,676,503 shares of common stock reserved for future issuance under our 2015 Equity Incentive Plan and 321,140 shares of common stock reserved for issuance under our 2015 Employee Stock Purchase Plan. The authorized number of shares under both such benefit plans are subject to automatic annual increases in the number of shares of common stock reserved for future issuance on January 1 of each year. All of the shares of common stock issuable pursuant to our equity compensation plans have been registered for public resale under the Securities Act of 1933, as amended, or the Securities Act. Accordingly, these shares will be able to be freely sold in the public market upon issuance as permitted by any applicable vesting requirements.

Moreover, as of December 31, 2016, the holders of an aggregate of up to approximately 10.4 million shares of common stock have rights, subject to some conditions, to require us to file one or more registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. If we were to register these shares for resale, they could be freely sold in the public market. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the market price of our common stock could decline.

The concentration of our stock ownership will likely limit your ability to influence corporate matters, including the ability to influence the outcome of director elections and other matters requiring stockholder approval.

Based upon shares outstanding as of December 31, 2016, our executive officers, directors and the holders of more than 5% of our outstanding common stock, in the aggregate, beneficially owned approximately 48.4% of our common stock. As a result, these stockholders, acting together, will have significant influence over all matters that require approval by our stockholders, including the election of directors and approval of significant corporate transactions. Corporate actions might be taken even if other stockholders oppose them. This concentration of ownership might also have the effect of delaying or preventing a change of control of our company that other stockholders may view as beneficial.

If securities or industry analysts do not publish research or reports about our business, or if they downgrade our common stock, the price of our common stock could decline.

The trading market for our common stock depends, in part, on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us downgrade our stock, publish inaccurate or unfavorable research about our business or cease to maintain coverage, our stock price would likely decline. In addition, if our operating results fail to meet the forecast of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause our stock price and trading volume to decline.

We are an “emerging growth company” and the reduced disclosure requirements applicable to emerging growth companies may make our common stock less attractive to investors.

We are an “emerging growth company,” as defined in the JOBS Act, and we have taken advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies” including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced financial disclosure obligations, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments not previously approved. As an “emerging growth company” under the JOBS Act, we are permitted to delay the adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements are made applicable to private companies. However, we are electing not to take advantage of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to not take advantage of the extended transition period for complying with new or revised accounting standards is irrevocable.

We may take advantage of these provisions until we are no longer an “emerging growth company.” We would cease to be an “emerging growth company” upon the earliest to occur of: the last day of the fiscal year in which we have more than $1.0 billion in annual revenue; the date we qualify as a “large accelerated filer,” with at least $700 million of equity securities held by non-affiliates; the issuance, in any three-year period, by us of more than $1.0 billion in non-convertible debt securities; and the last day of 2020. If we take advantage of any of these reduced reporting burdens in future filings, the information that we provide our security holders may be different than you might get from other public companies in which you hold equity interests. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

We have incurred, and expect to incur, increased costs and demands upon management as a result of complying with the laws and regulations affecting public companies, particularly after we are no longer an “emerging growth company,” which could adversely affect our business, operating results and financial condition.

As a public company, we have incurred greater legal, accounting and other expenses than we incurred as a private company, and we expect these costs to increase after we cease to be an “emerging growth company”. We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, and the rules and regulations of the New York Stock Exchange. These requirements have increased and will continue to increase our legal, accounting and financial compliance costs and have made and will continue to make some activities more time consuming and costly. After we are no longer an emerging growth company, or sooner if we choose not to take advantage of certain exemptions set forth in the JOBS Act, we expect to incur significant expenses and devote substantial management effort toward ensuring compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act. In that regard, we will need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge.

If we do not continue to develop effective internal controls, we may not be able to accurately report our financial results and our business could be harmed.

The Sarbanes-Oxley Act requires, among other things, that we assess the effectiveness of our internal control over financial reporting annually and the effectiveness of our disclosure controls and procedures quarterly. In particular, Section 404 of the Sarbanes-Oxley Act, or Section 404, now requires us to perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on, and our independent registered public accounting firm potentially to attest to, the effectiveness of our internal control over financial reporting. As an emerging growth company, we expect to avail ourselves of the exemption from the requirement that our independent registered public accounting firm attest to the effectiveness of our internal control over financial reporting under Section 404. However, we may no longer avail ourselves of this exemption when we cease to be an emerging growth company. When our independent registered public accounting firm is required to undertake an assessment of our internal control over financial reporting, the cost of our compliance with Section 404 will correspondingly increase. Our compliance with applicable provisions of Section 404 will require that we incur substantial accounting expense and expend significant management time on compliance-related issues as we implement additional corporate governance practices and comply with reporting requirements. Moreover, if we are not able to comply with the requirements of Section 404 applicable to us in a timely manner, or if we or our independent registered public accounting firm identifies deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by the SEC or other regulatory authorities, which would require additional financial and management resources.

Investor perceptions of our company may suffer if material weaknesses are found, and this could cause a decline in the market price of our common stock. Irrespective of compliance with Section 404, any failure of our internal control over financial reporting could harm our operating results and reputation. If we are unable to implement these requirements effectively or efficiently, it could harm our operations, financial reporting, or financial results and could result in an adverse opinion on our internal controls from our independent registered public accounting firm.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws and under Delaware law might discourage, delay or prevent a change of control of our company or changes in our management and, therefore, depress the trading price of our common stock.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could depress the trading price of our common stock by acting to discourage, delay or prevent a change of control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions:

- authorize the issuance of "blank check" preferred stock that our board of directors could issue to increase the number of outstanding shares to discourage a takeover attempt;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- prohibit stockholders from calling a special meeting of our stockholders;
- provide that the board of directors is expressly authorized to make, alter or repeal our bylaws; and
- establish advance notice requirements for nominations for elections to our board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings.

Additionally, we are subject to Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any "interested" stockholder for a period of three years following the date on which the stockholder became an "interested" stockholder and which may discourage, delay or prevent a change of control of our company.

Any provision of our amended and restated certificate of incorporation, bylaws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for: any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officer and other employees. If a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business and financial condition.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

We lease space for our corporate headquarters in Salt Lake City, Utah pursuant to leases that expire in February 2025 and October 2027. We plan to move into additional office space in Pleasant Grove, Utah pursuant to a lease with a term of 10 years when the facility is completed. We also lease space in Chicago, Illinois for certain research and development functions pursuant to a lease that expires in July 2022 as well as office space in Seattle, Washington for engineering functions. We maintain our international headquarters in London, England and sales offices in Sydney, Australia, Hong Kong and Sao Paulo, Brazil. We believe our facilities are adequate for our current needs.

Item 3. 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 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Our common stock is traded on the New York Stock Exchange under the symbol "INST." Trading of our common stock commenced on November 13, 2015 in connection with our initial public offering. The following table sets forth, for the periods indicated, the high and low sales price for our common stock as reported on the New York Stock Exchange.

	2016	
	High	Low
First quarter	$22.38	$13.79
Second quarter	$21.88	$16.73
Third quarter	$25.66	$18.58
Fourth quarter	$26.66	$18.65
	2015	
	High	Low
Fourth quarter (beginning November 13, 2015)	$23.63	$15.75

Holders

As of February 8, 2017, there were approximately 76 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders and includes stockholders who are beneficial owners but whose shares are held in street name by brokers and other nominees.

Dividends

We have never declared or paid cash dividends on our capital stock. We intend to retain all available funds and future earnings, if any, to fund the development and expansion of our business and we do not anticipate paying any cash dividends in the foreseeable future. The terms of our credit facility also restrict our ability to pay dividends, and we may also enter into debt instruments in the future that will restrict our ability to declare or pay cash dividends on our common stock. Any future determination related to dividend policy will be made at the discretion of our board of directors and will be dependent on a number of factors, including our earnings, capital requirements and overall financial condition.

Performance Graph

The following graph compares the performance of our common stock for the period indicated with the performance of the S&P 500 and the S&P 1500 Application Software Index. This graph assumes an investment of $100 on November 13, 2015 in each of our common stock, the S&P 500 and the S&P 1500 Application Software Index, and assumes reinvestment of dividends, if any. The stock price performance shown on the graph below is not necessarily indicative of future stock price performance.

This information under “Stock Performance Graph” is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference in any filing of Instructure, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K and irrespective of any general incorporation language in those filings.

Sales of Unregistered Securities

None.

Use of Proceeds

On November 12, 2015, our registration statement on Form S-1 (No. 333-207349) was declared effective for our IPO. There has been no material change in the planned use of proceeds from our IPO from that described in the prospectus filed with the SEC pursuant to Rule 424(b)(4) under the Securities Act on November 13, 2015. As of December 31, 2016, we have used $34.9 million of the net IPO proceeds to fund our operations. As of December 31, 2016, no portion of the net IPO proceeds have been paid directly or indirectly by us to any of our directors or officers (or their associates) or persons owning ten percent or more of our equity securities, other than payments in the ordinary course of business to officers for salaries and bonuses, and payments to our directors for service on our Board of Directors.

Item 6. Selected Financial Data.

SELECTED CONSOLIDATED FINANCIAL DATA

You should read the selected consolidated financial data below in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements, related notes and other financial information included elsewhere in this Annual Report on Form 10-K. The selected consolidated financial data in this section are not intended to replace the consolidated financial statements and are qualified in their entirety by the consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K.

The following selected consolidated statements of operations data for the years ended December 31, 2016, 2015 and 2014 and the consolidated balance sheet data as of December 31, 2016 and 2015 have been derived from our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K. The consolidated statement of operations data for the years ended December 31, 2013 and 2012 and consolidated balance sheet data as of December 31, 2014 and 2013 has been derived from our audited financial statements not included in this Annual Report on Form 10-K. Our historical results are not necessarily indicative of the results that may be expected in the future.

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(in thousands, except per share data)				
Consolidated Statements of Operations Data:					
Revenue:					
Subscription and support	$97,115	$62,463	$38,093	$22,456	$7,403
Professional services and other	13,765	10,730	6,259	3,599	1,371
Total revenue	110,880	73,193	44,352	26,055	8,774
Cost of revenue:					
Subscription and support[1][2]	24,252	17,682	12,131	8,581	4,346
Professional services and other[1]	8,497	6,391	2,982	2,039	2,748
Total cost of revenue	32,749	24,073	15,113	10,620	7,094
Gross profit	78,131	49,120	29,239	15,435	1,680
Operating expenses:					
Sales and marketing[1][2]	69,991	53,459	35,390	20,702	11,912
Research and development[1][2][3]	35,973	24,151	21,290	11,242	4,698
General and administrative[1][2]	25,542	23,482	11,268	5,321	3,411
Total operating expenses	131,506	101,092	67,948	37,265	20,021
Loss from operations	(53,375)	(51,972)	(38,709)	(21,830)	(18,341)
Other income (expense):					
Interest income	352	39	32	22	8
Interest expense	(87)	(74)	(136)	(150)	(7)
Change in fair value of warrant liability	62	(653)	(2,518)	(545)	(199)
Other income (expense), net	(353)	(201)	(39)	4	3
Total other expense, net	(26)	(889)	(2,661)	(669)	(195)
Loss before income taxes	(53,401)	(52,861)	(41,370)	(22,499)	(18,536)
Income tax expense	(167)	(117)	(57)	—	—

Net loss	$(53,568)	$(52,978)	$(41,427)	$(22,499)	$(18,536)

35

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(in thousands, except per share data)				
Deemed dividends to investors	$—	$(632)	$—	$(353)	$—
Net loss attributable to common stockholders	$(53,568)	$(53,610)	$(41,427)	$(22,852)	$(18,536)
Net loss per common share attributable to common stockholders, basic and diluted[4]	$(1.92)	$(6.07)	$(7.50)	$(6.26)	$(5.36)
Weighted average common shares used in computing basic and diluted net loss per common share attributable to common stockholders[4]	27,838	8,838	5,525	3,650	3,456

(1) Includes stock-based compensation as follows:

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(in thousands)				
Cost of revenue:					
Subscription and support	$488	$177	$258	$28	$7
Professional services and other	474	166	39	8	5
Sales and marketing	3,030	1,228	2,877	1,597	473
Research and development	3,862	1,403	3,971	1,585	442
General and administrative	2,820	6,262	1,053	374	910
Total stock-based compensation	$10,674	$9,236	$8,198	$3,592	$1,837

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

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(in thousands)				
Cost of revenue:					
Subscription and support	$-	$-	$30	$-	$-
Professional services and other		-	-	-	-
Sales and marketing	(57)	-	461	267	57
Research and development	(57)	-	653	267	57

General and administrative	(103)	1,327	81	-	104
Total payroll tax expense	$(217)	$1,327	$1,225	$534	$218

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

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(in thousands)				
Cost of revenue:					
Subscription and support	$-	$ -	$ -	$ -	$ -
Professional services and other	-	-	-	-	-
Sales and marketing	-	-	-	-	-
Research and development	9	9	6	-	-
General and administrative	-	-	-	-	-
Total amortization of acquisition-related intangibles	$9	$ 9	$ 6	$ -	$ -

(4) See Note 1 to our consolidated financial statements for an explanation of the method used to calculate basic and diluted net loss per common share attributable to common stockholders.

	As of December 31,			
	2016	2015[1]	2014	2013
	(in thousands)			
Consolidated Balance Sheet Data:				
Cash and cash equivalents	$44,539	$90,471	$43,915	$13,138
Working capital, excluding deferred revenue	75,824	92,638	47,440	22,023
Total assets	111,336	121,060	67,026	41,169
Deferred revenue	75,891	52,325	31,954	19,466
Total liabilities	101,372	75,441	53,568	35,155
Redeemable convertible preferred stock	—	—	88,989	49,092
Total stockholders' equity (deficit)	9,964	45,619	(75,531)	(43,078)

(1) In November 2015, we completed our IPO of 5,060,000 shares of common stock at an initial price to the public of $16.00 per share. The IPO resulted in net proceeds to us of approximately $71.4 million, after deducting underwriting discounts and commission and other offering expenses, and resulted in the conversion of our redeemable convertible preferred stock into common stock.

Non-GAAP Financial Measures

In addition to our results determined in accordance with U.S. generally accepted accounting principles, or 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.

