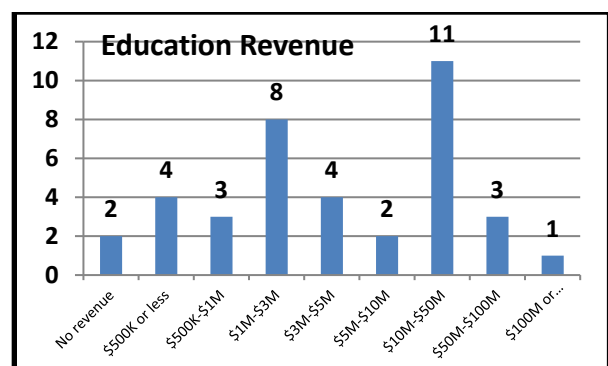
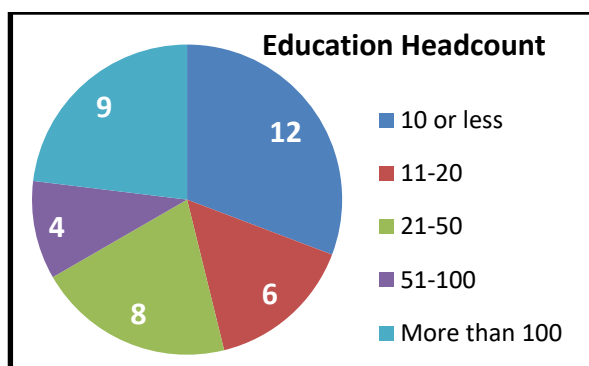
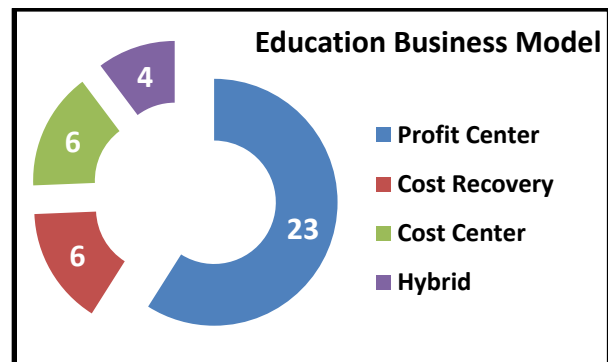
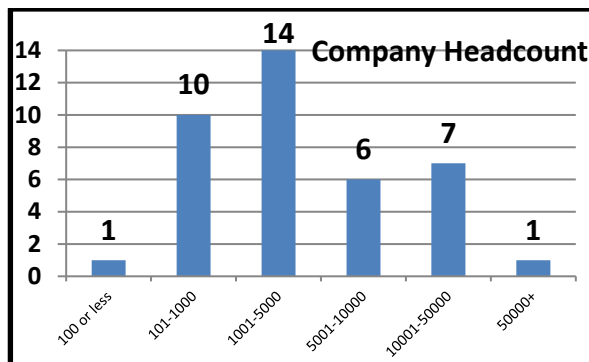
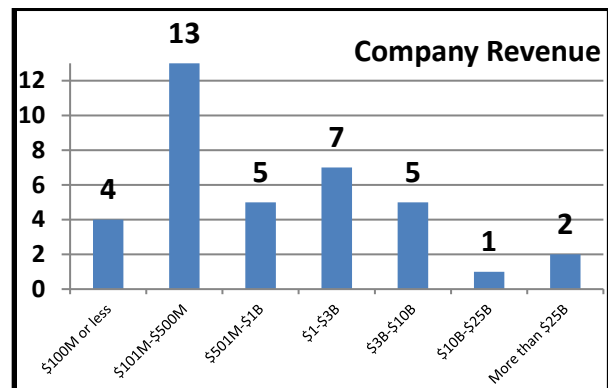
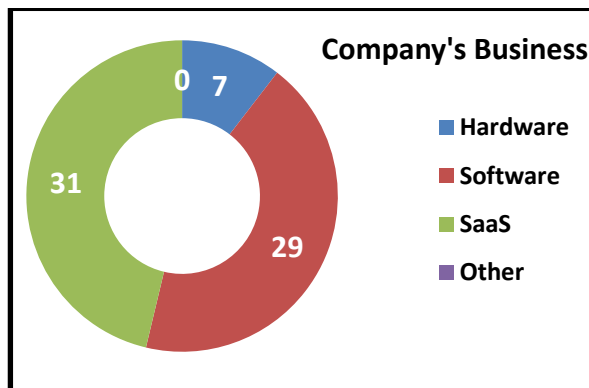




CEdMA Training Market Barometer 1st Quarter 2019 Actual

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 35 responses for global and 4 for North America so the combined 39 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 2% to 19Q1.

Operating profit is revenue minus all fixed and variable costs, excluding allocations, divided by revenue. The growth trend is 2-3% to 19Q1, down from 4% in 2016, but up from 2% in 2017.

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 1-2% to 19Q1.

Virtual Classroom (VILT) is all revenue for instructor-led training via the web, with or without virtual labs. Growth dropped to 1-2% during 2013, was 6% in 2015-16, but is now 1% to 19Q1.

Public (scheduled) classes is revenue for ILT and VILT and the trend has dropped to negative 3% to 19Q1, having peaked at 1-2% in 2014, and been flat in 2015-16.

Private (one-customer) classes is revenue for ILT and VILT, and now showing a trend just above flat to 19Q1, having been 3% in 2014, 2% in 2015 and 3-4% 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 8% increase to 19Q2, having grown steadily from a 5% increase in 2013. Note that 26 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 back to flat to 19Q1, falling from 5% in 2015. 25 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 19Q1 is showing negative 3%. (But only 16 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 7% to 19Q1. (But only 7 members reported revenue.)

