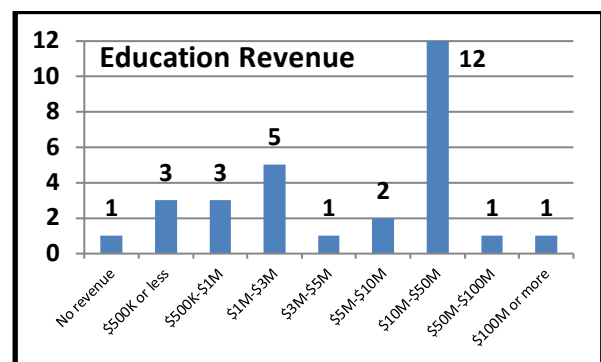
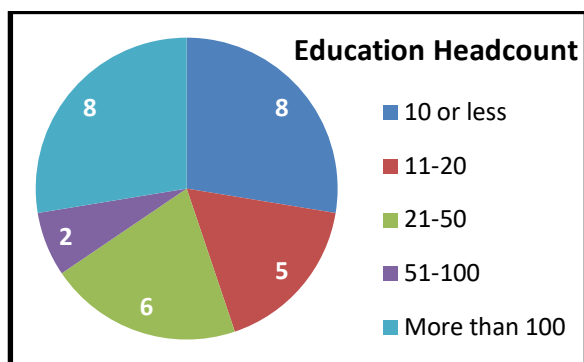
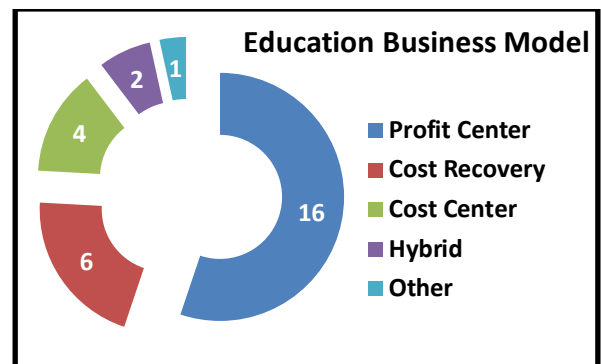
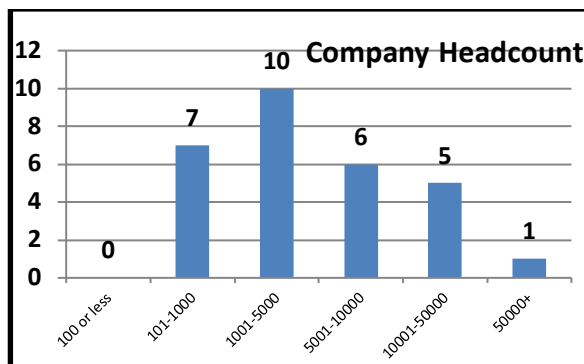
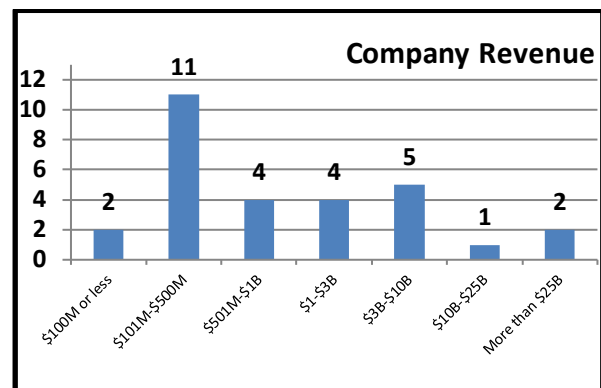
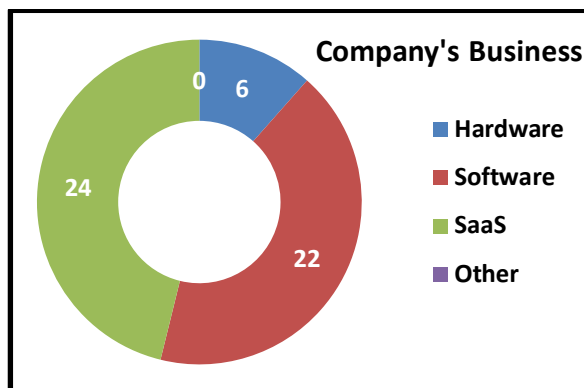




CEdMA Training Market Barometer 3rd Quarter 2019 Actual

Introduction

This report is compiled by CEdMA for its members about their Education businesses. It is based around a series of absolute growth or decline percentages in the range $\pm 12.5\%$. Revenue and volumes refer to training services delivered in the quarter and not future bookings. Members were asked to indicate whether their data was for the global business or that for North America. Note that in this report, u/f/d is the number of members reporting up/flat/down, respectively. There were 23 responses for global and 6 for North America so the combined 29 profiles are as follows:



Changes to the Barometer

In response to member suggestions, we have changed the survey in the following ways from 16Q1:

1. We only collect data **about the quarter just ended**, not the "current" quarter
2. All questions **ask about revenue** (but some about **volumes** added back in 18Q4)
3. We ask about the major modalities such as ILT, VILT and eLearning, plus additional services.

Summary

The unweighted average uses all responses as entered, whereas the weighted average uses the size of the revenue, taking the relevant education value, so larger companies have a bigger impact.

These observations are weighted and based on trendlines of 4-period moving averages.

Total Revenue is defined as all recognized revenue. The trend was 4-5% in 2016, dropped to 2-3% in 2017 and is now flat to 19Q3. This last quarter was negative -3.1% compared to 18Q3.

Operating profit is revenue minus all fixed and variable costs, excluding allocations, divided by revenue. The growth trend is flat to 19Q3, down from 4% in 2016, and 3% in 2018.

Live Classroom (ILT) is all revenue when the instructor is in the same physical location. Growth was flat in 2013-14, 2% in 2015-17 but has now dipped to negative 4-5% to 19Q3.

Virtual Classroom (VILT) is all revenue for instructor-led training via the web, with or without virtual labs. Growth has dropped from 6% in 2015-16, to 3% in 2017 but is now negative -1% to 19Q3.

Public (scheduled) classes is revenue for ILT and VILT and the trend has dropped to negative -5% to 19Q3, having peaked at 1-2% in 2014, and been flat in 2015-16, but negative since 2017.

Private (one-customer) classes is revenue for ILT and VILT, and now showing a trend of negative -2% to 19Q3, having been 3% in 2014, 2% in 2015 and 4-5% in 2016-17.

Self-paced is all revenue generated by training students without instructors, such as eLearning, video, and can be paid per use or subscription. It's showing a 10% increase to 19Q3, having grown steadily from a 5% increase in 2013. Note that 19 reported revenue for self-paced.

Certification is all revenue for certification business, such as exam fees and exam prep services, but excluding any exam prep training which is accounted under ILT/VILT/self-paced. The trendline is negative 1% to 19Q3, falling from 5% in 2015, but flat since then. 19 reported revenue.