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(unaudited)				
	(in thousands)				
Other Financial Data:					
Non-GAAP Operating Loss [1]	(42,909)	(41,400)	(29,280)	(17,704)	(16,286)
Free Cash Flow [2]	(29,287)	(25,983)	(22,798)	(9,631)	(8,945)

(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 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 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 provided by (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:

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(unaudited)				
	(in thousands)				
Loss from operations	$(53,375)	$(51,972)	$(38,709)	$(21,830)	$(18,341)
Stock-based compensation	10,674	9,236	8,198	3,592	1,837
Payroll tax expense on secondary stock purchase transactions	—	1,327	1,225	534	218
Reversal of payroll tax expense on secondary stock purchase transactions	(217)	—	—	—	—
Amortization of acquisition related intangibles	9	9	6	—	—
Non-GAAP operating loss	$(42,909)	$(41,400)	$(29,280)	$(17,704)	$(16,286)

The following table provides a reconciliation of net cash provided by operating activities to free cash flow:

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(unaudited)				
	(in thousands)				
Net cash used in operating activities	$(21,608)	$(19,351)	$(20,395)	$(8,634)	$(7,946)
Less: purchases of property and equipment and intangible assets	7,742	6,696	2,440	997	999
Plus: proceeds from disposals of property and equipment	63	64	37	—	—
Free cash flow	$(29,287)	$(25,983)	$(22,798)	$(9,631)	$(8,945)

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

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 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. 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 December 31, 2016, we have grown to serve more than 2,000 customers, representing colleges, universities, K-12 school districts, and companies in more than 40 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, 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 each of December 31, 2016, 2015 and 2014. For 2016, 2015 and 2014, our revenue was $110.9 million, $73.2 million and $44.4 million, respectively, representing year-over-year growth of 51% and 65%. For 2016, 2015 and 2014, our net losses were, $53.6 million, $53.0 million and $41.4 million, 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 these areas. 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. In 2016, 2015 and 2014 9%, 6% and 4%, respectively, of our revenue was derived from outside the United States. 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 December 31, 2016, 2015 and 2014.

Backlog

Backlog represents future non-cancellable amounts to be invoiced under our agreements. We have generally signed multiple year subscription contracts for our applications. For these agreements, it is common to invoice an initial amount at contract signing followed by subsequent periodic invoices, generally annually. At any point in the contract term, there can be amounts that we have not yet been contractually able to invoice. Until such time as these amounts are invoiced, they are not recorded in revenue, deferred revenue, accounts receivable or elsewhere in our consolidated financial statements, and are considered by us to be backlog. Multiple-year payments are recorded as deferred revenue until recognized as revenue according to our revenue recognition policies and are not considered a component of backlog. As of December 31, 2016, 2015 and 2014, we had backlog of approximately, $213.0 million, $151.7 million and $113.2 million, respectively. We expect backlog to fluctuate up or down from period to period for several reasons, including the timing and duration of customer contracts, varying billing cycles and the timing of customer renewals.

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 “Selected Consolidated Financial Data—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. In February 2015, preferred stock warrants were exercised which resulted in the reclassification of the warrant liability of $3.9 million to additional paid-in capital. 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.

Results of Operations

The following tables set forth certain consolidated financial data in dollar amounts and as a percentage of total revenue.

	Year Ended December 31,		
	2016	2015	2014
	(in thousands)		
Revenue:			
Subscription and support	$97,115	$62,463	$38,093
Professional services and other	13,765	10,730	6,259
Total revenue	110,880	73,193	44,352
Cost of revenue:			
Subscription and support	24,252	17,682	12,131
Professional services and other	8,497	6,391	2,982
Total cost of revenue	32,749	24,073	15,113
Gross profit	78,131	49,120	29,239
Operating expenses:			
Sales and marketing	69,991	53,459	35,390
Research and development	35,973	24,151	21,290
General and administrative	25,542	23,482	11,268
Total operating expenses	131,506	101,092	67,948
Loss from operations	(53,375)	(51,972)	(38,709)
Other income (expense):			
Interest income	352	39	32
Interest expense	(87)	(74)	(136)
Change in fair value of warrant liability	62	(653)	(2,518)
Other income (expense), net	(353)	(201)	(39)
Total other expense, net	(26)	(889)	(2,661)
Loss before income taxes	(53,401)	(52,861)	(41,370)
Income tax expense	(167)	(117)	(57)
Net loss	$(53,568)	$(52,978)	$(41,427)

	Year Ended December 31,		
	2016	2015	2014
	(as a percentage of total revenue)		
Revenue:			
Subscription and support	88 %	85 %	86 %
Professional services and other	12	15	14
Total revenue	100	100	100
Cost of revenue:			
Subscription and support	22	24	27
Professional services and other	8	9	7
Total cost of revenue	30	33	34
Gross profit	70	67	66
Operating expenses:			
Sales and marketing	63	73	80
Research and development	32	33	48
General and administrative	23	32	25
Total operating expenses	118	138	153
Loss from operations	(48)	(71)	(87)
Other income (expense):			
Interest income	0	0	0
Interest expense	(0)	(0)	0
Change in fair value of warrant liability	0	(1)	(6)
Other income (expense), net	(0)	(0)	0
Total other expense, net	(0)	(1)	(6)
Loss before income taxes	(48)	(72)	(93)
Income tax expense	(0)	(0)	0
Net loss	(48)%	(72)%	(93)%

Year Ended December 31, 2016 Compared to the Year Ended December 31, 2015

Revenue

	Year Ended December 31,		Change	
	2016	2015	Amount	%
	(dollars in thousands)			
Subscription and support	$97,115	$62,463	$34,652	55%
Professional services and other	13,765	10,730	3,035	28
Total revenue	$110,880	$73,193	$37,687	51

Subscription and support revenue increased $34.7 million for the year ended December 31, 2016 primarily due to an increase in the total number of customers, which grew from approximately 1,800 as of December 31, 2015 to well over 2,000 as of December 31, 2016.

Professional services and other revenue increased $3.0 million for the year ended December 31, 2016 primarily due to an increase in new customers discussed above and an increase in the training completion rate.

Cost of Revenue and Gross Margin

	Year Ended December 31,		Change	
	2016	2015	Amount	%
	(dollars in thousands)			
Cost of revenue:				
Subscription and support	$24,252	$17,682	$6,570	37%
Professional services and other	8,497	6,391	2,106	33
Total cost of revenue	$32,749	$24,073	$8,676	36
Gross margin percentage:				
Subscription and support	75%	72%		
Professional services and other	38	40		
Total gross margin	70	67		

Total cost of revenue increased $8.7 million for the year ended December 31, 2016 primarily due to an increase in employee-related costs, web hosting costs and third-party software license costs, amortization of developed technology and allocated overhead expenses. 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 $6.6 million for the year ended December 31, 2016 primarily due to an increase in web hosting and third-party software license costs, employee-related costs, amortization of developed technology and allocated overhead expenses. Web hosting and third-party software license costs increased $3.1 million due to the increase in total customers. Employee-related costs increased $2.3 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 $0.6 million due to the continued development of our software platform. Allocated overhead expenses and other insignificant items increased $0.6 million primarily due to higher rent and communication expense and maintenance on our facilities.

Professional services and other costs of revenue increased $2.1 million for the year ended December 31, 2016 primarily due to an increase in employee-related costs and allocated overhead expenses. Employee-related costs increased $1.6 million as we continued to grow our professional services organization to support our customer growth and improve service levels and offerings. Travel and outsider contractor costs increased $0.2 million due to the increase in total customers and demand for training and professional services. Allocated overhead expenses and other insignificant items increased $0.3 million primarily due to higher rent and communication expense and maintenance on our facilities.

Operating Expenses

Sales and Marketing

	Year Ended	Change

	December 31,			
	2016	2015	Amount	%
	(dollars in thousands)			
Sales and marketing	$69,991	$53,459	$16,532	31%

Sales and marketing expenses increased $16.5 million for the year ended December 31, 2016 primarily due to an increase in employee-related and sales commission costs, expansion of our marketing programs, travel, information technology and allocated overhead expenses. Employee-related and sales commission costs increased $12.6 million as a result of hiring of additional employees domestically and internationally and growth in our customer base. Marketing program costs increased $1.7 million due to continued expansion into international and corporate markets and growth in our annual user conference, InstructureCon. Travel costs increased $0.8 million as we continue to expand our sales and marketing organization and grow our customer base. Information technology expenses increased $0.8 million as we continue to automate our internal systems. Allocated overhead expenses increased $0.6 million primarily due to higher rent and communication expense and maintenance on our facilities.

Research and Development

	Year Ended December 31,		Change	
	2016	2015	Amount	%
	(dollars in thousands)			
Research and development	$35,973	$24,151	$11,822	49%

Research and development expenses increased $11.8 million for the year ended December 31, 2016 primarily due to an increase in employee-related costs, information technology, and allocated overhead expenses. Employee-related costs increased $10.2 million, information technology expenses increased $0.8 million, as we continue to grow our engineering organization to develop new applications and continue to develop additional features for Canvas and Bridge. Allocated overhead expenses increased $0.4 million primarily due to higher rent and communication expense and maintenance on our facilities. Outside contractors and other insignificant items increase by $0.4 million primarily due to outsourced development and depreciation on capital equipment.

General and Administrative

	Year Ended December 31,		Change	
	2016	2015	Amount	%
	(dollars in thousands)			
General and administrative	$25,542	$23,482	$2,060	9%

General and administrative expenses increased $2.1 million for the year ended December 31, 2016 primarily due to an increase in employee-related costs, information technology, third-party services and allocated overhead expenses. Stock-based compensation decreased $3.4 million resulting from expense associated with the purchase, by an investor, of common stock from current and former employees at a premium over fair value offset by salaries and wages of $2.3 million. Our information technology expenses increased $0.9 million as we continued to automate our internal systems. Third-party services increased $1.2 million primarily due to legal and administrative costs relating to our continued expansion. Allocated overhead and other insignificant expenses increased $1.1 million primarily due to increased business insurance, higher rent and communication expense, maintenance on our facilities and depreciation of capital equipment.

Other Income (Expense)

	Year Ended	Change

	December 31, 2016	2015	Amount	%
	(dollars in thousands)			
Other expense, net	$(26)	$(889)	$863	-97%

Other 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 expense, net decreased $0.9 million for the year ended December 31, 2016 as the change in fair value of warrant liability decreased $0.7 million due to the exercise of the majority of common stock warrants in February 2016, in addition to a net decrease in the fair value of the warrant liability for the period. This expense was further decreased by $0.3 million due to an increase in interest income and was partially offset by a $0.1 million increase in net foreign currency transaction losses.

Year Ended December 31, 2015 Compared to the Year Ended December 31, 2014

Revenue

	Year Ended December 31, 2015	2014	Change Amount	%
	(dollars in thousands)			
Subscription and support	$62,463	$38,093	$24,370	64%
Professional services and other	10,730	6,259	4,471	71
Total revenue	$73,193	$44,352	$28,841	65

Subscription and support revenue increased $24.4 million for the year ended December 31, 2015 primarily due to an increase in the total number of customers, which grew from approximately 1,000 as of December 31, 2014 to over 1,800 as of December 31, 2015.

Professional services and other revenue increased $4.5 million for the year ended December 31, 2015 primarily due to an increase in new customers and the sale of premium implementations, which include additional professional services and onsite training.

Cost of Revenue and Gross Margin

	Year Ended December 31,		Change	
	2015	2014	Amount	%
	(dollars in thousands)			
Cost of revenue:				
Subscription and support	$17,682	$12,131	$5,551	46 %
Professional services and other	6,391	2,982	3,409	114
Total cost of revenue	$24,073	$15,113	$8,960	59
Gross margin percentage:				
Subscription and support	72 %	68 %		
Professional services and other	40	52		
Total gross margin	67	66		

Total cost of revenue increased $9.0 million for the year ended December 31, 2015 primarily due to an increase in employee-related costs, web hosting costs and amortization of developed technology. Total gross margin increased slightly as the impact of improved leverage of our web hosting costs relative to the growth in subscription and support revenue was offset by higher costs of professional services and other revenue.

Subscription and support cost of revenue increased $5.6 million for the year ended December 31, 2015 primarily due to an increase in employee-related costs, web hosting and third-party software license costs, amortization of developed technology and overhead allocations. Employee-related costs increased $2.4 million as we continued to grow our customer support organization to support our customer growth and improve service levels and offerings. Web hosting and third-party software license costs increased $2.4 million due to the increase in total customers. Amortization of capitalized software development costs increased $0.4 million due to the continued development of our software platform. Allocated overhead expenses increased $0.3 million primarily due to higher rent expense and the depreciation of capital equipment. The remaining $0.1 million increase is due to other insignificant items.

Professional services and other costs of revenue increased $3.4 million for the year ended December 31, 2015 primarily due to an increase in employee-related costs, travel costs, outside contractors and overhead allocations. Employee-related costs increased $2.5 million as we continued to grow our professional services organization to support our customer growth and improve service levels and offerings. Travel and other costs increased $0.4 million as our premium implementations provided for onsite training. Outside contractor costs increased $0.2 million due to an increase in seasonal demand for training and professional services. Allocated overhead expenses and other insignificant items increased $0.3 million primarily due to higher rent expense and the depreciation of capital equipment.

Operating Expenses

Sales and Marketing

	Year Ended December 31,		Change	
	2015	2014	Amount	%
	(dollars in thousands)			
Sales and marketing	$53,459	$35,390	$18,069	51%

Sales and marketing expenses increased $18.1 million for the year ended December 31, 2015 primarily due to an increase in employee-related costs and sales commissions, expansion of marketing programs to new international and corporate markets, travel, overhead, and information technology expenses. Employee-related costs and sales commissions increased $11.8 million as a result of the hiring of additional employees and growth in our customer base. Marketing program costs increased $3.3 million as we launched Bridge in February 2015, expanded into international markets, and increased attendance at InstructureCon, our annual user conference. Travel and other costs increased $1.6 million as we continued to expand our sales and marketing organization to grow our customer base. Allocated overhead expenses increased $0.9 million primarily due to higher rent expense and the depreciation of capital equipment. Information technology expenses increased $0.8 million as we continue to automate our internal systems. These increases were offset by a decrease in outside contractor costs of $0.3 million.

Research and Development

	Year Ended December 31,		Change	
	2015	2014	Amount	%
	(dollars in thousands)			
Research and development	$24,151	$21,290	$2,861	13%

Research and development expenses increased $2.9 million for the year ended December 31, 2015 primarily due to an increase in employee-related costs of $2.6 million and information technology expenses and allocations of $0.3, as we continue to grow our engineering organization to develop new applications and continue to develop additional features for Canvas and Bridge.

General and Administrative

	Year Ended December 31,		Change	
	2015	2014	Amount	%
	(dollars in thousands)			
General and administrative	$23,482	$11,268	$12,214	108%

General and administrative expenses increased $12.2 million for the year ended December 31, 2015 primarily due to an increase in employee-related costs, including stock-based compensation, information technology, travel and other expenses, third-party services and overhead allocations. Stock-based compensation increased $5.2 million as a result of a non-cash expense associated with the purchase by an investor of common stock from current and former employees at a premium over fair value. Employee-related costs increased $5.3 million as a result of the recruiting and hiring of additional employees. Our information technology expenses increased $0.7 million as we continued to automate our internal systems. Travel expenses increased $0.2 million primarily due to our continued growth and international expansion. Third-party services increased $0.4 million due to tax and legal costs relating to our international expansion. Allocated overhead expenses and other insignificant items increased $0.4 million primarily

due to higher rent expense and the depreciation of capital equipment.

Other Income (Expense)

	Year Ended December 31,		Change	
	2015	2014	Amount	%
	(dollars in thousands)			
Other expense, net	$(889)	$(2,661)	$1,772	(67)%

Other 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 expense decreased $1.8 million for the year ended December 31, 2015 as the change in fair value of warrant liability decreased due to the exercise of the redeemable convertible preferred stock warrants in February 2015. The decrease in the change in fair value of warrant liability was offset by an increase in net foreign currency transaction losses.