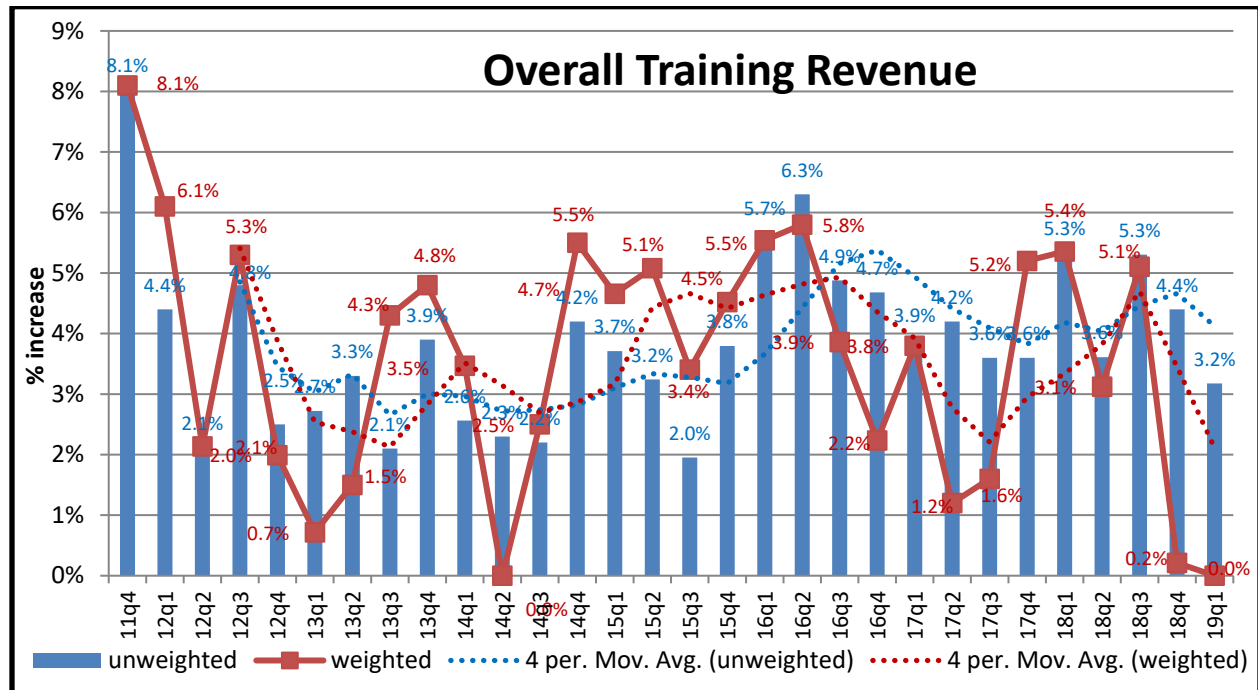
New Learning Modalities is all revenue for social learning, gamification, microlearning, mobile. 2016 showed the trendline at 7%, but it's now showing 2% to 19Q1, from flat in 2017. (But only 5 members reported revenue.)

Subscriptions include all revenue from any of the above modalities included in subscriptions.

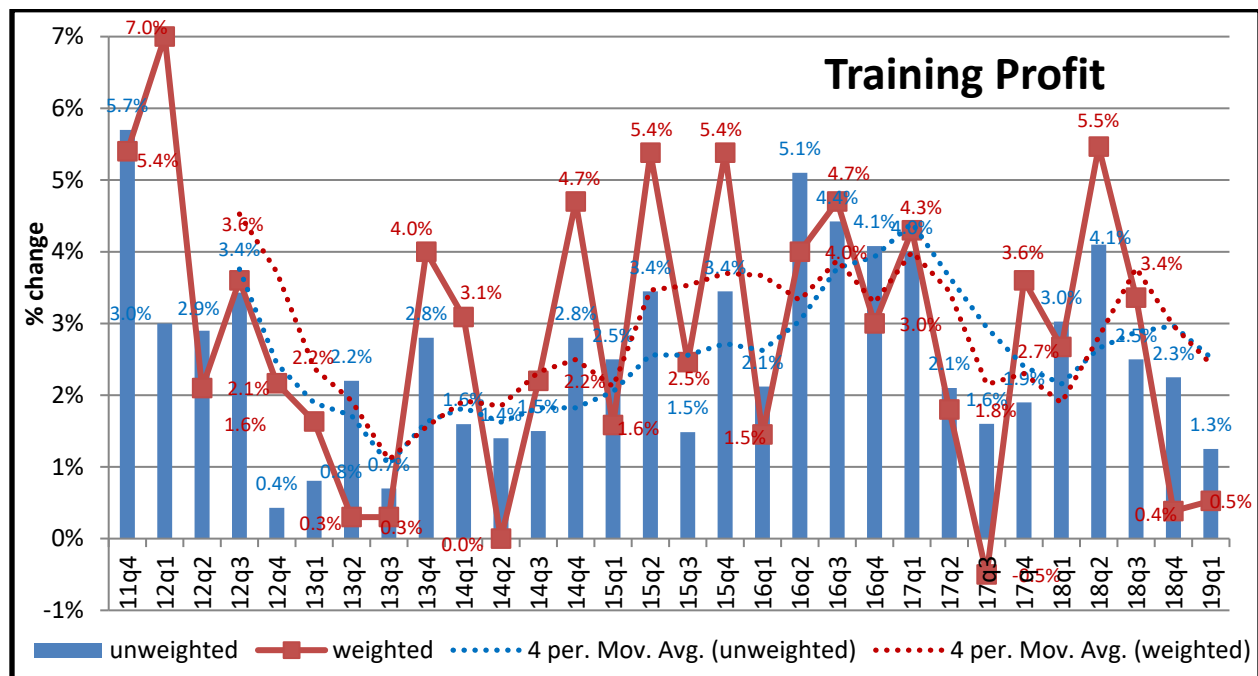
Subscription revenue grew on average 8% during 2016, now trending at 8%. 23 reported revenue.

Training Revenue and Profit

The unweighted total training revenue increase for 19Q1 (u=23, f=4, d=10) was 3.2%. The weighted total training revenue decrease was -0.2%. The 4-period moving average is currently showing an increase of 4% for unweighted and 2% weighted.