Learning Consulting is all revenue generated by non-training education business like learning needs analysis, customization of material assessments, and mentoring/coaching after training. There were increases of 1% in 2016, but the trendline to 19Q3 is showing negative -2%, having been as low as negative 4% for 2018. (But only 10 members reported revenue.)

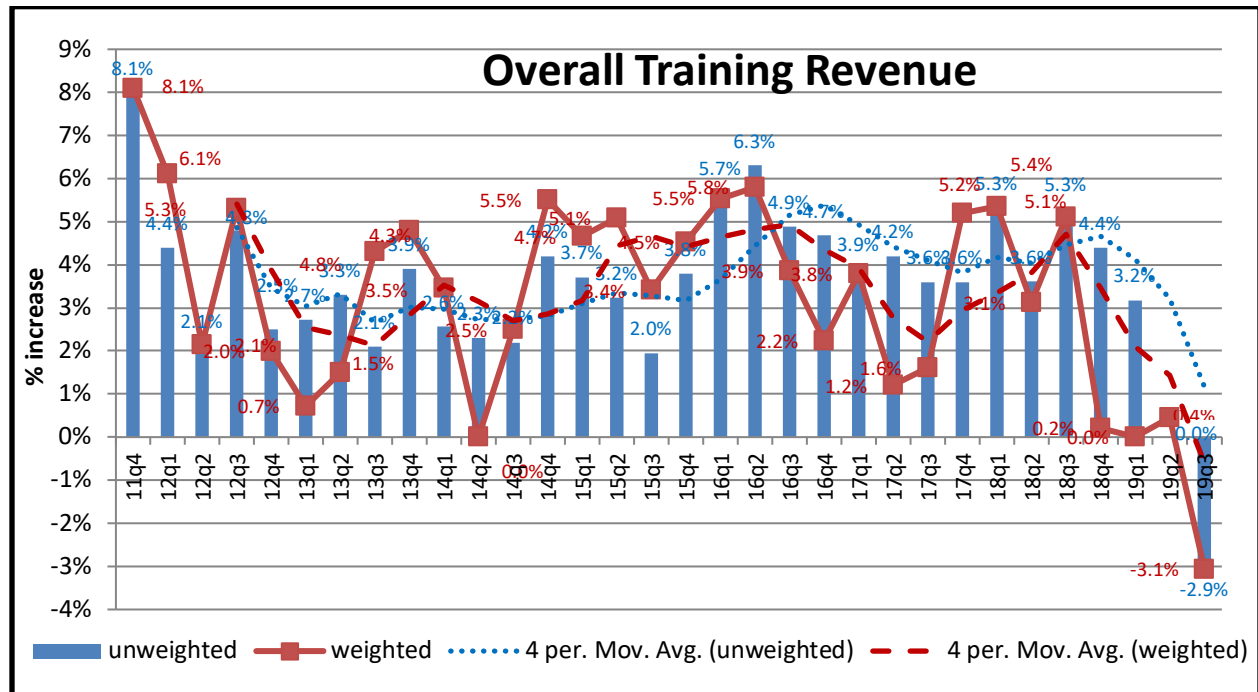
Learning Technologies is all revenue generated by learning tools, infrastructure, courseware and directly related training and learning consulting for these technologies. After showing negative 2% in 2016 and positive 2% in 2017, the trend is now negative -4% to 19Q3. (But only 3 members reported revenue.)

New Learning Modalities is all revenue for social learning, gamification, microlearning, mobile. 2016 showed the trendline at 7%, but it's now flat to 19Q3, having peaked at 5% in 2018. (But only 4 members reported revenue.)

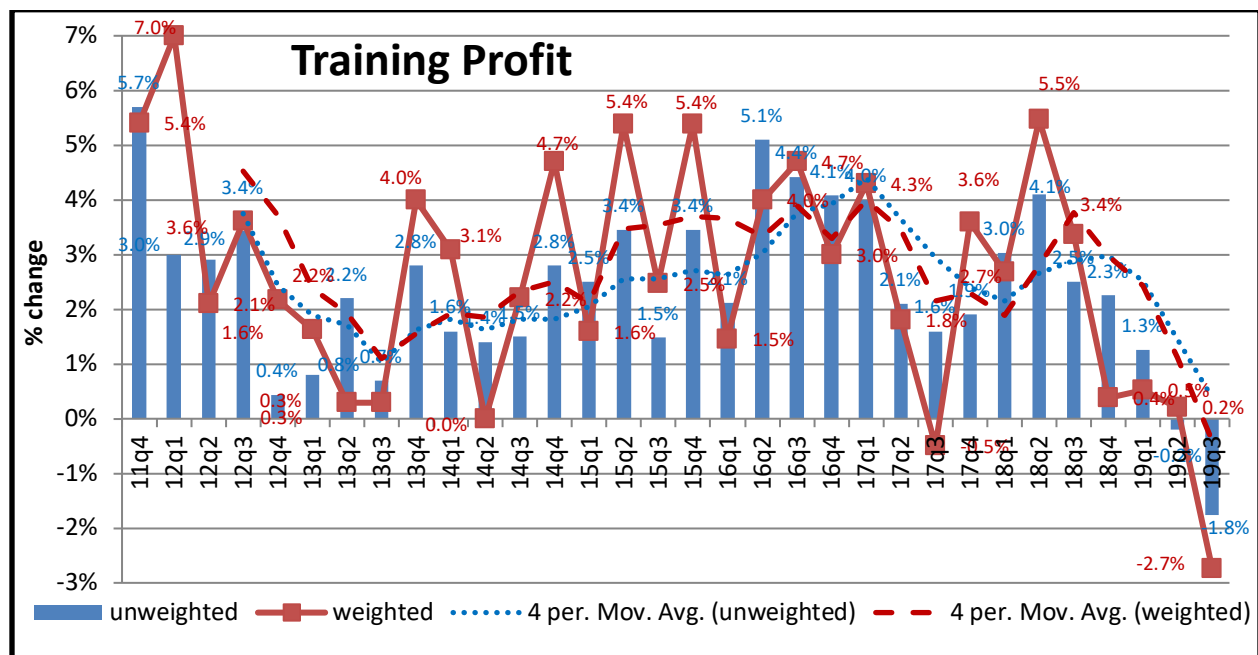
Subscriptions include all revenue from any of the above modalities. Subscription revenue has grown consistently 6-8% from 2017 and it's now rising 10% to 19Q3. 18 reported revenue.

Training Revenue and Profit

The unweighted total training **revenue** decrease for 19Q3 (u=10, f=3, d=15) was -2.9%. The weighted total training **revenue** decrease was -3.1%. The 4-period moving average is currently showing an increase of 1% for unweighted but flat weighted.