Liquidity and Capital Resources

As of December 31, 2016, we had $44.5 million of cash and cash equivalents and $23.9 million in short-term marketable securities. We believe our cash and cash equivalents, short-term marketable securities, 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 2015, we entered into an amended and restated loan and security agreement, or credit facility, with Silicon Valley Bank, or SVB. The agreement provides for up to $15.0 million in revolving borrowings (subject to increase to $25.0 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 2017, 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 December 31, 2016, 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 monthly. During the continuance of an event of default, SVB may accelerate amounts outstanding, terminate the credit facility and foreclose on the collateral. As of December 31, 2016, we were in compliance with all covenants under the terms of the credit facility.

The following table shows our cash flows for 2016, 2015 and 2014:

	Year Ended December 31,		
	2016	2015	2014
	(in thousands)		
Net cash used in operating activities	$(21,608)	$(19,351)	$(20,395)
Net cash (used in) provided by investing activities	(31,306)	(6,469)	10,003
Net cash provided by financing activities	6,982	72,376	41,169

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, change in fair value of warrant liability, depreciation and amortization and other non-cash charges, net. We expect that we will continue to use cash from operating activities as we continue to invest in and grow our business.

Net cash used in operating activities during 2016 primarily reflected our net loss of $53.6 million, offset by non-cash expenses that included $10.7 million of stock-based compensation and $4.4 million of depreciation and amortization. Working capital sources of cash included a net increase of $23.6 million in deferred revenue primarily resulting from the growth in customers during the period and a $3.7 million increase in accounts payable and accrued liabilities. These sources were partially offset by an increase in accounts receivable of $8.8 million, an increase in prepaids and other assets of $0.8 million and a decrease to deferred rent and other liabilities of $0.8 million.

Net cash used in operating activities during 2015 primarily reflected our net loss of $53.0 million, offset by non-cash expenses that included $9.2 million of stock-based compensation, $3.0 million of depreciation and amortization, and $0.7 million in change in fair value of warrant liability. Working capital sources of cash included a net increase of $18.8 million in deferred revenue and accounts receivable primarily resulting from the growth in customers during the period. Also contributing to the source of cash was a $3.9 million increase in accounts payable and a $0.7 million increase to straight-line deferred rent expense, offset by an increase in prepaid expenses and other assets of $2.7 million.

Net cash used in operating activities during 2014 primarily reflected our net loss of $41.4 million, offset by non-cash expenses that included $8.2 million in stock-based compensation, $2.6 million for the change in warrant liability, and $2.1 million of depreciation and amortization. Working capital sources of cash included a $12.5 million increase in deferred revenue primarily resulting from the growth in the number of customers invoiced during the period and a $2.5 million increase in accounts payable and accrued expenses as a result of a higher level of expenses consistent with the overall growth of the business. These sources of cash were offset by a $4.3 million increase in accounts receivable as a result of increased billings to customers consistent with the overall growth of the business, a $2.3 million increase in prepaid expenses and other assets resulting from a prepayment to one of our third-party hosting service providers and $0.3 million related for all other insignificant items. The change in net cash used in operating activities from 2013 to 2014 is primarily due to increases in employee-related costs as we continued to invest in and grow our business.

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 used in investing activities during 2016 was $31.3 million, consisting primarily of purchases of marketable securities of $28.8 million, partially offset by $5.1 million of cash maturities from our marketable securities. Other cash used in investing activities includes $7.7 million of purchased software licenses, classified within intangible assets, and property and equipment, including capitalized software development costs. These uses were offset by $0.1 million of proceeds from disposals of property and equipment.

Net cash used in investing activities during 2015 was $6.5 million, consisting primarily of $6.7 million of purchased property and equipment and capitalized software development costs and $1.5 million purchase of marketable securities, offset by $1.7 million of cash maturities from our marketable securities and other insignificant items.

Net cash provided by investing activities during 2014 was $10.0 million, consisting primarily of $13.8 million for the maturity and sale of marketable securities. These sources of cash were partially offset by a $2.4 million of purchased property and equipment and a $1.2 million purchase of marketable securities.

Financing Activities

Our financing activities have consisted primarily of issuances of capital stock to fund our operations and, to a lesser extent, proceeds from the exercises of warrants and options. Cash flows used in financing activities consisted primarily of the repayment of capital leases.

Net cash provided by financing activities for 2016 was $7.0 million and consisted of proceeds received from the issuance of common stock under employee equity plans.

Net cash provided by financing activities for 2015 consisted primarily of $72.0 million of net IPO proceeds received, $0.3 million of proceeds received from warrant exercises and $0.3 million proceeds received from option exercises, offset by a $0.2 million repayment of capital lease obligations.

Net cash provided by financing activities for 2014 was $41.2 million, consisting primarily of $39.9 million of net proceeds received from the issuance of Series E preferred stock and $0.8 million of proceeds received from option exercises and $0.5 million for other insignificant items.

Contractual Obligations and Commitments

Contractual obligations are cash that we are obligated to pay as part of certain contracts that we have entered during the course of business. Below is a table that shows the projected outlays as of December 31, 2016:

		Payments due by Period:			
		Less than	1-3	3-5	More than
	Total	1 Year	Years	Years	5 Years
	(in thousands)				
Operating lease obligations	$67,947	$5,728	$13,396	$13,718	$35,105

We lease our office facilities under non-cancelable operating leases. As of December 31, 2016, we had leases that expire at various dates through 2029.

Letters of Credit

As of December 31, 2016, we had a total of $721,060 in letters of credit outstanding in favor of certain landlords for office space. These letters of credit renew annually and expire at various dates through March 2023.

Off-Balance Sheet Arrangements

During 2016, 2015 and 2014, 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.

Income Taxes

As of December 31, 2016, we had approximately $127.4 million and $147.4 million of federal and state net operating loss carryforwards, respectively, available to reduce future taxable income that will begin to expire in 2028 for federal purposes and 2018 for state tax purposes. As of December 31, 2016, we also had federal research and development tax credit carryforwards of approximately $2.5 million and state research and investment credit carryforwards of $0.8 million. If not utilized, the federal and state carryforwards will expire at various dates through 2034.

Utilization of the net operating loss carryforwards may be subject to a substantial annual limitation due to the ownership change limitations provided by 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.

Due to our cumulative losses, we maintain a full valuation allowance against our deferred tax assets as of December 31, 2016. We consider all available evidence, both positive and negative, in assessing the extent to which a valuation allowance should be applied against our deferred tax assets.

Emerging Growth Company Status

Section 107 of the Jumpstart Our Small Business Startups Act, or JOBS Act, provides that an “emerging growth company” can take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. However, we have chosen to irrevocably “opt out” of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to not take advantage of the extended transition period for complying with new or revised accounting standards is irrevocable.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of financial condition and results of operations is based on our consolidated financial statements which have been prepared in accordance with GAAP. In preparing our financial statements, we make estimates, assumptions and judgments that can have a significant impact on our reported revenue, results of operations and net income or loss, as well as on the value of certain assets and liabilities on our balance sheet during and as of the reporting periods. These estimates, assumptions and judgments are necessary because future events and their effects on our results and the value of our assets cannot be determined with certainty, and are made based on our historical experience and on other assumptions that we believe to be reasonable under the circumstances. These estimates may change as new events occur or additional information is obtained, and we may periodically be faced with uncertainties, the outcomes of which are not within our control and may not be known for a prolonged period of time. Because the use of estimates is inherent in the financial reporting process, actual results could differ from those estimates.

The critical accounting estimates, assumptions and judgments that we believe have the most significant impact on our consolidated financial statements are described below.

Revenue Recognition

We primarily generate revenue from multiple element arrangements, which typically include subscriptions to our online software, support and training, implementation, custom training and consulting services. Our customers do not have the right to take possession of the online software solution. Revenue from subscriptions is recognized ratably over the subscription period beginning on the date the subscription is made available to customers. Implementation services are recognized upon completion. Nonrefundable upfront fee revenue is recorded over the longer of the contract term or the estimated customer life. We recognize revenue from training and consulting services as the services are provided. Amounts billed that have not yet met the applicable revenue recognition criteria are recorded as deferred revenue.

As part of accounting for multiple element arrangements, we must assess if each component has value on a standalone basis and should be treated as a separate unit of accounting. There is an in-depth process that we undergo to determine the standalone value for each component where we determine if an individual component could be sold by itself or if the component is sold by other third parties. If the component has standalone value upon delivery, we account for each component separately. Subscription services have standalone value as they are often sold separate from all other services. Implementation services, which includes training and consulting services, have standalone value as they are often sold separately from other services. Implementation services also includes nonrefundable upfront fees that do not have standalone value as they are not sold separately by us or by third parties. Training and consulting services have standalone value as they are sold separately by us and by third parties.

We allocate total arrangement fees to each element in a multiple element arrangement based on the relative selling price hierarchy of each element. We are not able to establish vendor-specific objective evidence, or VSOE, the most reliable level of allocating standalone value, for our subscription implementation, training and consulting services because of our pricing practices. We note that third-party evidence, or TPE, the second most reliable level of allocating standalone value, is not appropriate for determining the standalone value for any of our services because the pricing for any similar third-party subscription or training or consulting services is inconsistent. Therefore, we rely on best estimate of selling price, or BESP, to allocate value to the various components of our arrangements.

We determine BESP by considering our overall pricing objectives and market conditions. Significant pricing practices taken into consideration for our subscription services, which may also include support, training, and professional services, include discounting practices, the size and volume of our transactions, the customer type, price lists, our

pricing strategy, and historical stand-alone sales. The determination of BESP is made through consultation with and approval by our pricing committee. As our pricing strategies evolve, we may modify our pricing in the future which could result in changes in relative selling prices.

If our judgments change we would not expect to see a material effect on our consolidated financial statements.

We are evaluating the new revenue recognition guidance of ASC 606, effective January 1, 2018, and the adoption of this new guidance may have a material effect on the presentation of our consolidated financial statements. Refer to the "Recent Accounting Pronouncements" section below.

Stock-Based Compensation

We measure and recognize compensation expense for all stock-based awards granted to our employees and other service providers, based on the estimated fair value of the award on the date of grant and on a straight-line basis over the vesting period of the award based on the estimated portion of the award that is expected to vest, which is generally the period from the grant date to the end of the vesting period. We recognize compensation expense for our 2015 Employee Stock Purchase Plan on a straight-line basis.

We use the market closing price of our common stock as reported on the New York Stock Exchange for the fair value of restricted stock units ("RSUs") granted.

We use the Black-Scholes option pricing model to measure the fair value of our stock options and purchase rights issued to employees under our 2015 Employee Stock Purchase Plan, or ESPP, when they are granted. We make several estimates in determining our stock-based compensation for these stock options and purchase rights. These assumptions and estimates are as follows:

- Fair Value of Common Stock. Refer to the "Valuation of Common Stock" section below for assumptions used by management in estimating the fair value of common stock.
    - Expected Term. The expected term represents the period that our stock-based awards are expected to be outstanding. The expected term assumptions were determined based on the vesting terms, exercise terms and contractual lives of the options. The expected term of employee option awards is determined using the average midpoint between vesting and the contractual term for outstanding awards, or the simplified method, because we do not yet have a sufficient history of option exercises. We consider this appropriate as we plan to see significant changes to our equity structure in the future and there is no other method that would be more indicative of exercise activity. For the ESPP, we use an expected term of 0.5 years to match the offering period.
- Expected Volatility. Since, we did not have a trading history of our common stock, the expected volatility was determined based on the historical stock volatilities of our comparable companies. To determine our peer companies, we used the following criteria: software or software-as-a-service companies; similar histories and relatively comparable financial leverage; sufficient public company trading history; and in similar businesses and geographical markets. We used the peers' stock price volatility over the expected life of our granted options to calculate the expected volatility. We intend to continue to apply this process using the same or similar public companies until a sufficient amount of historical information regarding the volatility of our own share price becomes available, or unless circumstances change such that the identified companies are no longer similar to us, in which case, more suitable companies whose share prices are publicly available would be used in the calculation. For the ESPP, we use the trading history of our own common stock to determine expected volatility.
- Risk-Free Interest Rate. The risk-free interest rate is based on the implied yield available on U.S. Treasury zero-coupon issues with remaining terms similar to the expected term on the options.
- Expected Dividend Yield. We have never declared or paid any cash dividends and do not plan to pay cash dividends in the foreseeable future, and, therefore, use an expected dividend yield of zero.

We will continue to use judgment in evaluating the assumptions related to our stock-based compensation expense calculations on a prospective basis.

In addition to the assumptions used in the Black-Scholes option-pricing model with respect to stock options and purchase rights, we must also estimate a forfeiture rate to calculate the stock-based compensation expense for our awards. Our forfeiture rate is based on an analysis of our actual forfeitures, although we do not have sufficient history, over the expected term. We will continue to evaluate the appropriateness of the forfeiture rate based on actual forfeiture experience, analysis of employee turnover and other factors. Changes in the estimated forfeiture rate can have a significant impact on our stock-based compensation expense as the cumulative effect of adjusting the rate is

recognized in the period the forfeiture estimate is changed. If a revised forfeiture rate is higher than the previously estimated forfeiture rate, an adjustment is made that will result in a decrease to the stock-based compensation expense recognized in our financial statements. If a revised forfeiture rate is lower than the previously estimated forfeiture rate, an adjustment is made that will result in an increase to the stock-based compensation expense recognized in our financial statements.

We have also recorded stock-based compensation for investor purchases of common stock and preferred stock from current and former employees to the extent the purchase price per share exceeded the fair value of such shares.

Valuation of Common Stock

Given the absence of an active market for our common stock prior to our IPO, our board of directors was required to estimate the fair value of our common stock at the time of each option grant based upon several factors, including its consideration of input from management and contemporaneous third-party valuations.

The exercise price for all stock options granted was at the estimated fair value of the underlying common stock, as estimated on the date of grant by our board of directors in accordance with the guidelines outlined in the American Institute of Certified Public Accountants, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. Each fair value estimate was based on a variety of factors, which included the following:

- contemporaneous valuations performed by unrelated third-party valuation firms;
- the prices, rights, preferences and privileges of our preferred stock relative to those of our common stock;
- the lack of marketability of our common stock;
- our actual operating and financial performance;
- current business conditions and projections;
- our hiring key personnel and the experience of our management;
- our history and the timing of the introduction of new applications and features;
- our stage of development;
- the likelihood of achieving a liquidity event, such as an initial public offering or a merger or acquisition of our business given prevailing market conditions;
- the illiquidity of stock-based awards involving securities in a private company;
- the market performance of comparable publicly traded companies; and
- U.S. and global capital market conditions.

To allocate value to our common stock, we utilized either an option pricing method, or OPM, a probability weighted expected return method, or PWERM, approach or a hybrid method consisting of OPM and PWERM. The OPM treats common stock and preferred stock as call options on a business, with exercise prices based on the liquidation preference of the preferred stock. Therefore, the common stock only has value if the funds available for distribution to the holders of common stock exceeds the value of the liquidation preference of the preferred stock at the time of a liquidity event, such as a merger, sale, or initial public offering, assuming the business has funds available to make a liquidation preference meaningful and collectible by stockholders. The common stock is modeled as a call option with a claim on the business at an exercise price equal to the remaining value immediately after the preferred stock is liquidated. The OPM uses the Black-Scholes option-pricing model to price the call option.