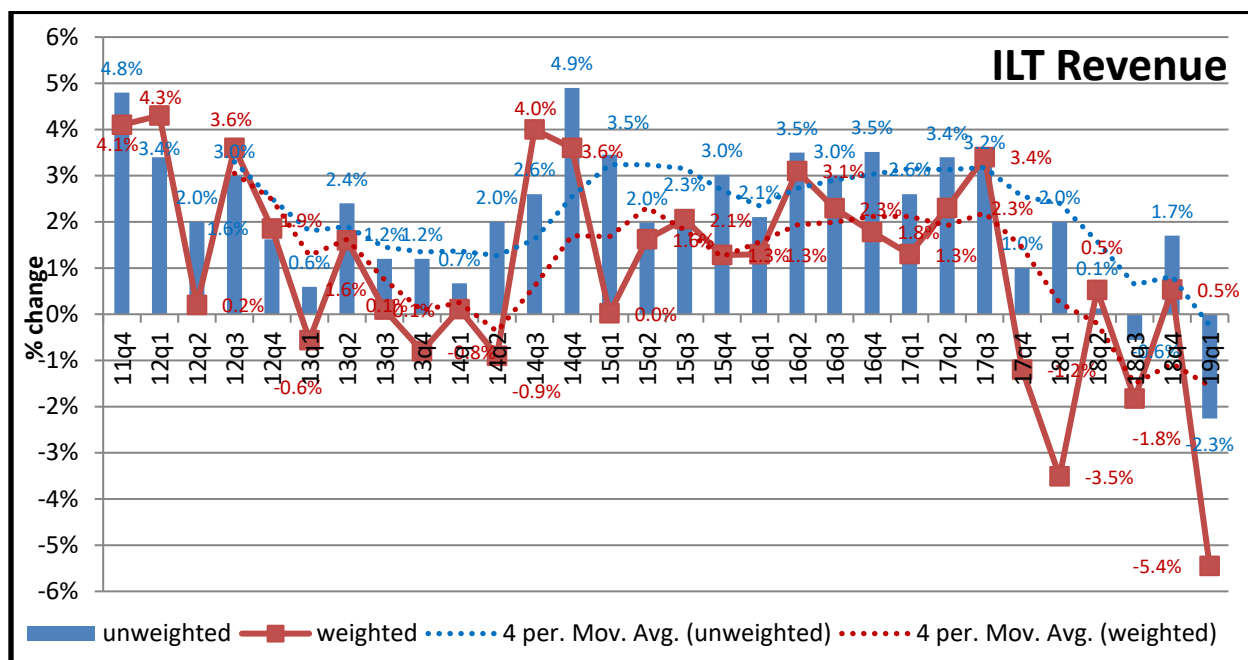


Training profit in 19Q1 (u=18, f=5, d=11) was a 1.3% increase unweighted, and 0.5% weighted. The training profit weighted trendline to 19q1 shows a 2-3% increase.



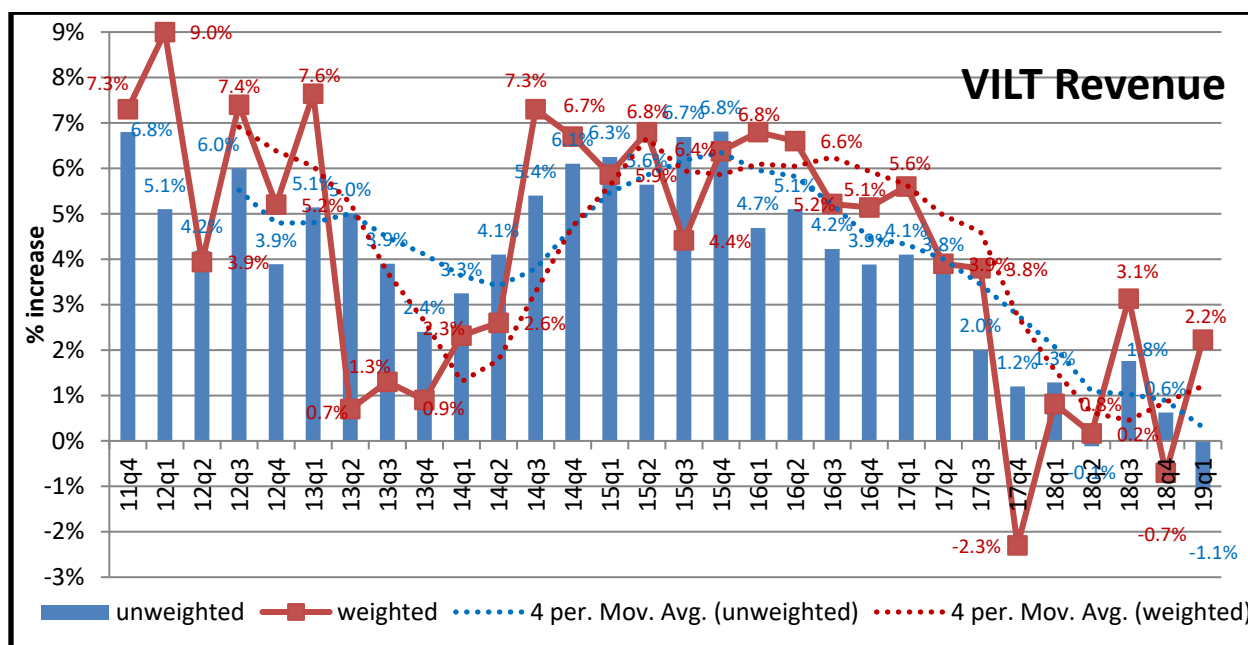
Live Instructor-led Training

The unweighted live classroom **revenue** decrease for 19Q1 (u=9, f=5, d=17) was 2.3% with weighted 5.4%. The decrease in **volume** was 1.9%. The weighted 4-period moving average is now negative 1-2%.



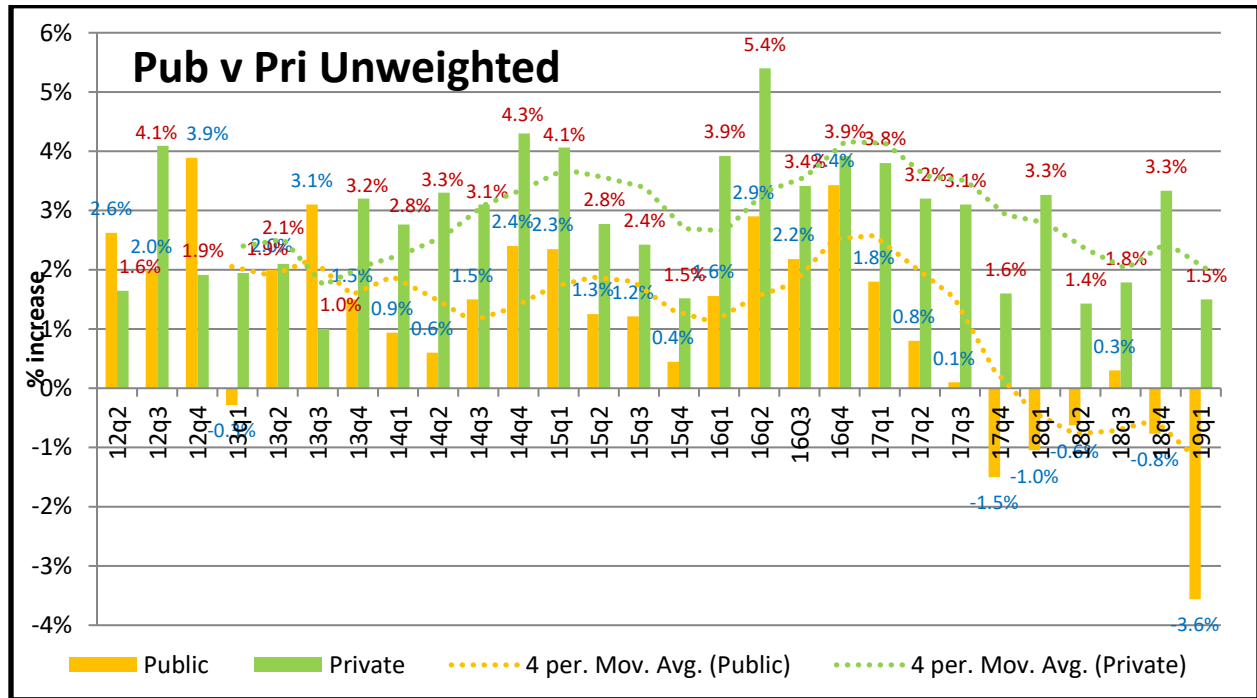
Virtual Instructor-led Training

Virtual classroom is still trending downwards. The unweighted virtual classroom **revenue** decrease for 19Q1 (u=9, f=9, d=13) was 1.1%. The weighted virtual classroom **revenue** decrease was 2.2%. The increase in **volume** was 0.5%. However, the 4-period moving average for weighted has dropped to 1%, down from 3% in 2017 and 6% in 2015-16. Note that 29 reported positive revenue.