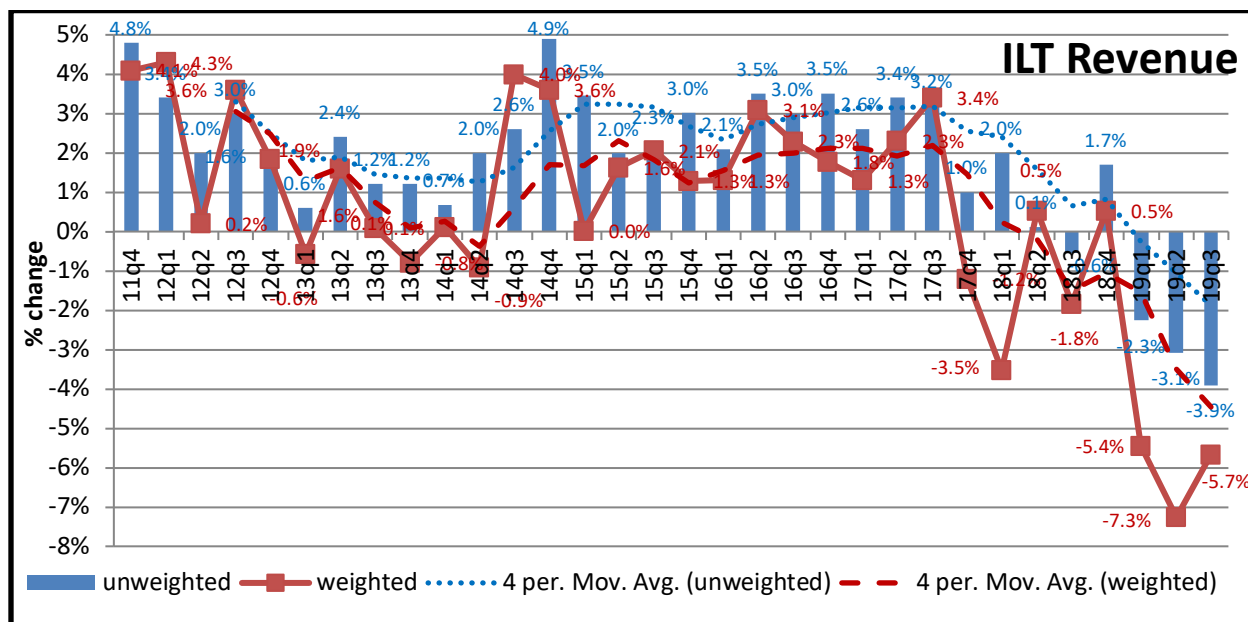


Training profit in 19Q3 (u=7, f=10, d=10) was a -1.8% decrease unweighted, and -2.7% weighted. The training profit weighted trendline to 19Q3 has fallen to flat.



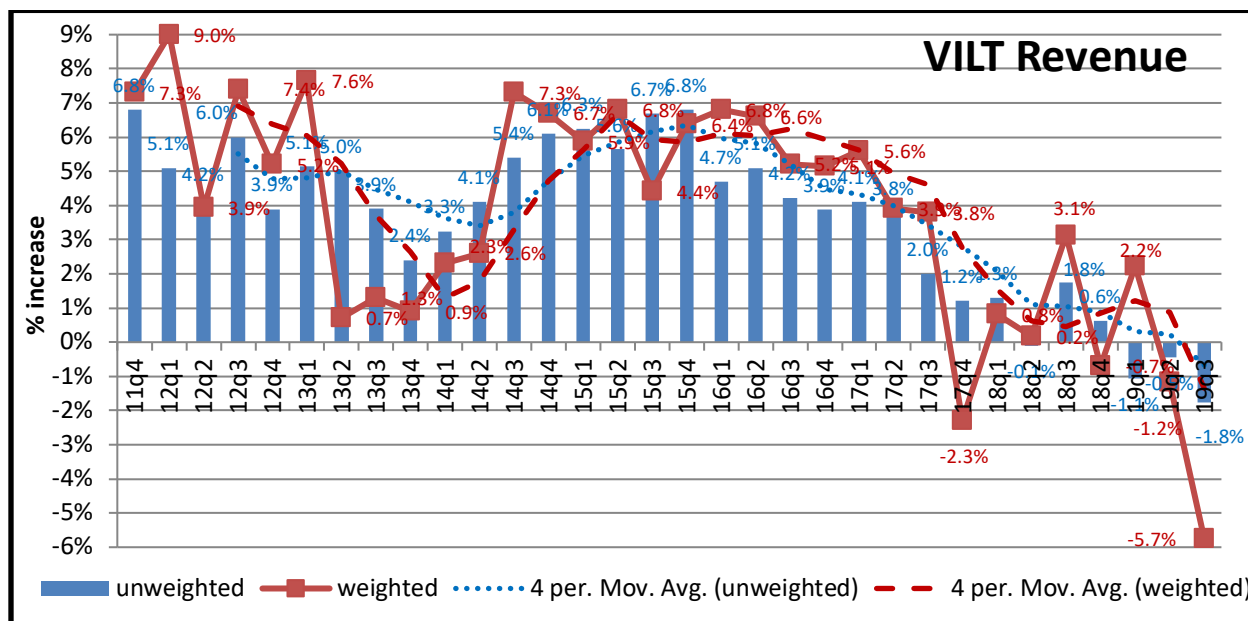
Live Instructor-led Training

The unweighted live classroom **revenue** decrease for 19Q3 (u=7, f=2, d=16) was -3.9% with weighted -5.7%. The decrease in **volume** was -0.7%. The weighted 4-period moving average is now negative 4-5%. This is a further downturn in ILT revenue.