The PWERM approach employs various market approach calculations depending upon the likelihood of various liquidation scenarios. For each of the various scenarios, an equity value is estimated and the rights and preferences for each shareholder class are considered to allocate the equity value to common shares. The common share value is then multiplied by a discount factor reflecting the calculated discount rate and the timing of the event. Lastly, the common share value is multiplied by an estimated probability for each scenario. The probability and timing of each scenario are based upon discussions between our board of directors and our management team. Under the PWERM, the value of our common stock is based upon four possible future events for our company: (1) an initial public offering, (2) an acquisition of our company, (3) remaining a private concern and (4) a liquidation scenario.

The market approach uses similar companies or transactions in the marketplace. We utilized the guideline company method of the market approach for determining the fair value of our common stock under the initial public offering scenarios. We identified companies similar to our business and used these guideline companies to develop relevant market multiples and ratios. We then applied these market multiples and ratios to our financial forecasts to create an indication of total equity value. Under the acquisition scenario, we utilized the guideline company method and the guideline transaction method of the market approach to determine the fair value of the common stock. The guideline

transaction method compares the operating results and market value of the equity or invested capital of acquired companies similar to our business. Under the liquidation scenario, we assumed no value remained to be allocated to our common stockholders.

Following our IPO, we rely on the closing price of our common stock as reported by the New York Stock Exchange on the date of grant to determine the fair value of our common stock.

Recent Accounting Pronouncement

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 will adopt the standard in the three months ended March 31, 2017. Upon adoption, we will recognize the previously unrecognized excess tax benefits through a cumulative-effect adjustment to accumulated deficit. The previously unrecognized excess tax effects will be recorded as a deferred tax asset, which will be fully offset by a valuation allowance. We will apply the change in presentation to the statements of cash flows retrospectively and no longer classify the excess tax benefits from employee stock plans as a reduction from operating cash flows for all periods presented.

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 income statement. 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 November 2015, the FASB issued ASU No. 2015-17, Balance Sheet Classification of Deferred Taxes, requiring all deferred tax assets and liabilities, and any related valuation allowance, to be classified as noncurrent on the balance sheet. The classification change for all deferred taxes as noncurrent simplifies entities' processes as it eliminates the need to separately identify the net current and net noncurrent deferred tax asset or liability in each jurisdiction and allocate valuation allowances. We elected to prospectively adopt the accounting standard in the beginning of our fourth quarter of 2015. Prior periods in our consolidated financial statements were not retrospectively adjusted.

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 account 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. Implementation costs associated with software licenses were expensed as incurred.

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 are currently considering adopting 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 the Company’s 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 are in the initial stages of our evaluation of the impact of the new standard on our accounting policies, processes, and system requirements. We have assigned internal resources in addition to the engagement of third party service providers to assist in the evaluation. Furthermore, we have made and will continue to make investments in systems 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 preliminarily 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. Depending on the outcome of our evaluation, the timing of when revenue is recognized could change significantly for nonrefundable upfront fees and our multi-year subscription agreements.

As part of our preliminary 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.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

The primary objective of our investment activities is to preserve our capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of cash equivalents and investments in a variety of securities of high credit quality. As of December 31, 2016, we had cash, cash equivalents and investments of $68.4 million consisting of cash, marketable securities and money market accounts in highly rated financial institutions in the United States. A portion of our investments may be subject to interest rate risk and could fall in value if market interest rates increase. However, because our investments are primarily short-term in duration, we believe that our exposure to interest rate risk is not significant and a 1% movement in market interest rates would not have a significant impact on the total value of our portfolio. We actively monitor changes in interest rates.

Item 8. Financial Statements and Supplementary Data.

INSTRUCTURE, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm	F-1
Consolidated Balance Sheets	F-2
Consolidated Statements of Operations	F-3
Consolidated Statements of Comprehensive Loss	F-4
Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)	F-5
Consolidated Statements of Cash Flows	F-6
Notes to Consolidated Financial Statements	F-7

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of Instructure, Inc.

We have audited the accompanying consolidated balance sheets of Instructure, Inc. and subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive loss, redeemable convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Instructure, Inc. and subsidiaries at December 31, 2016 and 2015, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

Salt Lake City, Utah

February 10, 2017

INSTRUCTURE, INC.

Consolidated Balance Sheets

(in thousands, except per share data)

	December 31,	
	2016	2015
Assets		
Current assets:		
Cash and cash equivalents	$44,539	$90,471
Short term marketable securities	23,895	325
Accounts receivable—net of allowance of $241 and $225 at December 31, 2016 and 2015, respectively	18,072	9,523
Prepaid expenses	5,434	5,010
Other current assets	936	614
Total current assets	92,876	105,943
Property and equipment, net	14,733	11,732
Goodwill	989	989
Intangible assets, net	760	444
Noncurrent prepaid expenses	984	749
Other assets	994	1,203
Total assets	$111,336	$121,060
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$5,374	$3,912
Accrued liabilities	10,905	8,852
Deferred rent	773	541
Deferred revenue	72,747	49,384
Total current liabilities	89,799	62,689
Deferred revenue, net of current portion	3,144	2,941
Deferred rent, net of current portion	8,372	9,078
Warrant liability	25	331
Other long-term liabilities	32	402
Total liabilities	101,372	75,441
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, par value of $0.0001 per share; 10,000 shares authorized as of December 31, 2016 and 2015; no shares issued and outstanding as of December 31, 2016 and 2015	—	—
Common stock, par value of $0.0001 per share; 200,000 shares authorized as of December 31, 2016	3	4

and 2015; 28,554 shares issued and outstanding as of December 31, 2016; 28,368 shares issued and

27,240 shares outstanding at December 31, 2015

Treasury stock, 0 and 1,128 common shares, at cost, as of December 31, 2016 and 2015, respectively	—	(1)
Additional paid-in capital	206,442	188,517
Accumulated other comprehensive income	(12)	—
Accumulated deficit	(196,469)	(142,901)
Total stockholders' equity	9,964	45,619
Total liabilities and stockholders' equity	$111,336	$121,060

See accompanying notes.

INSTRUCTURE, INC.

Consolidated Statements of Operations

(in thousands, except per share amounts)

	Year Ended December 31,		
	2016	2015	2014
Revenue:			
Subscription and support	$97,115	$62,463	$38,093
Professional services and other	13,765	10,730	6,259
Total revenue	110,880	73,193	44,352
Cost of revenue:			
Subscription and support	24,252	17,682	12,131
Professional services and other	8,497	6,391	2,982
Total cost of revenue	32,749	24,073	15,113
Gross profit	78,131	49,120	29,239
Operating expenses:			
Sales and marketing	69,991	53,459	35,390
Research and development	35,973	24,151	21,290
General and administrative	25,542	23,482	11,268
Total operating expenses	131,506	101,092	67,948
Loss from operations	(53,375)	(51,972)	(38,709)
Other income (expense):			
Interest income	352	39	32
Interest expense	(87)	(74)	(136)
Change in fair value of warrant liability	62	(653)	(2,518)
Other income (expense), net	(353)	(201)	(39)
Total other expense, net	(26)	(889)	(2,661)
Loss before income taxes	(53,401)	(52,861)	(41,370)
Income tax expense	(167)	(117)	(57)
Net loss	$(53,568)	$(52,978)	$(41,427)
Deemed dividends to investors	—	(632)	—
Net loss attributable to common stockholders	$(53,568)	$(53,610)	$(41,427)
Net loss per common share attributable to common stockholders, basic and diluted	$(1.92)	$(6.07)	$(7.50)
Weighted average common shares used in computing basic and diluted net loss per common share attributable to common stockholders	27,838	8,838	5,525

See accompanying notes

F-3

INSTRUCTURE, INC.

Consolidated Statements of Comprehensive Loss

(in thousands)

	Year Ended December 31,		
	2016	2015	2014
Net loss	$(53,568)	$(52,978)	$(41,427)
Other comprehensive loss:			
Unrealized loss on marketable securities	(12)	—	—
Comprehensive loss	$(53,580)	$(52,978)	$(41,427)

See accompanying notes.

INSTRUCTURE, INC.

Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)

(in thousands)

	Redeemable Convertible Preferred Stock		Common Stock, $0.001 Par Value		Common Treasury Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount				
Balances at December 31, 2013	12,779	49,092	4,911	1	(1,128)	(1)	5,413	5	(48,496)	(43,078)
Exercise of common stock options	—	—	2,469	—	—	—	528	—	—	528
Vesting of common stock subject to repurchase	—	—	—	—	—	—	149	—	—	149
Stock-based compensation	—	—	—	—	—	—	8,198	—	—	8,198
Grant of restricted stock awards	—	—	73	—	—	—	—	—	—	—
Issuance of Series E redeemable convertible preferred stock—net of issuance costs of $103	1,825	39,897	—	—	—	—	—	—	—	—
Common stock issued in 12 Spokes acquisition	—	—	23	—	—	—	104	—	—	104
Unrealized loss on marketable securities	—	—	—	—	—	—	—	(6)	—	(6)
Reclassification of gain on marketable	—	—	—	—	—	—	—	1	—	1

securities to earnings										
Net loss	—	—	—	—	—	—	—	—	(41,427)	(41,427)
Balances at December 31, 2014	14,604	88,989	7,476	1	(1,128)	(1)	14,392	—	(89,923)	(75,531)
Exercise of common stock options	—	—	223	—	—	—	349	—	—	349
Vesting of common stock subject to repurchase	—	—	—	—	—	—	48	—	—	48
Stock-based compensation	—	—	—	—	—	—	9,236	—	—	9,236
Exercise of redeemable convertible preferred stock warrant	373	4,149	—	—	—	—	—	—	—	—
Issuance of common stock in relation to Initial Public Offering, net of offering cost incurred of $3,936	—	—	5,060	1	—	—	71,356	—	—	71,357
Conversion of redeemable convertible preferred stock to common stock	(14,977)	(93,770)	15,652	2	—	—	93,768	—	—	93,770
Cancellation of restricted stock awards	—	—	(43)	—	—	—	—	—	—	—
Deemed dividends to investors	—	632	—	—	—	—	(632)	—	—	(632)
Net loss	—	—	—	—	—	—	—	—	(52,978)	(52,978)
Balances at December 31, 2015	—	—	28,368	4	(1,128)	(1)	188,517	—	(142,901)	45,619
Issuance of common stock under employee stock purchase	—	—	1,051	—	—	—	7,009	—	—	7,009

plans										
Vesting of common stock subject to repurchase	—	—	—	—	—	—	25	—	—	25
Vested restricted stock units, net	—	—	185	—	—	—	—	—	—	0
Shares withheld for tax withholding on vesting of restricted stock	—	—	—	—	—	—	(27)	—	—	(27)
Stock-based compensation	—	—	—	—	—	—	10,674	—	—	10,674
Retirement of treasury stock	—	—	(1,128)	(1)	1,128	1	—	—	—	0
Exercise of common stock warrant	—	—	78	—	—	—	244	—	—	244
Unrealized loss on marketable securities	—	—	—	—	—	—	—	(12)	—	(12)
Net loss	—	—	—	—	—	—	—	—	(53,568)	(53,568)
Balances at December 31, 2016	—	$—	28,554	$ 3	—	$ —	$206,442	$ (12)	$(196,469)	$9,964

See accompanying notes

INSTRUCTURE, INC.

Consolidated Statements of Cash Flows

(in thousands)

	Year Ended December 31,		
	2016	2015	2014
Operating Activities:			
Net loss	$(53,568)	$(52,978)	$(41,427)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation of property and equipment	3,981	2,672	1,760
Amortization of intangible assets	405	309	306
Amortization of deferred financing costs	46	54	61
Change in fair value of warrant liability	(62)	653	2,575
Excess tax benefit for stock-based compensation	—	—	(872)
Stock-based compensation	10,674	9,236	8,198
Other	92	193	200
Changes in assets and liabilities:			
Accounts receivable, net	(8,837)	(1,532)	(4,335)
Prepaid expenses and other assets	(818)	(2,673)	(2,296)
Accounts payable and accrued liabilities	3,732	3,938	2,542
Deferred revenue	23,566	20,371	12,488
Deferred rent	(474)	719	515
Other liabilities	(345)	(313)	(110)
Net cash used in operating activities	(21,608)	(19,351)	(20,395)
Investing Activities:			
Purchases of property and equipment	(7,021)	(6,696)	(2,440)
Purchases of intangible assets	(721)	—	(6)
Proceeds from disposal of property and equipment	63	64	37
Purchases of marketable securities	(28,752)	(1,456)	(1,155)
Sale of marketable securities	—	—	10,402
Maturities of marketable securities	5,125	1,619	3,415
Acquisition of 12 Spokes	—	—	(250)
Net cash (used in) provided by investing activities	(31,306)	(6,469)	10,003
Financing Activities:			
IPO proceeds, net of offering costs paid of $3,261	—	72,032	—
Proceeds from issuance of redeemable convertible preferred stock, net of issuance costs of $0, $0 and $103 in the years ended December 31, 2016, 2015 and 2014, respectively	—	—	39,897
Proceeds from exercise of redeemable convertible preferred stock warrants	—	250	—

Proceeds from issuance of common stock from employee equity plans	7,009	349	751
Shares repurchased for tax withholdings on vesting of restricted stock	(27)	—	—
Payments of line of credit financing costs	—	(32)	(80)
Repayment of capital lease obligations	—	(223)	(271)
Excess tax benefit for stock-based compensation	—	—	872
Net cash provided by financing activities	6,982	72,376	41,169
Net increase in cash and cash equivalents	(45,932)	46,556	30,777
Cash and cash equivalents, beginning of period	90,471	43,915	13,138
Cash and cash equivalents, end of period	$44,539	$90,471	$43,915
Supplemental cash flow disclosure:			
Cash paid for taxes	$163	$67	$11
Cash paid for interest	$—	$19	$51
Non-cash investing and financing activities:			
Conversion of redeemable convertible preferred stock to common stock	$—	$(93,770)	$—
Leasehold improvements	$—	$23	$—
Issuance of common stock for exercise of common stock warrant	$244	$—	$—
Capital expenditures incurred but not yet paid	$174	$138	$33
Line of credit financing costs	$—	$—	$58
Issuance of common stock for acquisition	$—	$—	$104
Deemed dividends to investors	$—	$632	$—
Vesting of common stock subject to repurchase	$25	$48	$149

See accompanying notes.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

1. Description of Business and Summary of Significant Accounting Policies

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 and Hong Kong, all of which commenced operations in 2014 and Sweden and Brazil, which commenced operations in February 2015 and September 2015, respectively.

Basis of Presentation

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States, or U.S. GAAP. The accompanying consolidated financial statements include our accounts and those of our wholly-owned subsidiaries. All intercompany transactions have been eliminated in consolidation.