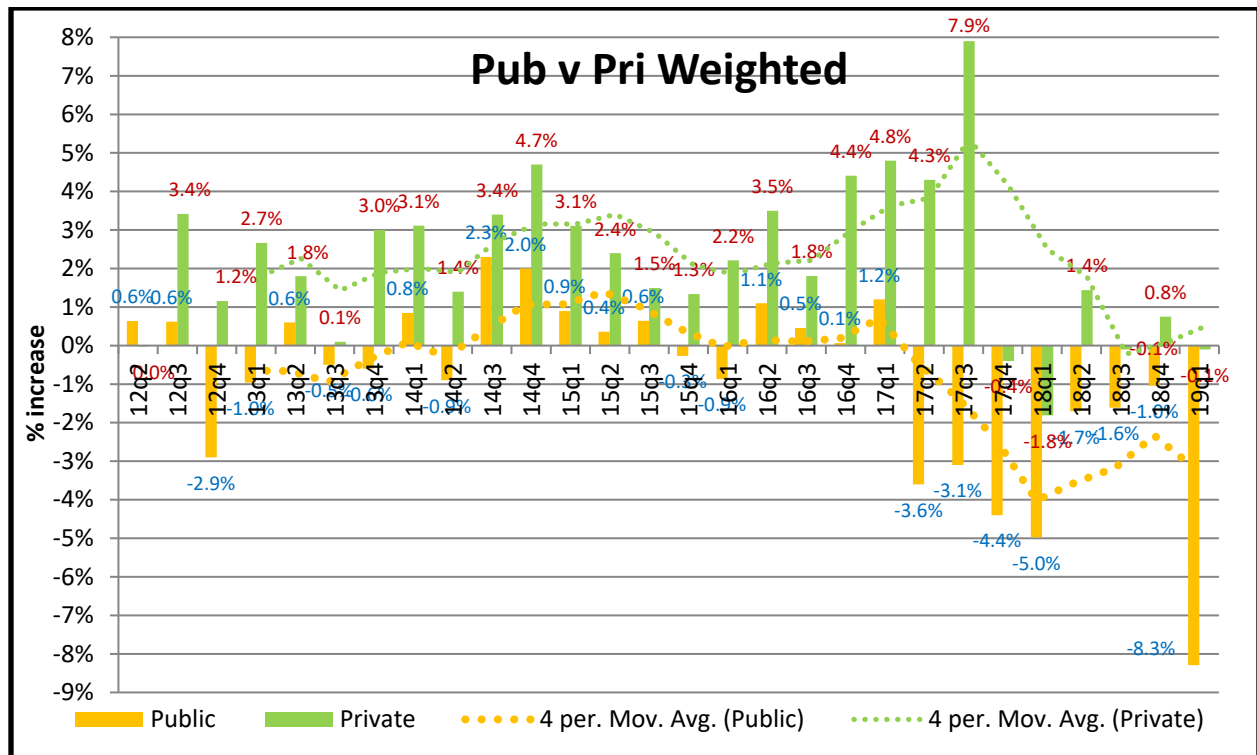


We now include questions on public classes and private classes. Unweighted public **revenues** have decreased in 19Q1 by 3.6% and private increased by 1.5%. The increase in **volume** was -2.2% for public but 0.5% for private. The trendline for public has dropped to negative 1% and for private to positive 2%.

(Note that public is u=8, f=6, d=19 and private u=16, f=8, d=11.)

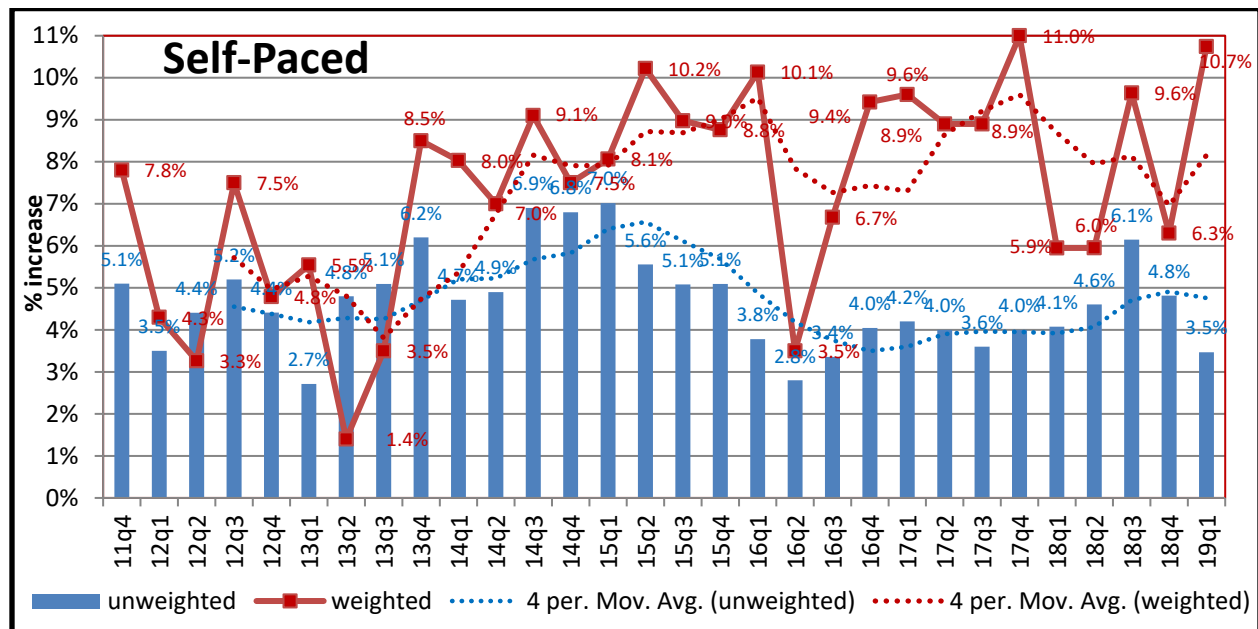


When weighting is considered, the changes are less dramatic, except since 2017. In 19Q1, public **revenue** has decreased 8.3% and private **revenue** decreased 0.1%. The 4-period moving average is negative 3% for public but remains just above flat for private.