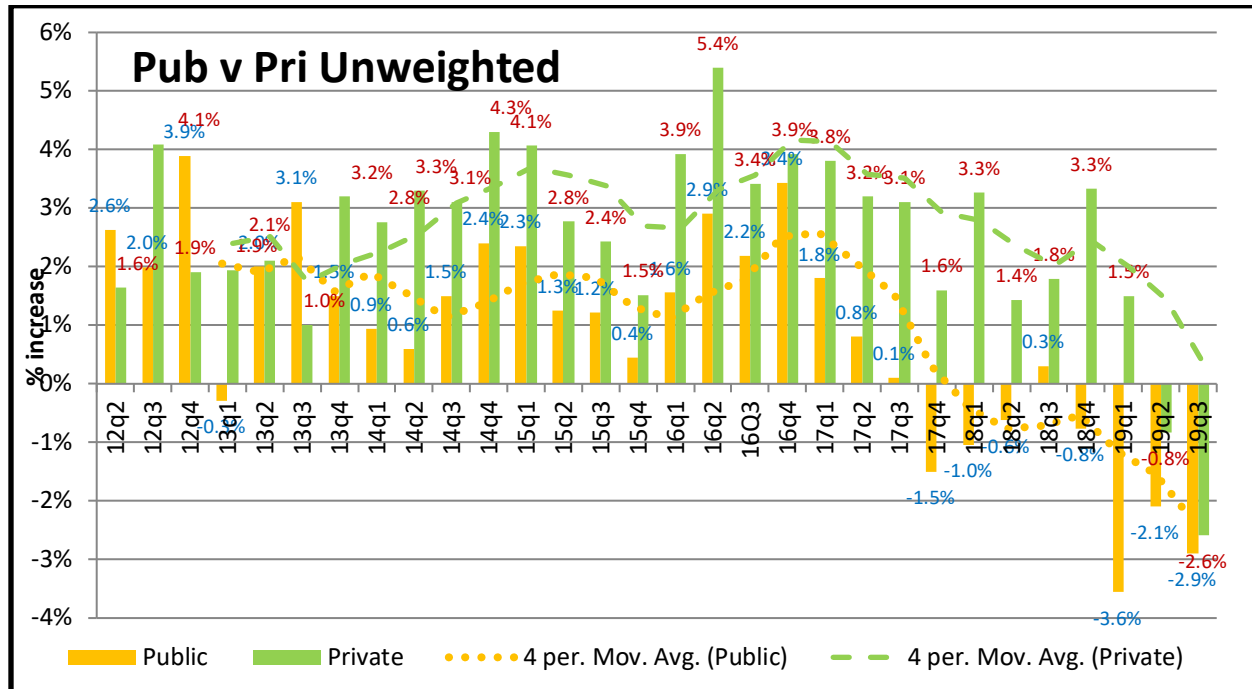


Virtual Instructor-led Training

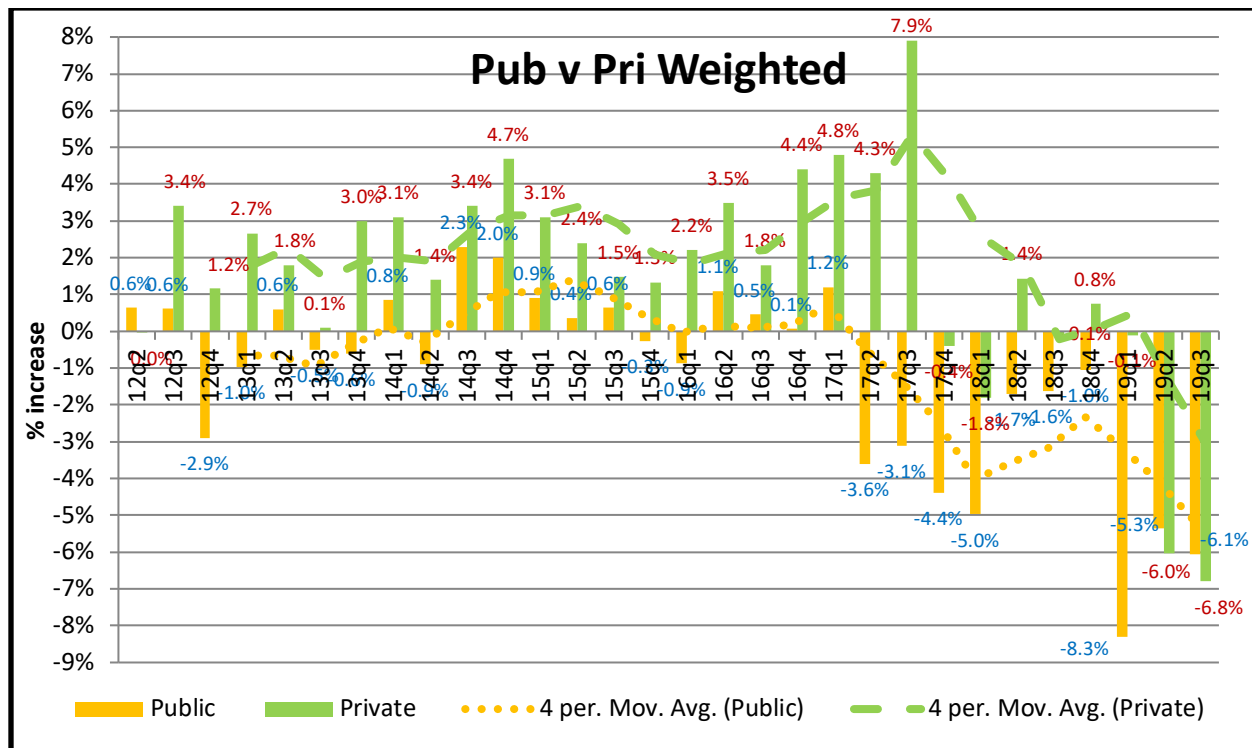
Virtual classroom also continuous trending downwards. The unweighted virtual classroom **revenue** decrease for 19Q3 (u=8, f=5, d=11) was -1.8%. The weighted virtual classroom **revenue** decrease was -5.7%. However, decrease in **volume** was -0.1%. The 4-period moving average for weighted is now -1%, down from 3% in 2017 and 6% in 2015-16. Note that 24 reported positive revenue.



We include questions on public classes and private classes. Unweighted public **revenues** have decreased in 19Q3 by -2.9% and private decreased by -2.6%. The decrease in **volume** was -1.0% for public and -0.3% for private. The trendline for public has dropped to negative 2% and for private to flat. (Note that public is u=7, f=4, d=14 and private u=7, f=5, d=15.)

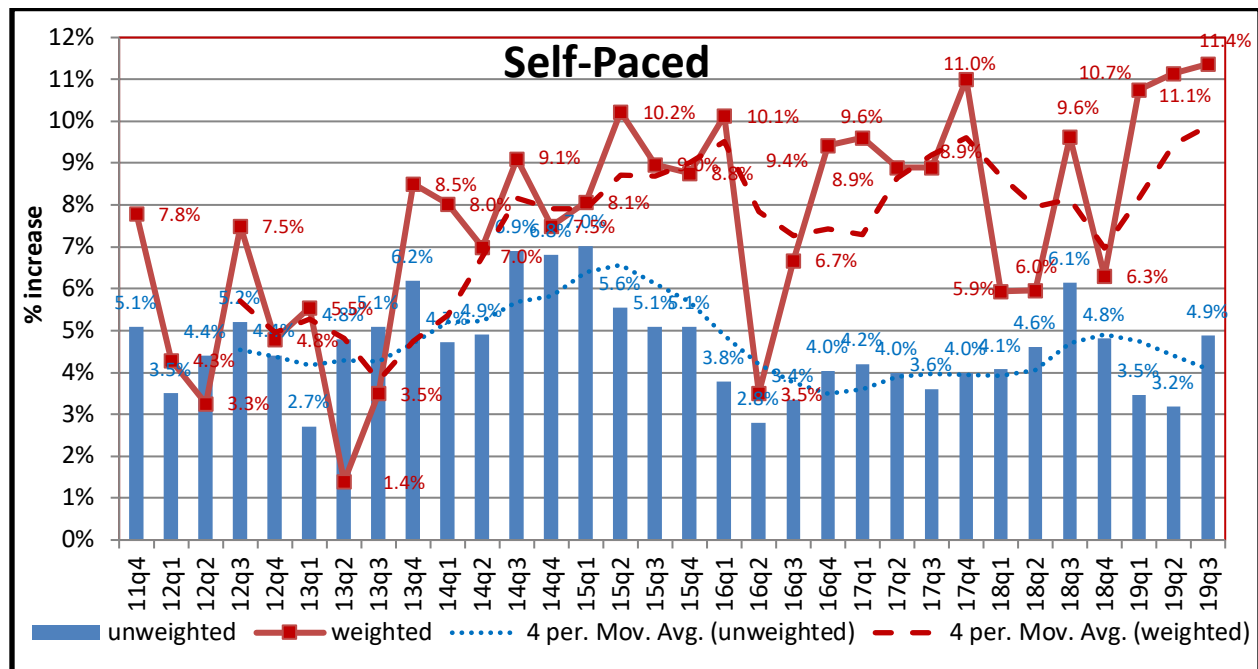


When weighting is considered, the changes are more dramatic. In 19Q3, public **revenue** has decreased -6.1% and even private **revenue** decreased -6.8%. The 4-period moving average is negative 5% for public and negative 2% for private.