Reverse Stock Split

On October 28, 2015, our board of directors and on October 30, 2015, our stockholders, respectively, approved the amendment and restatement of our certificate of incorporation to effect a reverse split of our common stock and redeemable convertible preferred stock at a 1-for-1.5 ratio (the “Reverse Stock Split”). The Reverse Stock Split became effective on October 30, 2015, upon the filing of our amended and restated certificate of incorporation. The par value of the common and redeemable convertible preferred was not adjusted as a result of the Reverse Stock Split. All issued and outstanding common stock, redeemable convertible preferred stock, options for common stock, restricted stock awards, warrants and per share amounts have been retroactively adjusted to reflect this Reverse Stock Split for all periods presented.

Initial Public Offering

On November 18, 2015, the Company closed its initial public offering (“IPO”) whereby 5,060,000 shares of common stock were sold to the public, including the underwriters’ overallotment option of 660,000 shares of common stock, at a price of $16.00 per share. The Company received aggregate proceeds of approximately $75.3 million from the IPO, net of underwriters’ discounts and commissions, but before deduction of offering expenses of approximately $3.9 million. Upon the closing of the IPO, all shares of the Company’s outstanding redeemable convertible preferred stock automatically converted into 15,652,382 shares of common stock.

Use of Estimates

The preparation of the consolidated financial statements in conformity with U.S. 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, preferred stock warrants, 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 fees. We base our estimates on historical experience and on various other assumptions which we believe to be reasonable.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

Operating Segments

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.

Net Loss Per Share Attributable to Common Stockholders

Basic net loss per share attributable to common stockholders is computed by dividing net loss attributable to common stockholders 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 attributable to common stockholders is computed by giving effect to all potential dilutive common stock equivalents outstanding for the period.

For purposes of this calculation, options to purchase common stock, common stock and redeemable convertible preferred stock warrants, and redeemable convertible preferred stock are considered to be common stock equivalents. For 2014, we applied the two-class method to calculate our basic and diluted net loss per share of common stock, as our redeemable convertible preferred stock and common stock are participating securities. The two-class method is an earnings allocation formula that treats a participating security as having rights to earnings that otherwise would have been available to common stockholders. However, the two-class method does not impact the net loss per common share attributable to common stockholders as we were in a loss position for each of the periods presented and the redeemable convertible preferred stockholders do not participate in losses.

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

	Year Ended December 31,		
	2016	2015	2014
Numerator:			
Net loss attributable to common stockholders	$(53,568)	$(53,610)	$(41,427)
Denominator:			
Weighted-average common shares outstanding—basic	27,852	8,924	5,750
Less: Weighted-average common stock subject to repurchase	(14)	(86)	(225)
Total weighted-average common shares	27,838	8,838	5,525

outstanding—basic			
Dilutive effect of share equivalents resulting from			
stock options, unvested restricted stock awards,			
common stock warrants, common stock subject to			
repurchase, redeemable convertible preferred stock			
warrants and redeemable convertible preferred stock			
(as converted)	—	—	—
Weighted-average common shares outstanding-diluted	27,838	8,838	5,525
Net loss per common share attributable to common			
stockholders, basic and diluted	$(1.92)	$(6.07)	$(7.50)

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

For the years ended December 31, 2016, 2015, and 2014, we incurred net losses and, therefore, the effect of our outstanding stock options, unvested restricted stock, restricted stock units, common stock warrants, common stock subject to repurchase, redeemable convertible preferred stock warrants and redeemable convertible preferred stock was not included in the calculation of diluted net loss per share as the effect would be anti-dilutive. The following table contains share totals with a potentially dilutive impact (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Options to purchase common stock	3,106	4,101	2,994
Common stock warrants	17	103	103
Redeemable convertible preferred stock warrants	—	—	373
Common stock subject to repurchase	—	45	135
Redeemable convertible preferred stock (as converted)	—	—	14,604
Unvested restricted stock awards	—	—	58
Restricted stock units	1,133	196	—
Total	4,256	4,445	18,267

Concentration of Credit Risk, Significant Customers and International Operations

Financial instruments that potentially subject us to a concentration of credit risk consist principally of cash and accounts receivable. We deposit cash with high credit quality financial institutions, which at times, may exceed federally insured amounts. We have not experienced any losses on our deposits. We perform ongoing credit evaluations of our customers' financial condition and generally require no collateral from our customers. We review the expected collectability of accounts receivable and record an allowance for doubtful accounts receivable for amounts that we determine are not collectible.

There were no customers with revenue as a percentage of total revenue exceeding 10% for the periods presented.

The following table depicts the largest customers' outstanding net accounts receivable balance as a percentage of the total outstanding net accounts receivable balance:

	Year Ended December 31,	
	2016	2015
Customer A	14.0%	21.0%
Customer B	—	11.0%

Customer C	—	11.0%
Total	14.0%	43.0%

There were no other customers with outstanding net accounts receivable balances as a percentage of the total outstanding net accounts receivable balance greater than 10% as of December 31, 2016 and 2015.

In 2014, we began international operations. Because our long-term growth strategy involves further expansion of our sales to customers outside of the United States, our business will be susceptible to risks associated with international operations. Refer to Note 6— Geographic Data for details.

Cash and Cash Equivalents

We consider all short-term highly liquid investments purchased with original maturities of three months or less at the time of acquisition to be cash equivalents.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

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 income 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.

Accounts Receivable

Accounts receivable are carried at the original invoiced amount less an allowance for doubtful accounts based on the probability of future collection. When management becomes aware of circumstances that may decrease the likelihood of collection, it records a specific allowance against amounts due, which reduces the receivable to the amount that management reasonably believes will be collected. For all other customers, management determines the adequacy of the allowance based on historical loss patterns, the number of days that billings are past due and an evaluation of the potential risk of loss associated with specific accounts. Account balances are written off against the allowance for doubtful accounts receivable when the potential for recovery is remote. Recoveries of receivables previously written off are recorded when payment is received.

The following is a roll-forward of our allowance for doubtful accounts (in thousands):

	Balance Beginning of Period	Charged to Costs or Expenses	Deductions[1]	Balance at End of Period
Allowance for Doubtful Accounts				
Year ended December 31, 2016	$ 225	$ 600	$ (584)	$ 241
Year ended December 31, 2015	$ 135	$ 232	$ (142)	$ 225
Year ended December 31, 2014	$ 53	$ 109	$ (27)	$ 135

(1) Deductions include actual accounts written-off, net of recoveries.

Property and Equipment and Intangible Assets

Property and equipment are stated at cost less accumulated depreciation. Expenditures that materially increase values or capacities or extend useful lives of property and equipment are capitalized.

Repairs and maintenance costs that do not extend the useful life or improve the related assets are expensed as incurred. Depreciation is computed using the straight-line method over the estimated useful lives of the assets or over the related lease terms (if shorter). The estimated useful life of each asset category is as follows:

	Estimated Useful Life
Computer and office equipment	2-3 years
Purchased software	2-3 years
Furniture and fixtures	2-5 years
Capitalized software development costs	3 years
Leasehold improvements and other	lesser of lease term or useful life (2-10 years)

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

Certain costs incurred to develop software applications used in the cloud-based learning management system are capitalized and included in property and equipment, net on the balance sheets. Capitalizable costs consist of (1) certain external direct costs of materials and services incurred in developing or obtaining internal-use software; and (2) payroll and payroll-related costs for employees who are directly associated with and who devote time to the project. These costs generally consist of internal labor during configuration, coding and testing activities. Research and development costs incurred during the preliminary project stage, or costs incurred for data conversion activities, training, maintenance and general and administrative or overhead costs, are expensed as incurred. Costs that cannot be separated between the maintenance of, and relatively minor upgrades and enhancements to, internal-use software are also expensed as incurred. Costs incurred during the application development stage that significantly enhance and add new functionality to the cloud-based learning management system are capitalized as capitalized software development costs. Capitalization begins when: (1) the preliminary project stage is complete; (2) management with the relevant authority authorizes and commits to the funding of the software project; (3) it is probable the project will be completed; (4) the software will be used to perform the functions intended; and (5) certain functional and quality standards have been met.

Acquired finite-lived intangibles are amortized on a straight-line basis over the estimated useful life of the asset, which is generally five years.

When there are indicators of potential impairment, we evaluate recoverability of the carrying values of property and equipment and intangible assets by comparing the carrying amount of an asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of the asset exceeds our estimated undiscounted future net cash flows, an impairment charge is recognized based on the amount by which the carrying value of the asset exceeds the fair value of the asset. We did not incur any impairment charges during the periods presented.

Leases

We lease our facilities under operating leases. For leases that contain rent escalation or rent concession provisions, we record rent expense for the total rent payable during the lease term on a straight-line basis over the term of the lease. We record the difference between the rent paid and the straight-line rent as a deferred rent liability in the accompanying balance sheets.

Fair Value

Our short-term financial instruments include accounts receivable, accounts payable and accrued liabilities and are carried in the consolidated financial statements as of December 31, 2016 and 2015 at amounts that approximate fair value due to their short-term maturity dates.

Goodwill

Goodwill represents the excess cost of the fair value of the net tangible and identifiable intangible assets acquired in a business combination. Goodwill is not subject to amortization, but is monitored annually for impairment or more frequently if there are indicators of impairment. Management considers the following potential indicators of impairment: (1) significant underperformance relative to historical or projected future operating results; (2) significant changes in our use of acquired assets or the strategy of our overall business; (3) significant negative industry or

economic trends; and (4) a significant decline in our stock price for a sustained period. We perform our annual impairment test on October 31st. We operate under one reporting unit and, as a result, evaluate goodwill impairment based on our fair value as a whole. Our current year impairment test did not result in any impairment of the goodwill balance. We did not recognize an impairment charge in any of the periods presented. We have no other intangible assets with indefinite useful lives.

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, or 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 (see Note 7— Stockholders' Equity). 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.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

Liability for Redeemable Convertible Preferred Stock Warrants

We account for freestanding warrants to purchase shares of our contingently redeemable convertible preferred stock as warrant liability on our consolidated balance sheets. We record the redeemable convertible preferred stock warrants at their estimated fair value because these warrants may contingently obligate us to redeem the underlying redeemable convertible preferred stock at some point in the future. At the end of each reporting period, changes in the estimated fair value of the warrant liability is recorded as change in fair value of warrant liability in the consolidated statements of operations until the earlier of the exercise or expiration of the warrants, or the completion of a qualifying liquidation event including an initial public offering, at which time the redeemable convertible preferred stock issuable upon exercise of the warrants would become common stock and the related liability would be reclassified to common stock, the redeemable convertible preferred stock warrants were exercised in February 2015. In connection with the exercise of the warrant, the warrant liability was marked to market one last time as of the settlement date. The resulting warrant liability of $3,899,000 and the cash received of $250,000 were recorded as redeemable convertible preferred stock, which then converted to common stock upon our IPO.

Revenue Recognition

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. We provide our applications as a service and revenue is recognized when persuasive evidence of an arrangement exists, the fee is fixed or determinable, collection is reasonably assured, and delivery has occurred or services have been rendered.

Because we provide our applications as a service and customers do not take possession of the software, these arrangements are accounted for as service contracts. For arrangements with multiple deliverables, we follow the guidance provided in ASC 605-25, Revenue Recognition for Multiple-Element Arrangements. In accordance with this guidance, deliverables in multiple-deliverable arrangements are accounted for as separate units of accounting if the delivered items have standalone value. If the deliverables in a multiple-deliverable arrangement do not have standalone value, the revenue associated with the deliverables is recognized ratably as a single unit of accounting over the period commencing upon delivery of the final deliverable and over the term of that deliverable. We allocate revenue to each deliverable in an arrangement based on a selling price hierarchy. The selling price for a deliverable is based on its vendor-specific objective evidence, or VSOE, if available, third-party evidence, or TPE, if VSOE is not available, or best estimate of the selling price, or BESP, if neither VSOE nor TPE is available. The total arrangement fee for a multiple-deliverable arrangement is allocated based on the relative VSOE, TPE, or BESP of each element, and the amount of revenue recognized is limited to the amount that is not contingent upon the delivery of future services.

We determine BESP by considering our overall pricing objectives and market conditions. Significant pricing practices taken into consideration for our subscription services, which may also include support, training, and professional services, include discounting practices, the size and volume of our transactions, the customer type, price lists, our pricing strategy, and historical stand-alone sales. The determination of BESP is made through consultation with and approval by our pricing committee. As our pricing strategies evolve, we may modify our pricing in the future which could result in changes in relative selling prices.

As subscription and support revenue are delivered over the entire length of the arrangement (the service period), they are recognized ratably beginning on the date our service is made available to customers through the end of the service period and all other revenue recognition criteria have been met. Implementation services include training and consulting services that generally take 30 to 90 days to complete. Implementation services have standalone value as the services are often sold separately. Implementation services are recognized upon completion. Implementation services also include nonrefundable upfront fees that do not have standalone value. As such, we defer revenue for the nonrefundable upfront fees and recognize the revenue over the longer of the contract term or estimated customer life. Training and professional services are sold with subscriptions and separately (i.e., not sold contemporaneously with the negotiation of a subscription contract) and we have determined each has standalone value. As a result, these services are recognized as revenue when the related services are delivered, which is generally within two to twelve months from the date of contract. Subscription training was introduced in 2016 and is recognized ratably in the same manner as subscription and support revenue described above.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

We also derive revenue from fees for separate, project-based custom application development, integrations, content services and change management consulting services. Pricing of these projects is generally either fixed fee or time and material based. We recognize revenue from these service arrangements in accordance with ASC 605. To the extent that adequate project reporting of time incurred and time to complete records exist, we recognize consulting services revenue as the services are performed under the proportionate performance method. 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. During the years ended December 31, 2016, 2015, and 2014 there was $383,000, $0 and $0 revenue recognized under the proportionate performance method, respectively. We recognized $184,000, $517,000, and $223,000 in revenue under the milestone method for 2016, 2015, and 2014, respectively.

Cost of Revenue

Cost of subscription revenue consists primarily 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.

Service Availability Warranty

We warrant to our customers: (1) that commercially reasonable efforts will be made to maintain the online availability of the platform for a minimum availability in a trailing 365-day period (excluding scheduled outages, standard maintenance windows, force majeure, and outages that result from any technology issue originating from any customer or user); (2) the functionality or features of the platform may change but will not materially degrade during any paid term; and (3) that support may change but will not materially degrade during any paid term. To date, we have not experienced any significant losses under these warranties.

Advertising Costs

Advertising costs are expensed as incurred and are included in sales and marketing expenses. Advertising expenses totaled $8,673,000, $6,965,000, and $3,849,000 for 2016, 2015 and 2014, respectively.

Stock-Based Compensation

Stock-based compensation cost is measured at the grant date based on the fair value of the award granted and recognized as compensation expense using the straight-line method over the period in which the award is expected to vest, which is generally the period from the grant date to the end of the vesting period. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. We recognize compensation expense for our 2015 Employee Stock Purchase Plan on a straight-line basis.

We use the market closing price of our common stock as reported on the New York Stock Exchange for the fair value of restricted stock units ("RSUs") granted.