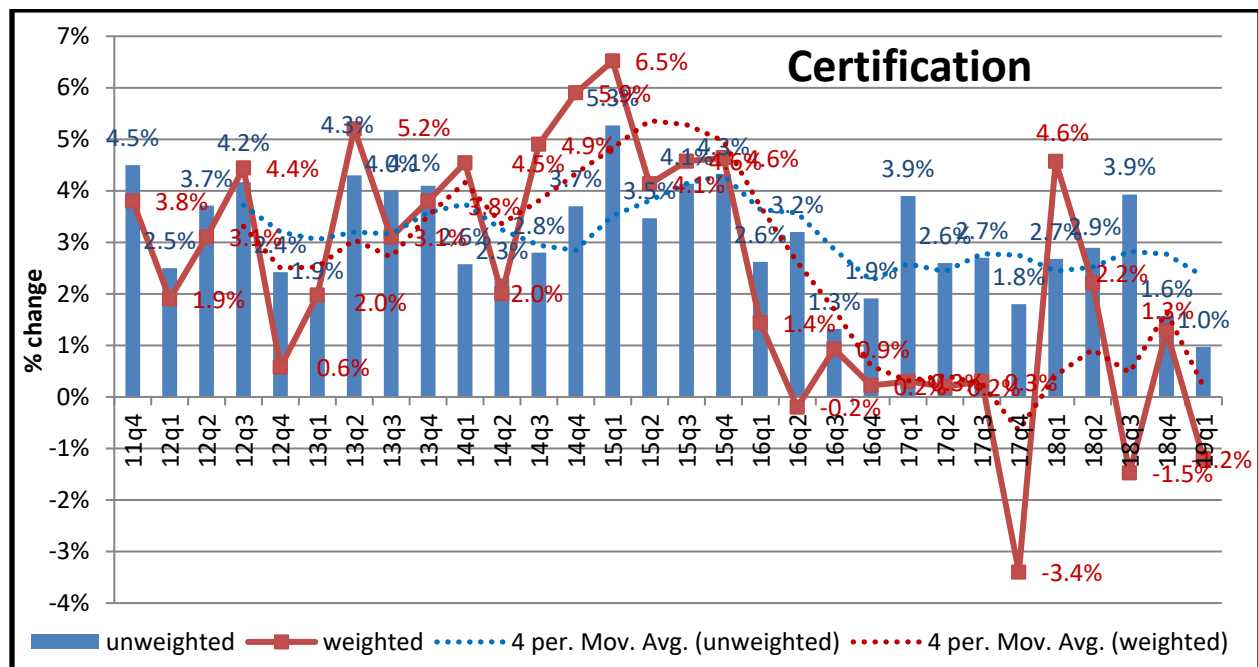
Self-Paced

The unweighted self-paced **revenue** increase in 19Q1 (u=18, f=7, d=5) was 3.5 %. However, the weighted self-paced **revenue** increase was 10.5%. The increase in **volume** was 3.3%. The 4-period moving average shows 8% for weighted. Note that 26 reported positive revenue.



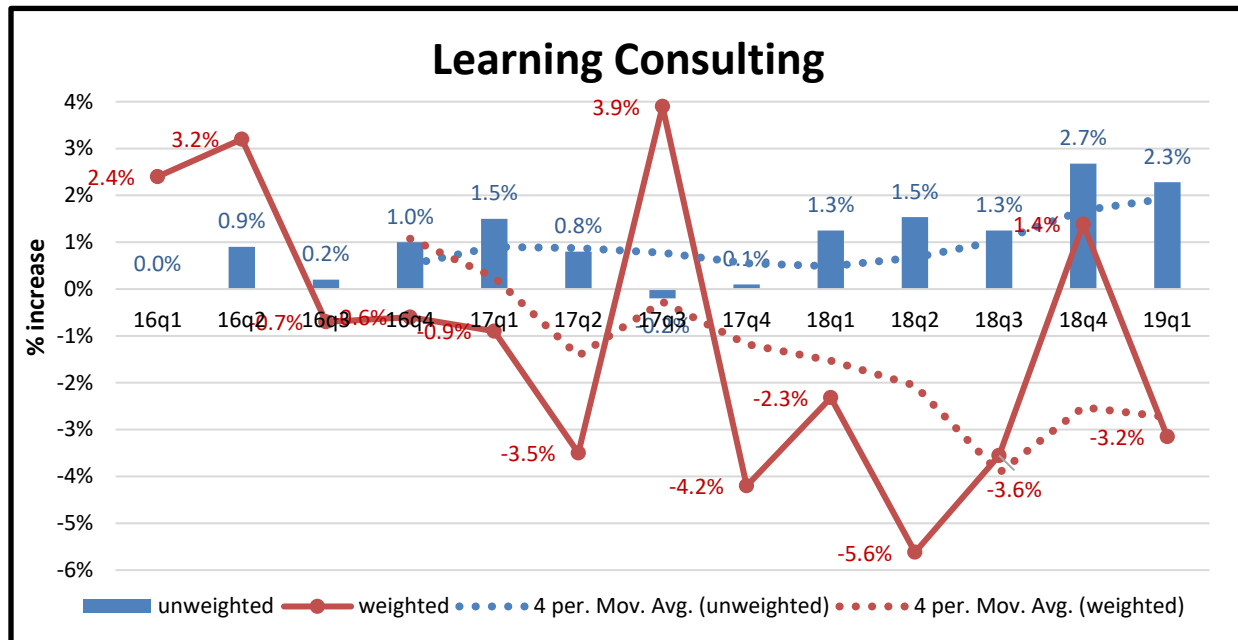
Certification

The unweighted certification **revenue** increase for 19Q1 (u=10, f=11, d=8) was 1.0%, but the weighted certification **revenue** decrease was 1.2%. The increase in **volume** was 1.2%. The weighted 4-period moving average is tending to flat. Note that only 25 reported positive revenue.