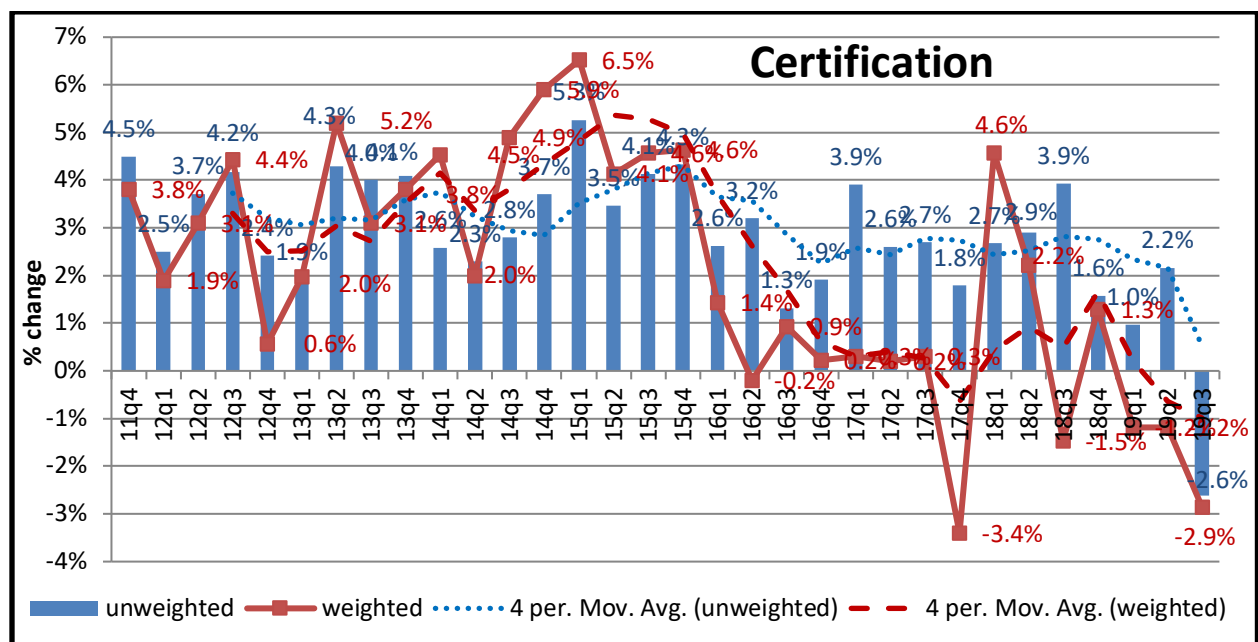
Self-Paced

The unweighted self-paced **revenue** increase in 19Q3 (u=14, f=4, d=3) was 4.9%. However, the weighted self-paced **revenue** increase was 11.4%. The increase in **volume** was 4.2%. The 4-period moving average shows 10% for weighted. Note that 21 reported positive revenue.



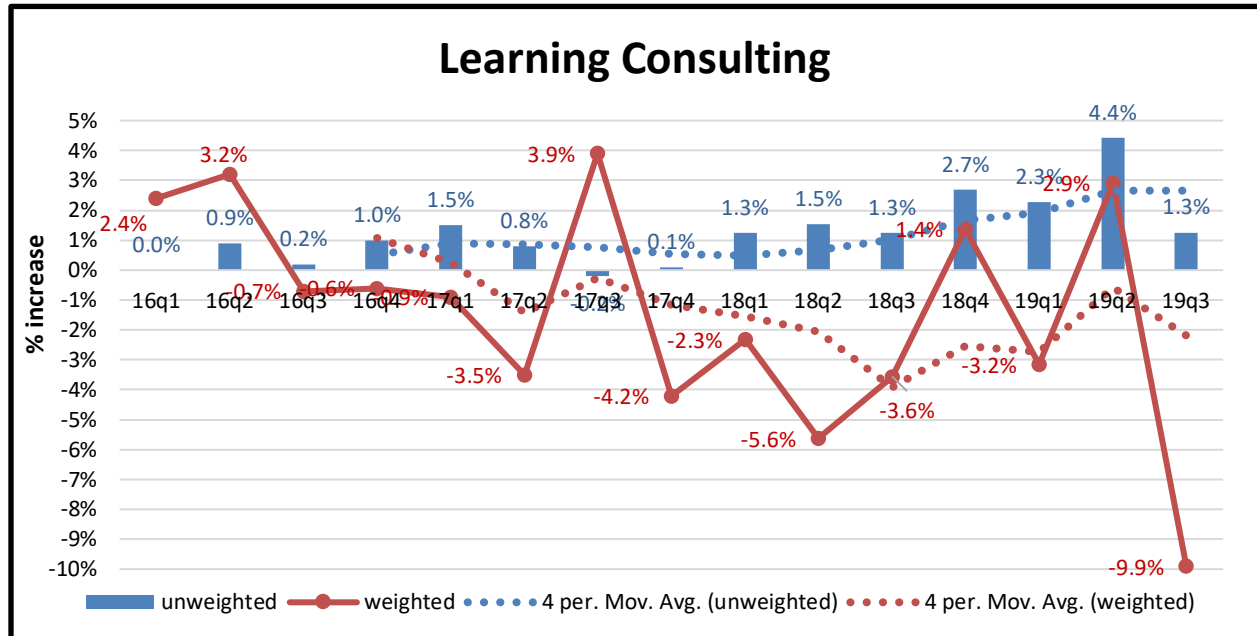
Certification

The unweighted certification **revenue** decrease for 19Q3 (u=4, f=7, d=9) was -2.6%, and the weighted certification **revenue** decrease was -2.9%. The increase in **volume** was 0.3%. The weighted 4-period moving average is negative 1%. Note that only 20 reported positive revenue.