We use the Black-Scholes option pricing model to determine the fair value of stock options issued to our employees, as well as purchase rights issued to employees under our 2015 Employee Stock Purchase Plan, or ESPP. The Black-Scholes option pricing model is affected by the unit price and a number of assumptions, including the award's expected life, risk-free interest rate, the expected volatility of the underlying stock and expected dividends.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

These assumptions are estimated as follows:

- Fair Value of Our Common Stock. Prior to our IPO in November 2015, we were required to estimate the fair value of our common stock. The fair value of the common stock underlying the stock options was determined by our board of directors, which considered numerous objective and subjective factors to determine the fair value of common stock at each grant date. These factors included, but were not limited to: (1) contemporaneous valuations of common stock performed by third-party specialists; (2) the lack of marketability of our common stock; (3) developments in the business; (4) the prices paid in recent transactions involving our equity securities; and (5) the likelihood of achieving a liquidity event, such as an initial public offering or a merger or acquisition, given prevailing market conditions. During aforementioned valuations, the third-party valuation firm would engage in discussions with management, analyze historical and forecasted financial statements, and review corporate documents when performing its analysis. In addition, these valuation studies were based on a number of assumptions, including industry, general economic, market and other conditions that could reasonably be evaluated at the time of the valuation. Now that our stock is publicly traded, we use the market closing price of our common stock as reported on the New York Stock Exchange for the fair value.
- Risk-Free Interest Rate. We base the risk-free interest rate used in the Black-Scholes option pricing model on the implied yield available on U.S. Treasury zero-coupon issues with remaining terms similar to the expected term on the options.
- Expected Term. We estimate the expected term for stock options using the simplified method due to the lack of historical exercise activity for our company. The simplified method calculates the expected term as the mid-point between the vesting date and the contractual expiration date of the award. For the ESPP, we use an expected term of 0.5 years to match the offering period.
- Volatility. We estimate the price volatility factor based on the historical volatilities of our comparable companies as we do not have a sufficient trading history for our common stock. To determine our comparable companies, we consider public enterprise cloud-based application providers and select those that are similar to us in size, stage of life cycle, and financial leverage. We intend to continue to apply this process using the same or similar public companies until a sufficient amount of historical information regarding the volatility of our own common stock share price becomes available, or unless circumstances change such that the identified companies are no longer similar to us, in which case, more suitable companies whose share prices are publicly available would be utilized in the calculation. For the ESPP, we use the trading history of our own common stock to determine expected volatility.
- Dividend Yield. We have not paid and do not expect to pay dividends for the foreseeable future.

Foreign Currency

The functional currency of our foreign subsidiaries is the U.S. dollar. Monetary assets and liabilities denominated in a foreign currency are revalued into U.S. dollars at the exchange rates in effect at the balance sheet dates. Income and expense accounts are revalued on the date of the transaction using the exchange rate in effect on the transaction date. Non-monetary assets, liabilities, and equity transactions are converted at historical exchange rates in effect at the time of the transaction. Foreign currency transaction gains and losses are recorded in other income (expense), net. During 2016, 2015 and 2014, a net foreign currency transaction loss of $339,000, $176,000 and $67,000 was recorded in the consolidated statements of operations, respectively.

Research and Development

With the exception of capitalized software development costs, research and development costs are expensed as incurred.

Commissions

We recognize commission expense related to subscriptions in the period in which the contract is signed.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

Risks and Uncertainties

We are subject to all of the risks inherent in an early stage business. These risks include, but are not limited to, a limited operating history, new and rapidly evolving markets, dependence on the development of new services, unfavorable economic and market conditions, changes in level of demand for our services, and the timing of new application introductions. If we fail to anticipate or to respond adequately to technological developments in our industry, changes in customer or supplier requirements, or changes in regulatory requirements or industry standards, or any significant delays in the development or introduction of services, our business could be harmed.

Income Taxes

Deferred tax assets and liabilities are accounted for using the asset and liability method and represent the future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates that are expected to be in effect when these temporary differences are expected to reverse. A valuation allowance is provided when it is more likely than not that some portion of the deferred tax assets will not be realized. At December 31, 2016 and 2015, the majority of deferred tax assets are offset by a valuation allowance. We recognize interest and penalties as a component of income tax expense.

Recent Accounting Pronouncement

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 will adopt the standard in the three months ended March 31, 2017. Upon adoption, we will recognize the previously unrecognized excess tax benefits through a cumulative-effect adjustment to accumulated deficit. The previously unrecognized excess tax effects will be recorded as a deferred tax asset, which will be fully offset by a valuation allowance. We will apply the change in presentation to the statements of cash flows retrospectively and no longer classify the excess tax benefits from employee stock plans as a reduction from operating cash flows for all periods presented.

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 income statement. 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 November 2015, the FASB issued ASU No. 2015-17, Balance Sheet Classification of Deferred Taxes, requiring all deferred tax assets and liabilities, and any related valuation allowance, to be classified as noncurrent on the balance sheet. The classification change for all deferred taxes as noncurrent simplifies entities' processes as it eliminates the need to separately identify the net current and net noncurrent deferred tax asset or liability in each jurisdiction and allocate valuation allowances. We elected to prospectively adopt the accounting standard in the beginning of our fourth quarter of 2015. Prior periods in our consolidated financial statements were not retrospectively adjusted.

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 account 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. Implementation costs associated with software licenses were expensed as incurred.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

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 are currently considering adopting 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 the Company’s 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 are in the initial stages of our evaluation of the impact of the new standard on our accounting policies, processes, and system requirements. We have assigned internal resources in addition to the engagement of third party service providers to assist in the evaluation. Furthermore, we have made and will continue to make investments in systems 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 preliminarily 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. Depending on the outcome of our evaluation, the timing of when revenue is recognized could change significantly for nonrefundable upfront fees and our multi-year subscription agreements.

As part of our preliminary 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.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

2. Property and Equipment

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

	December 31,	
	2016	2015
Computer and office equipment	$3,918	$2,717
Purchased software	1,074	1,074
Capitalized software development costs	6,947	3,460
Furniture and fixtures	2,701	1,890
Leasehold improvements and other	9,413	8,096
	24,053	17,237
Less accumulated depreciation and amortization	(9,320)	(5,505)
Total	$14,733	$11,732

Accumulated amortization for capitalized software development costs was $2,355,000 and $987,000 at December 31, 2016 and 2015, respectively. Amortization expense for capitalized software development costs for the years ended December 31, 2016, 2015 and 2014 was $1,368,000, $672,000 and $234,000, respectively, and is recorded within cost of revenue on the consolidated statements of operations.

3. Goodwill and Intangible Assets

Goodwill was $989,000 for the years ended December 31, 2016 and 2015.

Intangible assets consisted of the following (in thousands):

	Average Remaining	December 31,	
	Useful Life	2016	2015
Domain names	15 Months	$1,268	$1,268
Tradenames and trademarks	5 Months	109	109
Non-compete agreements	0 Months	26	26
Software	30 Months	321	—
Capitalized Learning Content	58 Months	400	—
Accumulated amortization		(1,364)	(959)
Total		$760	$444

Amortization expense for intangible assets was $405,000, $309,000 and $306,000 for the years ended December 31, 2016, 2015, and 2014, respectively. Amortization expense for capitalized learning content is recorded within cost of revenue on the consolidated statements of operations.

Based on the recorded intangible assets at December 31, 2016, estimated amortization expense is expected to be as follows (in thousands):

Years Ending December 31,	Amortization Expense
2017	$ 292
2018	191
2019	133
2020	80
2021	64
Total	$ 760

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

4. 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 table summarizes, by major security type, our assets that are measured at fair value on a recurring basis (in thousands).

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

	December 31, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate debt securities	$325	$ —	$ —	$ 325

The aggregate fair value of investments in an unrealized loss position was $17,906,000 as of December 31, 2016. Because we do not intend to sell the investments that are in an unrealized loss position and it is not likely that we will be required to sell any investments before recovery of their amortized cost basis, we do not consider these investments with an unrealized loss to be other-than-temporarily impaired as of December 31, 2016.

There were no marketable securities in an unrealized loss position as of December 31, 2015.

There were gross realized gains of $0, $0 and $9,000 from the sale or maturity of marketable securities included in other income (expense), net during 2016, 2015 and 2014, respectively. There were no gross realized losses from the sale or maturity of marketable securities during the years ended December 31, 2016, 2015 and 2014.

During the years ended December 31, 2016, 2015 and 2014, we recognized gross interest income on securities of $281,000, $30,000 and $177,000, respectively. Accretion expense on securities of $42,000, $13,000 and $148,000 during 2016, 2015 and 2014, respectively, and was reported within interest expense on the consolidated statements of operations.

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

	December 31,	
	2016	2015
Due within one year	$23,895	$325
Due after one year and through 5 years	—	—
Due after 5 years and through 10 years	—	—
Due after 10 years	—	—
Total	$23,895	$325

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

5. Credit Facility

In November 2012, we entered into a loan and security agreement with a financial institution, or the credit facility, allowing us to incur revolver borrowings of up to $7.0 million, or such lesser amount equal to a percentage of our monthly contracted recurring revenue. Interest on borrowings accrued at a rate equal to the prime rate plus 1.25% to 3.75%, with the exact interest rate determined by reference to a specified operating metric. Accrued interest is payable monthly on the first day of each month with all outstanding borrowings payable on the maturity date. In addition to an upfront facility fee, we are obligated to pay the lender a fee, payable quarterly in arrears, in an amount equal to 0.25% of the average unused portion of the available borrowings.

The credit facility contains customary conditions to borrowing, events of default and covenants, including covenants that restrict our ability to dispose of assets, change our business, merge with or acquire other entities, incur indebtedness, incur encumbrances, make distributions to holders of our capital stock, make investments or engage in transactions with our affiliates. The agreement also includes a financial covenant requiring the achievement of minimum bookings on a trailing three month basis, tested monthly. During the continuance of an event of default, SVB may accelerate amounts outstanding, terminate the credit facility, and foreclose on the collateral. Amounts borrowed under the credit facility are secured by a first priority security interest in substantially all of our assets other than intellectual property and more than 65% of the capital stock of any of our foreign subsidiaries.

In June 2015, we amended the credit facility to (1) increase available aggregate revolver borrowings and (2) decrease the interest rate on borrowings from a rate of prime plus 1.75% to prime plus 0.50%. The aggregate revolver borrowings is $15.0 million (subject to increase to $25.0 million in the lender’s sole discretion) through the maturity date in June 2017 so long as we are in compliance with all terms and conditions under the credit facility.

In November 2016, as part of our normal credit facility maintenance, we amended the minimum bookings targets for October 2016 through February 2017. The aggregate revolver borrowings remained at $15.0 million (subject to increase to $25.0 million in the lender’s sole discretion) through the maturity date in June 2017 so long as we are in compliance with all terms and conditions under the credit facility.

As of December 31, 2016 and 2015, we had no borrowings under the credit facility. Unamortized deferred financing costs associated with the credit facility were $10,000 and $56,000 as of December 31, 2016 and 2015, respectively.

6. Geographic Data

We have one operating segment, which is our cloud-based learning management systems. Revenue by geographic region, based on the physical location of the customer, is (in thousands):

	Year Ended December 31,		
	2016	2015	2014
United States	$100,668	$68,704	$42,366

Foreign	10,212	4,489	1,986
Total revenue	$110,880	$73,193	$44,352
Percentage of revenue generated outside of the United States	9 %	6 %	4 %

7. Stockholders' Equity

Common Stock

We had 200,000,000 shares of $0.0001 par value common stock authorized as of December 31, 2016 and 2015. There were 28,553,808 and 28,368,382 common shares issued at December 31, 2016 and 2015, respectively. There were 0 and 1,128,472 shares of common stock held in treasury at December 31, 2016 and 2015. 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 December 31, 2016.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

Common Stock Warrants

In November 2012, we issued a warrant to purchase 70,000 shares of common stock in connection with the credit facility. The warrant was fully exercisable with a ten-year term and an exercise price of $0.99 per share. This warrant is classified as stockholders' equity on the consolidated balance sheets.

In April 2014, we issued the lender a second warrant to purchase up to 33,332 shares of common stock in connection with an amendment of our credit facility at an exercise price of $4.47 per share, of which 16,666 were exercisable without contingency. The fair value of the warrant on the date of grant was $58,000 and was recorded as deferred financing costs and recognized as interest expense over the term of the credit facility. This common stock warrant is classified as a liability and recorded as a warrant liability on the consolidated balance sheets with changes in fair value being recorded each reporting period through the changes in fair value of warrant liability account on the statements of operations.

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 issued 78,406 shares. In connection with the exercise of the warrant, the warrant liability was marked to market as of the settlement date and a portion of the warrant liability equal to $244,000 was reversed and recorded as additional paid-in capital. The remaining warrant to purchase 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 this contingent event at 10%, an assumption used to determine the estimated fair value of the warrant. The warrant expires upon the earliest of (1) November 12, 2018 and (2) if we are acquired or substantially all of our assets are acquired or leased or otherwise disposed, then immediately prior to and contingent upon that acquisition. In the event of an acquisition, the common stock warrant will be automatically net-share settled if such exercise would provide value to the holder. The remaining contingent common stock warrant had an estimated common stock warrant liability balance of $25,000 at December 31, 2016.

The following table summarizes information about common stock warrants outstanding as of December 31, 2016 and 2015 (in thousands, except per share amounts):

		Number of Shares Underlying Common Stock Warrants as of December 31,		
Warrants to Purchase	Years of Expiration	2016	2015	Exercise Price
Common stock	2022	—	70	$ 0.99
Common stock	2018	17	33	4.47

Preferred Stock

Upon the closing of the IPO, our amended and restated certificate of incorporation authorized shares of undesignated preferred stock. As of December 31, 2016 and 2015, we had 10,000,000 shares of $0.0001 par value preferred stock authorized, of which no shares were issued or outstanding at December 31, 2016 and 2015.

Redeemable Convertible Preferred Stock

Upon the closing of the IPO on November 18, 2015, all outstanding convertible preferred stock was converted into 15,652,382 shares of common stock on a one-to-one basis, other than Series E which were converted using a ratio of approximately 1.3701 shares of common stock for each share of Series E preferred stock. No redeemable convertible preferred stock was outstanding as of December 31, 2016 and 2015.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

8. Stock-Based Compensation

The 2010 Equity Incentive Plan (the "2010 Plan") was terminated in connection with our IPO, and accordingly no shares are available for issuance under the 2010 Plan. However, any outstanding options granted under the 2010 Plan will remain outstanding, subject to the terms of the 2010 Plan and stock options agreements, until such outstanding options are exercised or until they terminate or expire by their terms. The 2010 Plan provided for the grant of incentive stock options, nonqualified options, stock appreciation rights, and shares of restricted stock to the Company's employees, officers, directors and outside consultants. As of December 31, 2016, 2,874,583 options to purchase common stock remained outstanding under the 2010 Plan.