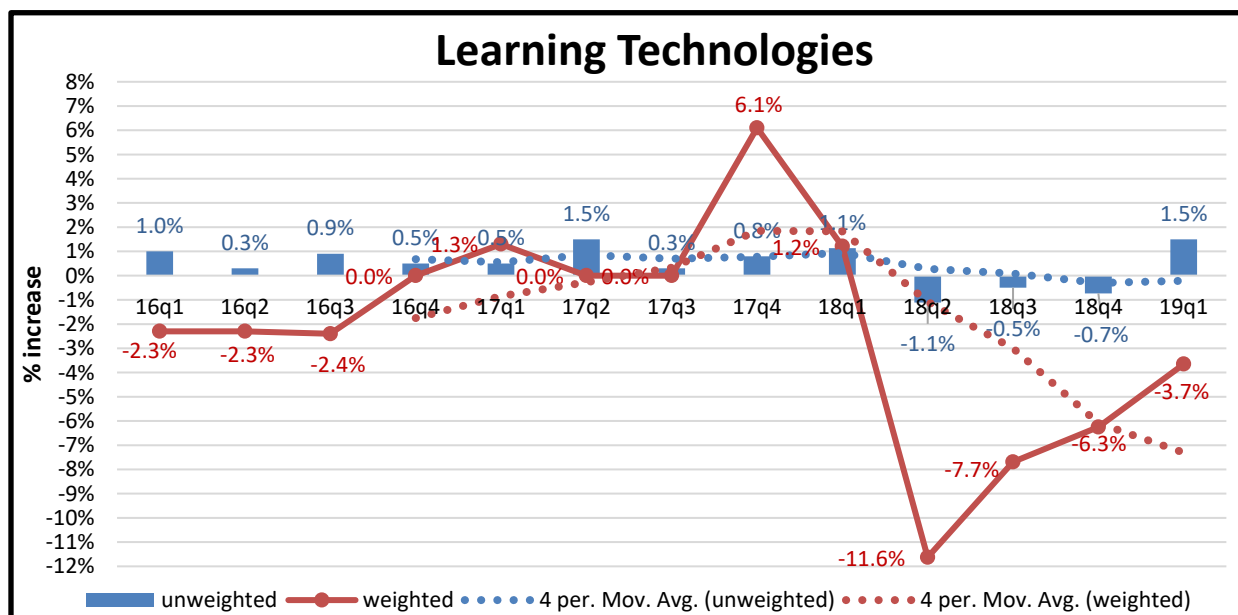
Learning Consulting

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 3%. The increase in **volume** was 2.5%. The **revenue** changes for 19Q1 (u=8, f=5, d=5) are 2.3% for unweighted and -3.2% when weighted. Note that only 16 reported positive revenue.



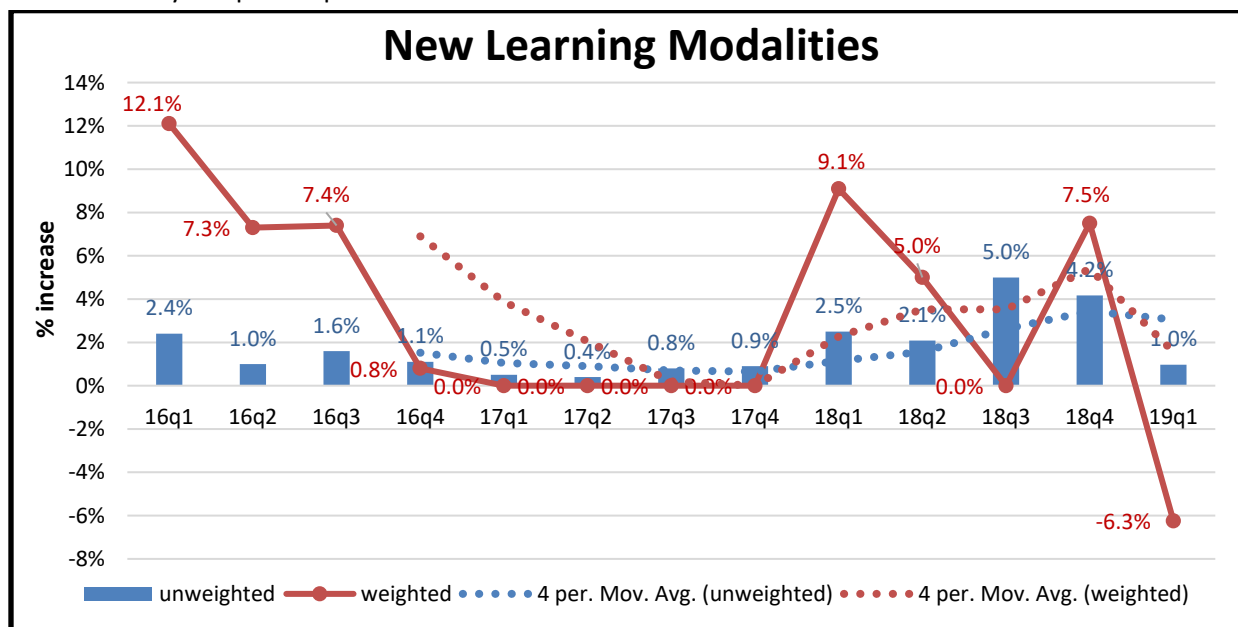
Learning Technologies

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 7% decrease. The **revenue** changes for 19Q1 (u=4, f=5, d=1) are positive 1.5% for unweighted and negative 3.7% when weighted. Note that only 7 reported positive revenue.



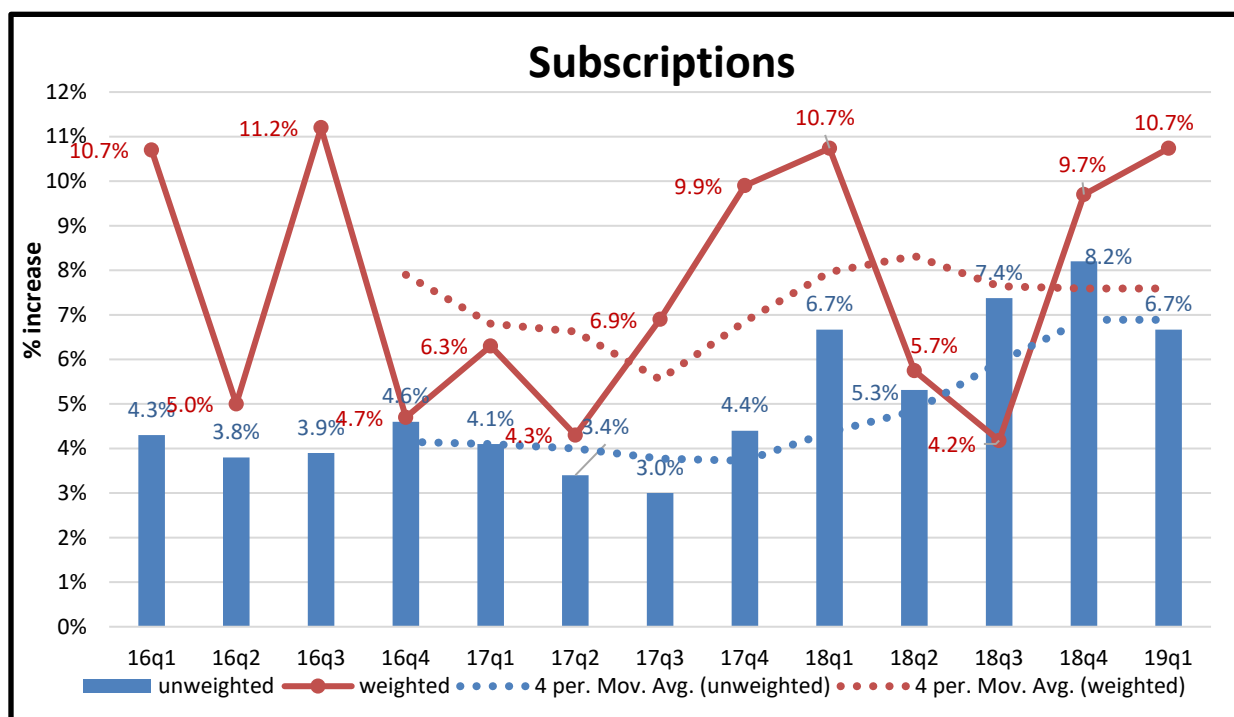
New Learning Modalities

We now have 13 quarterly reports. In that period, the trendline for unweighted scores are increasing 3%, while the weighted scores are 2%, falling from 7% in 2016. The decrease in **volume** was 0.1%. The **revenue** increases for 19Q1 (u=4, f=5, d=1) are 1.0% for unweighted and negative 6.3% for weighted. Note that only 5 reported positive revenue.