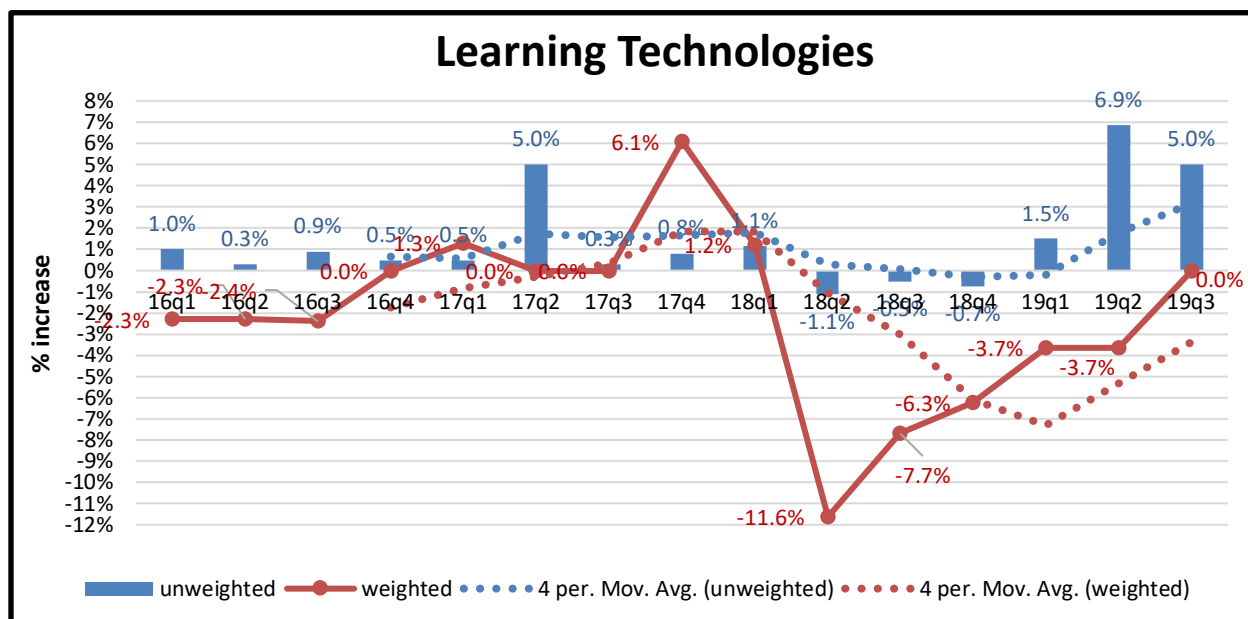
Learning Consulting

We now have over three years reporting this area. In that period, the unweighted scores have risen only in the last year. Weighted scores have been volatile and show a moving average of negative 2%. The increase in **volume** was 1.0%. The **revenue** changes for 19Q3 (u=4, f=3, d=3) are 1.3% for unweighted but a decrease of -9.9% when weighted. Note that only 10 reported revenue.



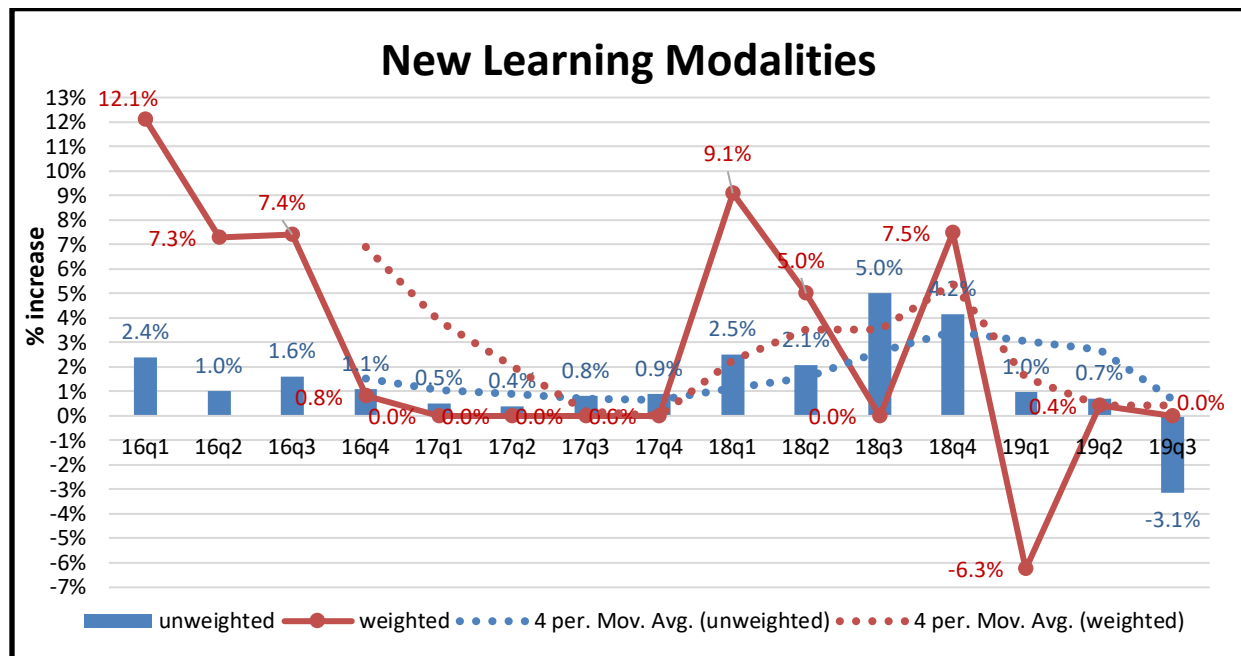
Learning Technologies

We also now have more than three years reporting this area. In that period, the unweighted scores have hovered around flat, but the trendline for weighted scores now shows 3-4% decrease. The **revenue** increase for 19Q3 (u=2, f=1, d=0) was 5.0% for unweighted but flat when weighted. Note that only 3 reported revenue.