Certain stock options granted under the 2010 Plan provide for early exercise of unvested shares. The unvested shares are subject to a repurchase right held by us at the original purchase price. Early exercises of options are not deemed to be substantive exercises for accounting purposes and accordingly, amounts received for early exercises are initially recorded in accrued liabilities or other long-term liabilities and reclassified to additional paid-in capital as the underlying shares vest. At December 31, 2016 and 2015, we had $0 and $26,000 recorded in liabilities related to early exercises of stock options, and the related number of unvested shares subject to repurchase was 0 and 44,541, respectively.

In August 2015, our board of directors adopted the 2015 Equity Inventive Plan (the "2015 Plan") and our stockholders approved the 2015 Plan in October 2015. The 2015 Plan became effective in connection with the IPO and provides for the grant of incentive stock options, nonqualified options, restricted stock units, stock appreciation rights, and shares of restricted stock. As of December 31, 2016, there were 3,225,795 shares of common stock authorized under the 2015 Plan. The 2015 Plan also provides that the number of shares reserved and available for issuance under the plan automatically increases each January 1, beginning on January 1, 2016 and continuing through and including January 1, 2025, by 4.5% of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors. This number is subject to adjustment in the event of a stock split, stock dividend or other change in our capital structure. As of December 31, 2016, 1,132,768 RSUs, net of forfeitures, remained outstanding under the 2015 Plan and 1,676,503 shares remaining for future grants. As of December 31, 2016, there were options to purchase 232,155 shares of common stock outstanding under the 2015 Plan.

The board of directors determines the terms of each grant. Generally, options have a vesting period ranging from one to four years. Stock options have a ten-year contractual life. Certain stock options have provisions to accelerate vesting upon the occurrence of certain events such as a change in control. Certain stock options provide for early exercise of unvested shares. All options were granted with an exercise price equal to or greater than the estimated fair value of our common stock at the date of grant. The fair value of the common stock that underlies the stock options has historically been determined by the board of directors based, in part, upon periodic valuation studies obtained from a third-party valuation firm. After the IPO, the fair value is determined by the market closing price of our common stock as reported on the New York Stock Exchange on the date of grant.

In August 2015, our board of directors adopted the 2015 Employee Stock Purchase Plan (the "ESPP"). Our stockholders approved the ESPP in October 2015, which became effective on the date of the IPO. A total of 333,333 shares of our common stock were initially reserved for issuance under the ESPP. The number of shares reserved for issuance will increase automatically each year, beginning January 1, 2016 through and including January 1, 2025 by the lesser of 1% of the total number of shares of our common stock outstanding on December 31 of the preceding calendar year;

333,333 shares of common stock; or such lesser number as determined by our board of directors. As of December 31, 2016, there were 605,732 shares authorized under the ESPP. The plan 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. Each offering need not be identical, but may not exceed 27 months and may specify one or more shorter purchase periods within the offering.

On each purchase date, eligible employees will purchase our stock at a price per share equal to 85% of the lesser of (1) the fair market value of our stock on the offering date or (2) the fair market value of our stock on the purchase date. During the year ended December 31, 2016, we issued 284,592 shares under the ESPP, with a weighted average purchase price per share of $14.53. Total cash proceeds from the purchase of shares under the 2015 ESPP in 2016 was $4,136,000. As of December 31, 2016, 321,140 shares are reserved for future issuance under the ESPP.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

The following table summarizes the assumptions relating to our stock options and ESPP purchase rights used in a Black Scholes option pricing model:

	Year Ended December 31,		
	2016	2015	2014
Employee Stock Options			
Dividend yield	None	None	None
Volatility	65.87%	66.15%—70%	70.00%—71.18%
Risk-free interest rate	1.4%	1.46%—1.84%	1.65%—1.99%
Expected life (years)	6.1	5.1—6.7	5.3—6.1
Fair value of common stock	$13.79	$9.195—$14.258	$2.355—$8.430
Employee Stock Purchase Plan			
Dividend yield	None	None	—
Volatility	46.95%—59.21%	54.22%	—
Risk-free interest rate	0.35%—0.63%	0.03%	—
Expected life (years)	0.5	0.5	—
Fair value of common stock	18.43—20.85	18.599	—

We estimate forfeitures at the time of grant for those awards that are expected to vest and revise those estimates in subsequent periods if actual forfeitures differ from those estimates. All stock-based payment awards are amortized on a straight-line basis over the requisite service periods of the awards, which are generally the vesting periods.

During 2014, certain investors purchased an aggregate of 648,774 shares of common stock from current and former employees, at a weighted average price per share of $19.72. This transaction resulted in aggregate purchase consideration of $12,797,000. The purchase price per share was in excess of the fair value of such shares. As a result, during 2014, we recorded the incremental purchase price above fair value of $6,898,000 as stock-based compensation expense for the sales by current and former employees.

During 2015, certain investors purchased an aggregate of 121,528 shares of common stock from a former employee, at a weighted average price per share of $19.72. In addition, during the year ended December 31, 2015, certain investors also purchased an aggregate of 534,251 shares of Series A redeemable convertible preferred stock from a current employee and another third-party investor, at a weighted average price per share of $21.93. These transactions resulted in aggregate purchase consideration of $14,109,000. The purchase price per share was in excess of the fair value of such shares. As a result, during the year ended December 31, 2015, we recorded the incremental purchase price above fair value of $5,353,000 as stock-based compensation expense for the sales by the current and former employees and $632,000 as a non-cash deemed dividend for the sale by the third-party investor.

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):

	Year Ended December 31,		
	2016	2015	2014
Options	$4,102	$3,466	$1,233
Vesting of restricted stock awards	—	61	67
Restricted stock units	4,561	134	—
Employee stock purchase plan	2,011	222	—
Employee sale of securities to investors	—	5,353	6,898
Total stock-based compensation	$10,674	$9,236	$8,198

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

	Year Ended December 31,		
	2016	2015	2014
Subscription and support cost of revenue	$488	$177	$258
Professional services and other cost of revenue	474	166	39
Sales and marketing	3,030	1,228	2,877
Research and development	3,862	1,403	3,971
General and administrative	2,820	6,262	1,053
Total stock-based compensation	$10,674	$9,236	$8,198

The following table summarizes the stock option activity for the year ended December 31, 2016 (in thousands, except per share amounts):

	Shares Underlying Options	Weighted-Average Exercise Price	Weighted-Average Remaining Life (in years)	Aggregate Intrinsic Value
Outstanding at January 1, 2016	4,101	$ 6.58	8.3	$ 58,417
Granted	232	13.79		
Exercised	(767)	3.75		
Forfeited or cancelled	(460)	11.15		
Outstanding at December 31, 2016	3,106	7.14	7.5	38,558
Vested and expected to vest—December 31, 2016	3,024	7.01	7.4	37,907
Exercisable at December 31, 2016	1,816	4.99	6.9	26,431

The follow table summarizes the activity of our unvested stock options for the year ended December 31, 2016 (in thousands, except per share amounts):

	Shares Underlying Options	Weighted-Average Grant Date Fair Value Per Share
Unvested at January 1, 2016	2,460	$ 5.74
Granted	232	8.29

Vested	(1,049)	4.67
Forfeited	(446)	6.91
Unvested at December 31, 2016	1,197	6.74

The weighted-average grant-date fair value of each option granted during 2016, 2015 and 2014 was $8.29, $7.26 and $3.75, respectively. The total intrinsic value of options exercised was $12,214,000, $2,328,000, and $10,942,000 during 2016, 2015, and 2014, respectively. The total fair value of options vested during 2016, 2015 and 2014 was $4,877,000, $2,366,000, $735,000, respectively.

As of December 31, 2016 and 2015, we had $5,342,000 and $9,721,000, respectively, of unrecognized stock-based compensation costs related to non-vested options that are expected to be recognized over a weighted average period of 2.3 years and 3.0 years, respectively.

As of December 31, 2016 and 2015, we had $830,000 and $919,000 of unrecognized stock-based compensation expense related to our ESPP that is expected to be recognized over the remaining term of the current offering period through May 31, 2017.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

RSUs vest upon achievement of a service condition. As soon as practicable following each vesting date, we will issue to the holder of the RSUs the number of shares of common stock equal to the aggregate number of RSUs that have vested. The service condition is a time-based condition met over a vesting period, as determined by our board of directors, which generally ranges from one to four years. The total stock-based compensation expense expected to be recorded over the remaining life of outstanding RSUs is approximately $14,936,000 at December 31, 2016. That cost is expected to be recognized over a weighted-average period of 3.2 years as of December 31, 2016. As of December 31, 2016, there are 1,606,000 RSUs expected to vest with an aggregate intrinsic value of $31,402,000. The total fair value of RSUs vested was approximately $3,743,000 in the year ended December 31, 2016. No RSUs vested in years ended December 31, 2015 and 2014.

The activity for RSUs for the year ended December 31, 2016 is as follows (in thousands, except per share amounts):

	RSUs Outstanding	
	Shares	Weighted-Average Grant Date Fair Value Per Share
Unvested and outstanding at January 1, 2016	196	$ 18.42
Granted	1,277	18.04
Vested	(186)	16.82
Cancelled	(154)	17.64
Unvested and outstanding at December 31, 2016	1,133	18.36

9. Income Taxes

Loss before provision for income taxes was as follows:

	Year Ended December 31,		
	2016	2015	2014
	(in thousands)		
United States	$(41,649)	$(43,626)	$(36,783)
Foreign	(11,752)	(9,235)	(4,587)
Total	$(53,401)	$(52,861)	$(41,370)

The components of the provision (benefit) for income taxes were as follows:

	Year Ended December 31,		
	2016	2015	2014
	(in thousands)		
Current:			
Federal	$—	$—	$—
State	49	16	22
Foreign	183	65	63
Total	232	81	85
Deferred:			
Federal	24	41	—
State	3	5	—
Foreign	(92)	(10)	(28)
Total	(65)	36	(28)
Provision for income taxes	$167	$117	$57

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

The following reconciles the differences between income taxes computed at the federal statutory rate of 35% and the provision for income taxes:

	Year Ended December 31,		
	2016	2015	2014
	(in thousands)		
Expected income tax benefit at the federal statutory rate	$(18,156)	$(17,972)	$(14,066)
State tax net of federal benefit	(1,767)	(1,703)	(904)
Stock-based compensation	1,101	2,921	2,782
Stock warrant liability	(21)	222	856
Difference in foreign tax rates	1,553	1,090	1,524
Research and development credits	(552)	(397)	(314)
Change in valuation allowance	17,798	15,615	10,114
Other	211	341	65
Income tax provision	$167	$117	$57

Deferred Tax Assets and Liabilities

Deferred income taxes reflect the net effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of our deferred tax assets and liabilities were as follows:

	Year Ended December 31,		
	2016	2015	2014
	(in thousands)		
Deferred tax assets:			
Net operating loss carryforwards	$53,693	$37,152	$22,626
Research and development credits	2,027	1,372	897
Accruals and reserves	3,614	3,285	2,746
Depreciation	382	157	286
Stock-based compensation	2,310	1,349	611
Total deferred tax assets	62,026	43,315	27,166
Deferred tax liabilities:			
Intangible assets	(73)	(47)	(20)
Capitalized costs	(1,774)	(952)	(409)
Total deferred tax liabilities	(1,847)	(999)	(429)
Valuation allowance	(60,122)	(42,324)	(26,709)
Net deferred tax assets	$57	$(8)	$28

At December 31, 2016, we had $53,693,000 in tax-effected federal, state and foreign net operating loss carryforwards that, if unused, begin expiring in 2018. Additionally, we had $3,040,000 of tax-effected carryforwards related to excess tax benefits for stock-based compensation. These operating loss carryforwards, if unused, begin expiring in 2018. Finally, at December 31, 2016, we had $3,395,000 in income tax credits, consisting primarily of federal and state research and development tax credits. These tax credits, if unused, begin expiring in 2023.

We review all available evidence to evaluate our recovery of deferred tax assets, including our recent history of accumulated losses in all tax jurisdictions over the most recent three years as well as our ability to generate income in future periods. We have provided a valuation allowance against our U.S. net deferred tax assets as it is more likely than not that these assets will not be realized given the nature of the assets and the likelihood of future utilization.

The valuation allowance increased by $17,798,000 and $15,615,000 in 2016 and 2015, respectively, due to the increase in the deferred tax assets primarily due to the increase in the net operating loss carryforwards.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

U.S. income taxes on the undistributed earnings of our non-U.S. subsidiaries have not been provided for as we currently plan to indefinitely reinvest these amounts and have the ability to do so. Cumulative undistributed foreign earnings were not material at December 31, 2016 and December 31, 2015.

We have federal net operating loss carryforwards of $127,438,000 and $91,226,000 at December 31, 2016 and 2015, respectively, which expire at various dates through 2034. We have generated net operating loss carryforwards from stock compensation deductions and the amount of federal and state excess tax benefits totaling $7,869,000 will be credited to additional paid-in capital if realized.

We have federal research and development credit carryforwards of $2,580,000 at December 31, 2016 that expire at various dates through 2034. We also have state research and investment credit carryforwards of $815,000 that expire at various dates through 2028.

On December 18, 2015, the Tax Increase Prevention Act was signed into law, which contains provisions that permanently extended the federal research credit. The federal research credit provisions had previously expired at the end of 2015. A 2015 federal research credit of $610,000 is reflected in the consolidated financial statements.

Uncertain Tax Positions

We account for uncertainty in income taxes using a two-step process. We first determine whether it is more likely than not that a tax position will be sustained upon examination by the tax authority, including resolutions of any related appeals or litigation processes, based on technical merit. If a tax position meets the more-likely-than-not recognition threshold it is then measured to determine the amount of benefit to recognize in the financial statements. The tax position is measured as the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement.

The following summarizes activity related to unrecognized tax benefits:

	Year Ended December 31,		
	2016	2015	2014
	(in thousands)		
Unrecognized benefit—beginning of the year	$739	$483	$280
Gross increases (decreases)—prior period positions	—	—	—
Gross increases (decreases)—current period positions	352	256	203
Unrecognized benefit—end of period	$1,091	$739	$483

All of the unrecognized tax benefits decrease deferred tax assets with a corresponding decrease to the valuation allowance. None of the unrecognized tax benefits would affect our effective tax rate if recognized in the future.

We have elected to recognize interest and penalties related to uncertain tax positions as a component of income tax expense. No interest or penalties have been recorded through December 31, 2016.

We do not expect any significant change in our unrecognized tax benefits within the next 12 months.

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.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

10. 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 2016 and 2015. 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

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2015, were as follows (in thousands):

	December 31, 2015			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds	$69,845	$—	$—	$69,845
Corporate debt securities	—	325	—	325
Total assets	$69,845	$325	$—	$70,170
Liabilities:				

Common stock warrant liability	—	—	331	331

The following table sets forth a summary of the changes in the estimated fair value of the warrant liabilities, which is measured at fair value on a recurring basis using significant unobservable inputs (Level 3) (in thousands):

	Redeemable Convertible Preferred Stock Warrant Liability	Common Stock Warrant Liability
Balance at January 1, 2015	$ 3,439	$ 138
Recognized expense	460	193
Exercise of warrant	(3,899)	—
Balance at December 31, 2015	$ —	$ 331
Recognized gain	—	(62)
Exercise of warrant	—	(244)
Balance at December 31, 2016	$ —	$ 25

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

The fair values of these outstanding warrants are measured using an option pricing model and probability weighted expect return model. Inputs used to determine estimated fair value include the estimated fair value of the underlying preferred and 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 adjusts the estimated volatility when significant changes in the peer group volatilities occur. Generally, increases (decreases) in the fair value of the underlying preferred and common stock would result in a directionally similar impact to the fair value measurement.