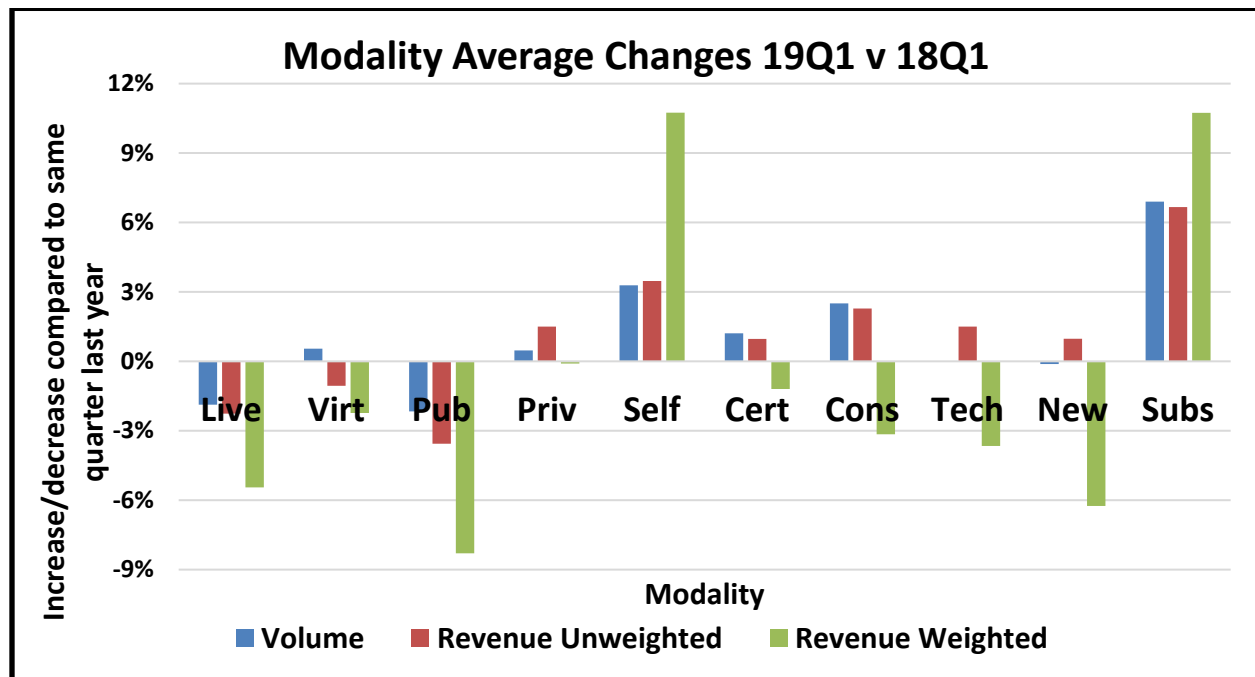
Subscriptions

We also have over three years reporting this area. In that period, unweighted scores show a 7% increase and weighted scores 7-8%. The **revenue** increases for 19Q1 (u=19, f=4, d=1) are 6.7% for unweighted and 10.7% for weighted. The increase in **volume** was 6.9%. Note that 23 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, averages will only be for unweighted input. Here's the comparison for 19q1.



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

1. DevOps
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 Subscriptions and Virtual Classes
4. Cloud
5. Network Video Fundamentals and IP Audio Essentials
6. Public training
7. 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.
8. Data Catalog Training
9. Self-Study courses saw the biggest increase as we continue to develop more courses.
10. EU pharmaceutical supply chain regulations
11. We see a significant increase in attach for our flagship product that aligns with product sales
12. T3 classes supporting Partner enablement - Q1 50% growth YoY
13. Self-paced training
14. Learning Consulting (custom education to customer data)
15. Subscription is now over 75% of total revenue
16. Private classes
17. Specialty and more advanced training topics; private courses

18. We launched a subscription program during Q1 2018 which contains unlimited self-paced training. This is the area of our business which is growing the most.
19. Product Essentials training
20. Custom training with customers
21. Training classes sold with Support Contracts ("Support Contract Attach") grew significantly; ILT/VILT in new technology areas
22. Data Science/Machine Learning
23. End User topics in our learning library
24. 110% focus on ARR as the primary measure of revenue success, so subscription offerings
25. Emerging cloud security technologies
26. YouTube channel subscribers grown to 10,000; Growth in online training has allowed us to run focused regional workshop events that highlight value through new products and initiatives. These are a cross learning-marketing initiative and have been very successful so far with several of the sales team explaining how this may lead to new business (mixing prospects with experienced customers)
27. Self-paced sold as a subscription
28. Deploying our software using Containers/Cloud.
29. Training related to these personas: Enterprise Developer, Security Engineer, IT System Administrator
30. Learning consulting and change management services
31. Classroom, technical training. Technical aspects of our SaaS product line. Customers are wanting more than features and functions.
32. We have reduced the barrier and so have seen a significant increase in learners self-serving whether it be self-signup to appropriate scheduled/public learning sessions to increased demand for on-demand delivery options.
33. Customized onsite training.
34. Steady consumption over last quarter
35. Virtual
36. Custom training (learning consulting)
37. Core technology Database, Search, Analytics,
38. Subscriptions

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

1. Certification voucher sales
2. Public Classes (at company facilities) - travel costs are the largest impediment
3. Firewall Basics
4. End to End Solutions
5. Instructor-led classes one off seats in a class and onsite training at customer location.
6. PowerCenter
7. Live classroom training continues to have the biggest decrease over the last 3 - 6 months.
8. US pharmaceutical supply chain software
9. Public ILT down 27% Q1; Training kits/Curriculum down 10% Q1
10. Private training
11. VILT has been discontinued now
12. VILT/ILT - bundled as part of subscription program as per our strategy to drive 80% plus subscription. Moving traditional services revenue over to SaaS model
13. Public schedule classes in a classroom