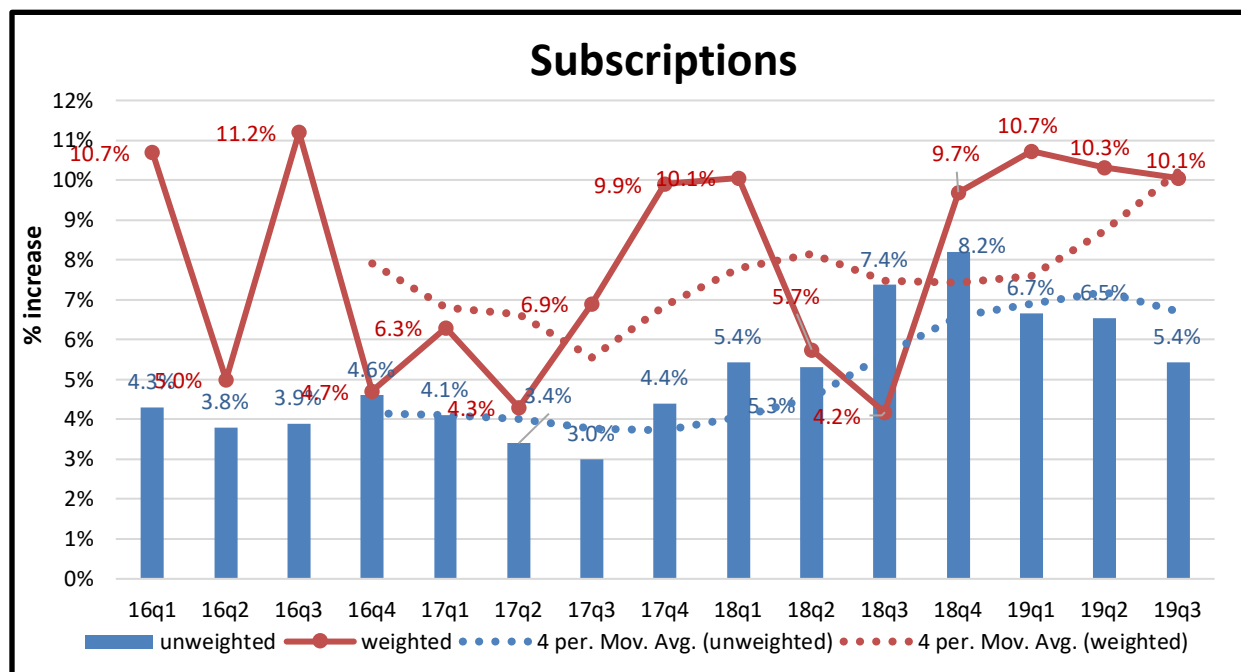
New Learning Modalities

We now have 15 quarterly reports. In that period, the trendline for both unweighted scores and weighted scores have fallen to flat. The increase in **volume** was 0.9%. The **revenue** decrease for 19Q3 ($u=0$, $f=3$, $d=1$) is -3.1% for unweighted and flat for weighted. Note that only 4 reported revenue.



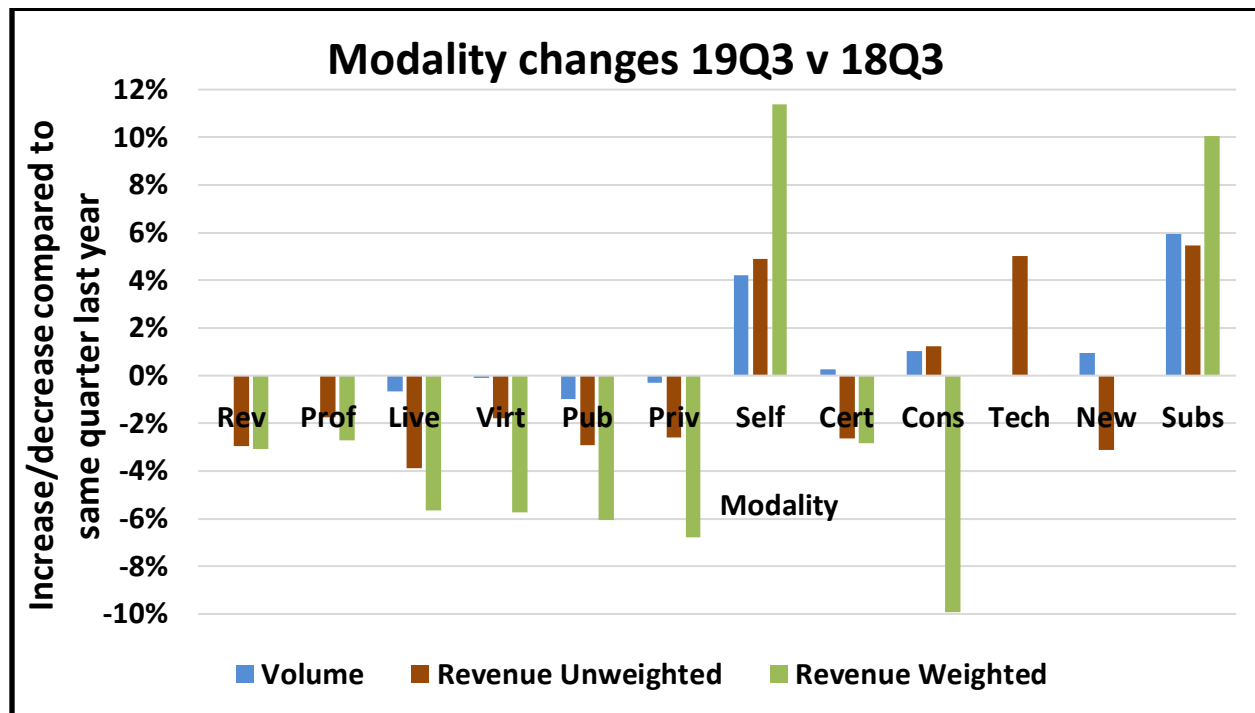
Subscriptions

We also have over three years reporting this area. In that period, unweighted scores show a 7% increase and weighted scores 10%. The **revenue** increases for 19Q3 ($u=12$, $f=2$, $d=3$) are 5.4% for unweighted and 10.1% for weighted. The increase in **volume** was 6.0%. Note that 18 reported revenue.



Volumes as well as revenue

We now ask for percentage movement of modalities by volume of students in addition to or instead of revenue. Of course, volume averages will only be for unweighted input. Here's the comparison for 19Q3.



Which subject areas saw the biggest increases in your training volumes in the last 3-6 months?

1. Certification, specialty/more advanced topics and training on our latest software platform.
2. Subscriptions are growing quickly, these are new for this year, we did not have subscriptions last year. These will help to drive our ILO and Assisted Self-Paced business.
3. Online courses and hands-on labs
4. Our subscription program launched in 2017 and we see that growing. 96% of our education sales are subscriptions. Our subscription program includes our entire portfolio, e-learning, ILT, VILT, customer conference and pre-conference education. 2019 - We made 75% of our on-demand content freely available to the public but our biggest impact with making it available was not watching end to end courses it is the views we receiving in videos we've embedded to our support articles.
5. We are developing more Self Study courses as we continue to see the biggest increase for them.
6. Private classes
7. Core technology Database (advance courses) and Graph
8. Cloud Computing; Data Science
9. End User topics in our learning library
10. T3 classes supporting Partner enablement 5% up YoY (YTD)
11. Overall the business has been down due to lack of support from regional leadership. The custom business was growing but a change in the Americas has caused a large decline.
12. Customized onsite training.
13. Data center, Network automation, SDN and DevOps
14. Certification on pharmaceutical compliance software

15. Custom training with customers
16. DevOps
17. Deployment; Architecture
18. Business has clearly separated into two streams - bespoke training events, and on-demand / self-paced training. Bootcamp-type web sessions and technical topic-specific webinars are also doing well quarter over quarter. Also noting a return to public VILT classes this past quarter w/continued improvement forecast next 3-6 months.
19. Training classes sold with Support Contracts ("Support Contract Attach") grew significantly; ILT/VILT in new technology areas
20. learning consulting and change management services
21. Learning Technologies
22. Cloud-based products
23. New courses on new products...
24. We have seen an increase in taking advantage of the self-serve option for the same ILT courses which contain the same content. It seems people are adjusting to how they learn to see the advantage of a flexible training schedule rather than a committed schedule. It also allows them to see the training materials as more than a box to tick or a one-time thing but a source of reference material in the time of need.
25. Classroom, technical training. Technical aspects of our SaaS product line. Customers are wanting more than features and functions.
26. 110% focus on ARR as the primary measure of revenue success, so subscription offerings
27. Subscriptions

Which subject areas saw the biggest decreases in your training volumes in the last 3-6 months?