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. See Note 4—Marketable Securities for further information regarding the fair value of our investments.

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

11. Commitments and Contingencies

Litigation

We are involved in legal proceedings, including challenges to trademarks, 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. These operating expenses are not included in the table below.

During 2013, we entered into a 12-year non-cancellable operating lease for our corporate headquarters that included a lease incentive allowance of $8,088,000 that we could use for either the payment of leasehold improvements or rent abatement. We utilized $5,629,000 of the lease incentive allowance for leasehold improvements, which were capitalized within property and equipment, net, on the consolidated balance sheets and depreciated over the lesser of the estimated useful life or the lease term. The remaining $2,459,000 was utilized as a rent abatement for the first 13 months of the lease. As part of the lease agreement, we are subject to 3% annual rent escalations. During 2015, we expanded our corporate headquarters and took occupancy of an additional floor. The lease was executed in September 2015 and includes a 3% annual rent escalation. The leasehold improvement allowance, rent abatement and rent escalations were incorporated into our straight-line rent calculation.

In order to accommodate current and anticipated future growth, we took occupancy in June 2015 of a leased research and development facility in Chicago, Illinois. The lease for the research and development facility was executed in December 2014 and is a 7.5 year non-cancellable operating lease that included a leasehold improvement allowance of $494,000. These leasehold improvements were capitalized within property and equipment, net, on the consolidated balance sheets and depreciated over the lesser of the estimated useful life or the lease term. The lease also provided a 50% monthly rent abatement for the first 24 months, or approximately $303,000 in total rent abatement. As part of the lease agreement, we are subject to 2.5% annual rent escalations. The leasehold improvement allowance, rent abatement and rent escalations were incorporated into our straight-line rent calculation.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

With the growth and expansion of sales, marketing, and customer support operations in the United Kingdom, a new non-cancellable operating lease was entered into in June 2015. The leased space in London has an initial term of five years with no rent escalations, and includes a 100% base rent abatement for the first eight months.

A new facility was also secured for continued growth and expansion of sales, marketing, and customer support operations in Australia in August 2015. The non-cancellable lease agreement for the Sydney location has an initial term of five years, includes a tenant improvement allowance of $169,000.

In September 2016, a new non-cancellable operating lease was entered into to support the growth and expansion of sales, marketing and customer support operations in Sao Paulo, Brazil. The leased space has an initial term of three years with annual rent escalations of 5%, and includes a 100% base rent abatement for the first 4 months.

In November 2016, we entered into two new lease agreements in Pleasant Grove, Utah to facilitate the growth of our engineering organization. The first lease is a short-term lease for temporary space while more permanent space is being made available for occupancy. The lease commences when the temporary space is suitable for occupancy, estimated to be February 15, 2017, and ends when the long-term lease is suitable for occupancy, estimated to be February 1, 2018. Total rent payments for the temporary lease is $148,906 due upon occupancy of the short term space. The second lease is a long-term lease with an initial lease term of 11 years from the date the facility is completed and fit for occupancy. We have the option to renew the long-term lease for an additional five-year period. The long-term lease includes two floors with occupancy of the second floor delayed until year two of the lease. Base annual rent payments are subject to annual rent escalations of 2.5% and are $803,000 per floor for the first 3.5 years and increase to $1,045,000 per floor for the remaining years.

At December 31, 2016, future minimum lease payments under non-cancellable operating leases were as follows (in thousands):

Year Ended December 31:	Operating Leases
2017	$ 5,728
2018	6,020
2019	7,376
2020	6,961
2021	6,757
Thereafter	35,105
Total	$ 67,947

Rent expense under operating leases for 2016, 2015 and 2014 was $4,680,000, $4,097,000 and $3,317,000, respectively.

12. Employee Benefit Plan

We sponsor a qualified 401(k) defined contribution plan (the “401(k) Plan”), available to all qualified employees. The 401(k) Plan allows employees to contribute gross salary though payroll deductions up to the legally mandated limit based on their jurisdiction. In 2014, we implemented a matching contribution equal to 50% of each participant’s elective contributions, not to exceed $1,000 per participant annually. Participants vest in matching contributions over a four-year period after a one year cliff vest. The cost recognized for our contributions to the 401(k) Plan for the year ended December 31, 2016, 2015 and 2014 was $619,000, $468,000 and $296,000, respectively.

13. Related-Party Transactions

We incurred $20,000, $40,000 and $40,000 for consulting services provided by a member of our board of directors during 2016, 2015 and 2014, respectively. We owed $0, and $10,000 for such services at December 31, 2016 and 2015, respectively.

INSTRUCTURE, INC.

Notes to Consolidated Financial Statements

15. Selected Quarterly Financial Data (unaudited)

The following tables set forth selected unaudited quarterly consolidated statements of operations data for each of the eight quarters in 2016 and 2015 (in thousands except per share data):

	Three Months Ended							
	Dec. 31, 2016	Sept. 30, 2016	June 30, 2016	March 31, 2016	Dec. 31, 2015	Sept. 30, 2015	June 30, 2015	March 31, 2015
	(unaudited) (in thousands)							
Total revenues	$31,546	$30,145	$25,890	$23,299	$21,797	$20,894	$15,877	$14,625
Gross profit	22,419	21,507	18,255	15,950	14,961	14,100	10,345	9,714
Loss from operations	(12,838)	(12,267)	(14,516)	(13,754)	(11,912)	(10,103)	(13,273)	(16,684)
Net loss	(12,922)	(12,317)	(14,590)	(13,739)	(12,122)	(10,212)	(13,334)	(17,310)
Net loss attributable to common stockholders	(12,922)	(12,317)	(14,590)	(13,739)	(12,122)	(10,212)	(13,966)	(17,310)
Net loss per common share attributable to common stockholders, basic and diluted	(0.46)	(0.44)	(0.53)	(0.50)	(0.74)	(1.60)	(2.21)	(2.79)

16. Subsequent Events

In January 2017, we granted 149,571 RSUs and options to purchase 166,005 shares of common stock. Total unrecognized stock-based compensation costs was $5,400,000, which is expected to be recognized over a weighted-average period of approximately four years.

In February 2017, we granted 12,048 RSUs and options to purchase 19,245 shares of common stock. Total unrecognized stock-based compensation costs was $529,000, which is expected to be recognized over a weighted-average period of approximately four years.

In January 2016, the number of shares authorized for the 2015 Equity Incentive Plan and 2015 Employee Stock Purchase Plan increased by 1,284,921 and 285,538, respectively, in connection with the annual automatic increases provided by those plans.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of disclosure controls and procedures. Our management, with the participation of our Chief Executive Officer and 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) as of the end of the period covered by this report.

Based on management's evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures are designed to, and are effective to, provide assurance at a reasonable level that the information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures.

Management's Annual Report on Internal Control over Financial Reporting. Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) of the Securities Exchange Act of 1934, as amended). Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2016. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control—Integrated Framework (2013 framework). All control systems are subject to inherent limitations. Our management has concluded that, as of December 31, 2016, our internal control over financial reporting is effective based on these criteria. This Annual Report on Form 10-K does not include an attestation report of our registered public accounting firm because, as an "emerging growth company" under the JOBS Act, we are exempt from the requirement to obtain an attestation report from our registered public accounting firm.

Changes in internal control over financial reporting. There were no changes in our internal control over financial reporting during the quarter ended December 31, 2016 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.

Item 9B. Other Information.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

(1) The information required by this Item concerning our executive officers and our directors and nominees for director may be found under the section entitled “Proposal No. 1—Election of Directors,” “Information Regarding the Board of Directors and Corporate Governance,” “Executive Officers” appearing in the 2017 Proxy Statement. Such information is incorporated herein by reference.

(2) The information required by this Item concerning our code of ethics may be found under the section entitled “Information Regarding the Board of Directors and Corporate Governance” appearing in the 2017 Proxy Statement. Such information is incorporated herein by reference.

(3) The information required by this Item concerning compliance with Section 16(a) of the Securities Exchange Act of 1934, amended may be found in the section entitled “Section 16(a) Beneficial Ownership Reporting Compliance” appearing in the 2017 Proxy Statement. Such information is incorporated herein by reference.

Item 11. Executive Compensation.

The information required by this Item may be found under the sections entitled “Director Compensation” and “Executive Compensation” and “Equity Compensation Plan Information” appearing in the 2017 Proxy Statement. Such information is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

(1) The information required by this Item with respect to security ownership of certain beneficial owners and management may be found under the section entitled “Security Ownership of Certain Beneficial Owners and Management” appearing in the 2017 Proxy Statement. Such information is incorporated herein by reference.
(2) The information required by this Item with respect to securities authorized for issuance under our equity compensation plans may be found under the sections entitled “Equity Compensation Plan Information” appearing in the 2017 Proxy Statement. Such information is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

(1) The information required by this Item concerning related party transactions may be found under the section entitled “Transactions with Related Persons” appearing in the 2017 Proxy Statement. Such information is incorporated herein by reference.
(2) The information required by this Item concerning director independence may be found under the sections entitled “Information Regarding the Board of Directors and Corporate Governance—Independence of the Board of Directors” and “Information Regarding the Board of Directors and Corporate Governance—Information Regarding Committees of the Board of Directors” appearing in the 2017 Proxy Statement. Such information is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services.

The information required by this Item may be found under the section entitled “Proposal No. 2—Ratification of Selection of Independent Registered Public Accounting Firm” appearing in the 2017 Proxy Statement. Such information is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a)(1) Financial Statements—The financial statements filed as part of this Annual Report on Form 10-K are listed on the Index to Consolidated Financial Statements in Item 8.

(a)(2) Financial Statement Schedules— All schedules are omitted because they are not applicable or the required information is shown in the financial statements or the notes thereto.

(a)(3) Exhibits—The exhibits required by Item 601 of Regulation S-K are listed in paragraph (b) below.

(b) Exhibits.

The exhibits listed on the Exhibit Index (following the Signatures section of this report) are filed herewith or are incorporated by reference to exhibits previously filed with the SEC.

Item 16. Form 10-K Summary

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Instructure, Inc.

Date: February 10, 2017 By: /s/ Joshua L. Coates
Joshua L. Coates
Chief Executive Officer

POWER OF ATTORNEY

Know All Persons By These Presents, that each person whose signature appears below constitutes and appoints Joshua L. Coates, Steven B. Kaminsky and Matthew A. Kaminer, or each of them, as his true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him and in his name, place or stead, in any and all capacities, to sign any amendments to this report and to file the same, with exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that either of said attorneys-in-fact, or substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Joshua L. Coates	Chief Executive Officer and Director	February 10, 2017
Joshua L. Coates	(Principal Executive Officer)	
/s/ Steven B. Kaminsky	Chief Financial Officer	February 10, 2017
Steven B. Kaminsky	(Principal Financial and Accounting Officer)	
/s/ Steven A. Collins	Director	February 10, 2017
Steven A. Collins		
/s/ William M. Conroy	Director	February 10, 2017
William M. Conroy		
/s/ Ellen Levy	Director	February 10, 2017
Ellen Levy		
/s/ Jim Steele	Director	February 10, 2017

Jim Steele		
/s/ Kevin Thompson	Director	February 10, 2017
Kevin Thompson		
/s/ Lloyd G. Waterhouse	Director	February 10, 2017
Lloyd G. Waterhouse		

EXHIBIT INDEX

Exhibit Number	Description	Incorporated by Reference Schedule Form	File Number	Exhibit	Filing Date	Filed Herewith
3.1	Amended and Restated Certificate of Incorporation.	8-K	001-37629	3.1	November 18, 2015	
3.2	Amended and Restated Bylaws.	S-1	333-207349	3.4	October 9, 2015	
4.1	Form of Common Stock Certificate.	S-1	333-207349	4.1	November 2, 2015	
10.1	Amended and Restated Investor Rights Agreement, by and among the Registrant and certain of its stockholders, dated November 21, 2014.	S-1	333-207349	10.1	October 9, 2015	
10.2	Form of Indemnity Agreement by and between the Registrant and its directors and officers.	S-1	333-207349	10.2	October 9, 2015	
10.3+	2010 Equity Incentive Plan and Forms of Incentive Stock Option Agreement and Nonqualified Stock Option Agreement.	S-1	333-207349	10.3	November 2, 2015	
10.4+	2015 Equity Incentive Plan.	S-1	333-207349	10.4	November 2, 2015	
10.5+	Form of Stock Option Agreement, Notice of Exercise and Stock Option Grant Notice under the 2015 Equity Incentive Plan.	10-Q	001-37629	10.1	May 6, 2016	
10.6+	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under the 2015 Equity Incentive Plan.	S-1	333-207349	10.6	October 9, 2015	
10.7+	2015 Employee Stock Purchase Plan.	S-1	333-207349	10.7	November 2, 2015	
10.8+	Form of Executive Agreement by and between the Registrant and its officers.	S-1	333-207349	10.8	October 9, 2015	

10.9+	Non-Employee Director Compensation Policy.	S-1	333-207349	10.9	October 23, 2015	
10.10	Lease Agreement by and between the Registrant and Old Mill Building IV, LLC, dated October 2, 2012.	S-1	333-207349	10.10	October 9, 2015	
10.11	First Amendment to Lease Agreement by and between the Registrant and Old Mill Building IV, LLC, dated October 30, 2014.	S-1	333-207349	10.11	October 9, 2015	
10.12	Lease Assumption Agreement by and between the Registrant and Old Mill Building IV, LLC, dated August 11, 2015.	S-1	333-207349	10.12	November 2, 2015	
10.13	Amended and Restated Loan and Security Agreement by and between the Registrant and Silicon Valley Bank, dated June 15, 2015.	S-1	333-207349	10.12	October 9, 2015	
10.14	Warrant to Purchase Common Stock issued to Silicon Valley Bank, dated April 1, 2014.	S-1	333-207349	10.14	October 9, 2015	
10.15	Lease Agreement by and between the Registrant and Valley Grove LLC, dated November 10, 2016	8-K	001-37629	10.15	November 15, 2016	
23.1	Consent of Independent Registered Public Accounting Firm					X
31.1	Certification of Periodic Report by Principal Executive Officer under Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Periodic Report by Principal Financial Officer under Section 302 of the Sarbanes-Oxley Act of 2002					X

Exhibit Number	Description	Incorporated by Reference				Filed Herewith
		Schedule Form	File Number	Exhibit	Filing Date	
32.1*	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
101.INS	XBRL Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema Document					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					X

+Indicates management contract or compensatory plan.

*Document has been furnished, is not deemed filed and is not to be incorporated by reference into any of the Company's filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, irrespective of any general incorporation language contained in any such filing.