14. Basic, fundamental subjects; ILT/Public courses
15. Both ILT and VILT continue to decline.
16. Certifications saw the biggest decline
17. Public (open) enrollments (F2F training) continues to degrade; Learning Consulting is up and down
18. Data Analyst (SQL)
19. Career site administration
20. Live classroom
21. On premise security technologies
22. ILT is decreasing, especially in our public classroom training. We ran fewer classroom trainings and continue to see higher cancellation rates despite sales continuing to grow.
23. Public & Private ILT
24. End User Training
25. Public and private classroom delivery
26. Live Webinars. They want them recorded and watch them later.
27. Private onsite training requests have significantly decreased over the past 3-6 months. Our partner/sales teams are completely onboard now with selling the 'scheduled/public' classes and they have learned the value of \$0 fee training.
28. Steady consumption over last quarter
29. Public training
30. Self-paced on demand training
31. Public Training

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

1. Needing to update courses on a quarterly basis; Margin reducing
2. Low and stale backlog; Signing/Sales growth
3. Sales Team's inability to sell training services; Change management to switch from a limited offering to selling curriculums/learning paths; Hiring Qualified Trainers with our operational knowledge
4. Attach rate; Past the adoption phase, now is sustainment phase
5. Dynamic Private Training, Validated Learning Paths
6. 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.
7. Getting customers to actually consume the training they purchased, both on-demand and instructor led. Renewing the education subscription for the second year, we have been running roughly a 40-45% renewal.
8. Implementation partners competing and taking the training business. Requirement for free training is keeping us from making up revenues that are declining from older products that the company is phasing out.
9. The biggest challenge is developing our materials for subscription-based while being agile for release with bi-weekly product.
10. Developing a subscription model -- transitioning from free content to fee-based training; Budget too tight to deliver required curriculum.
11. Staff reduction coming into 2019; More difficult to fill public classes ILT
12. Growing the ILT in some areas. Innovating around subscription training.

13. Instructor depth of subject matter; Continuing decline in certifications (beyond partners, which is a mandatory component of their agreement, but for customers we are still struggling to establish certification as something they should obtain (value prop/meaning to their business))
14. Bandwidth and subscription churn
15. Resources!!! Lack of efficiencies in reporting for sales team.
16. Creating scalable infrastructure necessary to support learners on new software; Capacity planning and shifting resources to meet the demands of the changing business landscape
17. I believe renewals will be a challenge but do not have enough metrics at this time. Course completions are not as high as we would like to see.
18. Content development funding to meet demands; Instructor resourcing
19. Content creation for the variety of customers and sales training for salesforce to understand how to sell training and certification. Launching a channel to be able to offer public classes.
20. Sales - we don't have a dedicated Education sales force. Shifting our organizational mindset to "Digital Learning", and from traditional classroom delivery
21. Accelerating content development time; Decreasing sales
22. 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
23. Sales support resource capacity
24. Technology and content creation. Technology - finally began implementation of our new LMS after delays due to competing IT projects. Launch planned for August. Our cloud training environments in MS Azure have been increasing in cost and we have been tasked with reducing this by 30-40%. From beginning of 2019 we improved technologies on this side and have seen savings of over 60% so far this year (in range of \$1-2m per year) while training more customers. Content creation - eLearning is growing in demand and we have a challenge in creating and maintaining our video content to meet customer needs. Based on demonstrating successes in eLearning and the reduced work requirement of ILT we received approval to hire a new eLearning Specialist into the team this year.
25. Inclusion of self-paced learning in license subscriptions
26. Recruitment of SMEs to develop training content; Managing and maintaining legacy content
27. Keeping up with student growth in all Geos, especially when we have no international instructors. We also just had our annual customer conference and it always sucks oxygen out of the team and room to prepare for and deliver on it.
28. New product released that has a different, lower revenue generation model for EDU and declining sales of legacy product
29. 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!)
30. 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. Planning Discussions - with all the changes being discussed with our product (everything from re: architecture, to move to SaaS delivery) our team is not brought into the conversations in regards to these changes at the right time so we can be part of the planning discussions. We are always playing catch-up which makes us ineffective, and also puts the changes at risk for not being as successful as they could be (why don't people see this - training plays a large factor in a products success)
31. Resource allocation in a growing market; Getting online learning pricing right.
32. Time away from the job to take training - even if customer has already purchased a training program.
33. Net new license sales; no major new product releases
34. The product business unit releasing a free enablement platform that they are driving all customers to; Lack of global leadership, selling global products with regional delivery

35. Lack of available talent for hiring instructors
36. Translation of material. Hiring 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. Digital badging is taking over the world!
2. How to educate our customer-facing sales, project managers, etc. to see training as a long-term journey with the customer and price it not as a giveaway but true revenue stream (equal in worth/value to consulting services).vNeed to expand offerings into the world of 3D, VR, 360 Video and Emulation/Simulation Based Training to keep up with the technology race
3. More eLearning
4. We are considering making all our foundational/entry level content free to the Administrators of our software.
5. More companies are focused on private team training. Our partners that we support with free training are also taking our standard customer training.
6. Customers expect training accessible 24/7/365 for little to no cost. They are looking for a library of scenario based topics that address specific challenges they face.
7. ARR requirement for most of our training. Customers are not pushing very hard for localization so we're not translating our content.
8. Customer requesting more virtual offerings or blended approaches; Digitalization and gamification becomes a main part of the learning methods
9. Our public training market has been eroding for a few years- OnDemand training consumption is not where we'd like to see it; adding in weekly ILT sessions to bolster blended models is our next step to help on this front- LMS vendors still don't seem able to put together a complete solution. Requirement for Training teams to tie into corporate goals more apparent than ever; but reporting on indirect influence is challenging.
10. Market is fairly strong - cyber security skills are still incredibly scarce.
11. Revenue is secondary for us and success is determined by product adoption and expansion. While being able to demonstrate increases in the number of learners, it's important to demonstrate success at all levels. We have had success in reporting back things like our cost reduction projects, and we will hopefully start measuring impact better in future by comparing correlation of trained vs untrained customers on #support cases and customer spend on up/cross selling.
12. Increased pressure on Free learning vs Fee based
13. Interest in on-demand training and subscriptions are increasing
14. Moving our content to 3rd party platforms where learners congregate (Coursera, Pluralsight, cloud academy, etc). This is a direction we STILL intend to go.
15. For too long everyone thinks if I provide documentation that is all that is needed. So, they rush to get something out the door and as long as there is documentation then that is all that is needed. Training is a luxury (attitude). We are able to get buy in for contextual/inline learning which will fundamentally change how we deliver learning opportunities and documentation.
16. In our particular case, integrating functions after acquisition stifling product sales and therefore customer training.
17. SaaS companies continue to focus on retention and renewals. Customer education teams need to get very clear on the role they play here in order to stay relevant. Is the training for free or for fee? What's the customer journey? Are we teaching product feature and function or building a product enabled workforce? Are we teaching customer to get value out of their spend? Are their business problems being solved?
18. Generally steady, no major decline or growth