1. Basic, fundamental subjects.
2. Public classroom training is generally on the decline the past couple of years
3. Instructor-led classes one off seats in a class and onsite training at customer location. In 2019 we continue to struggle filling regional locations of instructor-led deliveries. We'll probably have 3 total this year. Our customer base says they cannot take the time to commit to a 3-day class.
4. Live classroom training continues to have the biggest decrease over the last 3 - 6 months. We are now looking to limit public ILO offerings to maximize attendance in each offering.
5. Public schedule classes in a classroom
6. Search, Analytics
7. Data Analyst (SQL)
8. career site administration and reporting
9. Public ILT down. Curriculum sales to partners down 3%
10. Custom business
11. Private training for pharmaceutical compliance software
12. Certifications saw the biggest decline
13. Developer Training
14. End User Training
15. Public (open) enrollments - F2F training - continues to degrade; Learning Consulting is up and down - most recently, down
16. public and private classroom delivery on legacy product
17. Public training
18. Firewall
19. Certification

20. private training requests (either remote or onsite) have continued to decrease as more and more partners/customers are adjusting their schedules to take advantage of free training offered on a scheduled basis. Also, the same content is being offered on a self-serve basis but without certification. Partners/Customers are focusing more on developing the skills when needed.
21. Live Webinars. They want them recorded and watch them later.
22. Live classroom
23. Public Training

What were the two greatest challenges you faced in running your business in the last 3-6 months?

1. Creating scalable infrastructure necessary to support learners on new software; Capacity planning and shifting resources to meet the demands of the changing business landscape.
2. Low and stale backlog; Signing/Sales growth
3. Customer learning team moving from Marketing to Customer Success; Getting priority from IT on our customer facing technologies over some internal tools from other teams
4. Same two as last time but our renewal rate is up.1. Getting customers to actually consume the training they purchased, both on-demand and instructor led.2. Renewing the education subscription the second year, we have been running roughly a 50% renewal.
5. The biggest challenge is developing our materials for subscription based while being agile for release with bi weekly product. This is still a big challenge.
6. Resources!!!Lack of efficiencies in reporting for sales team.
7. Lack of available talent for hiring instructors
8. Accelerating content development time; Sales/Marketing Engagement is low
9. Learning about and implementing new features within existing curriculum in a timely manner; Not enough resources on the team; having to make do with much less
10. More difficult to fill public classes ILT, some recovery seen in Q3.
11. A change in leadership in some of the regions and lack of support for global training product roll out
12. Resource allocation in a growing market. Getting online learning pricing right.
13. Adding value to justify subscription renewals; Not enough TAM; small numbers of learners at customer companies require certifications and Training
14. content creation for the variety of customers and sales training for salesforce to understand how to sell training and certification. Enabling a channel to be able to offer public classes.
15. Needing to update courses on a quarterly basis; Margin reducing
16. Recruitment of SMEs to develop training content; Managing and maintaining legacy content
17. Nothing to add this quarter.
18. Sales - we don't have a dedicated Education sales force. Shifting our organizational mindset to "Digital Learning", and from traditional classroom delivery
19. New product released that has a different, lower revenue generation model for EDU and declining sales of legacy product
20. Our current training infrastructure is not able to support the programs we run. Some of the revenue associated with private training is not easily tracked as education revenue.
21. Attach rate; Past the adoption phase, now is sustainment phase
22. updating eLearning and ILT classes around our SaaS product lines which change every two weeks.
23. Team capacity - the business and our product direction are changing rapidly; our team does not have the capacity to carry on providing training and generate brand new programs within the required timelines. I stated this last survey and this still remains as our biggest challenge. Our second biggest challenge is our organizational structure. Our department has been moved into

the Product Development department. So now our budget needs are being weighed against product development which always wins. The methods and tools required to deliver training in this new environment are not being supported by the company. They want the change but don't want to do what it takes to make the change happen as they continue to allocate budget to the product development initiatives. The Education department has been moved across the organization 3 times in <1 year. This has been very disruptive and stagnates (or slows) our ability to deliver, make progress, and plan as we are continually having to re-get company buy in. We had better buy-in and budget allocation when under the Partner Enablement (Services) department.

24. I don't have the proper resources to deliver the training product that needs to be delivered. Change of my manager 3x this year (and the year isn't over!)
25. Company transition from on prem to SaaS, so have had to examine and make changes to many pricing and delivery models
26. Translation of material. The hiring of Instructors with appropriate languages for new countries.

Please add any other comments or observations you have on the state of the IT Training market

1. New executive management team will now be looking more closely at revenue and profitability. This will be part of our annual review and goal setting for 2020, on where the customer education team can have the greatest impact between direct revenue vs value from adoption and expansion on software sales.
2. We are considering making all our foundational/entry level content free to the Administrators of our software. In Jan of 2019 we made 75% of our on-demand content freely available to the public. our revenue has decreased as expected since we made so much of our on-demand content available for no fee. We don't have enough data yet to say that the customers/prospects that are engaged in the free training are purchasing more licenses or more likely to renew, but we are hoping to be able to correlate that data yet this year.
3. Customers expect training accessible 24/7/365 for subscription pricing. Developing profitable subscriptions that get the customer the knowledge they need while still reserving the complex topics for Instructor led training is a challenge in building out subscriptions.
4. Generally steady, no major decline or growth; Most companies like ours are also providing "informal" education e.g Developer Days. Meetups and professional forums are covering reasonable intro to intermediate training.
5. - Requirement for Training teams to tie into corporate goals more apparent than ever; but reporting on indirect influence on Lifetime Customer Value, Churn, Expansions..etc is challenging.
- Cloud is expanding rapidly
6. The training business has finally come to an agreement with the product business unit on the free and fee journey, I believe that will help with the overall customer experience to a great extent. Customer want to make sure they can be onboarded to a decent level and then seem willing to pay for the skills development
7. Healthy attitude of customers towards new subscription products and self-paced learning
8. - Difficult to find skilled CDs; resources are expensive in Boston area.
9. Digital badging is taking over the world!
10. Interest in on-demand training and subscriptions are increasing
11. Comments from last quarter still hold I'm afraid though some SaaS companies I've been associating with do get it and are turning the page. "Personal point of view, there seems to be a growing body of work that caters to the "engage at all costs" that lacks the substance to truly make the customer successful. Customer Success managers need to be more ubiquitously with

customer training to not only engage with the customer but also guide them through meaningful learning experiences."

12. It is an exciting time as a lot of innovation going on and it seems there is more understanding that 'traditional' learning program methods are not as effective. So there is more buy-in for innovating programs and more technologies available to support these innovations.
13. Partners are willing to learn with more autonomous methods than customers.