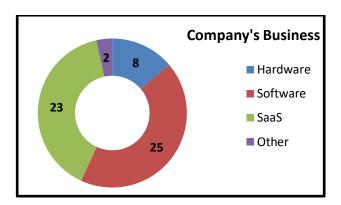
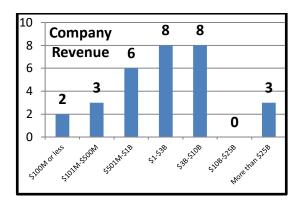
Computer Education Management Association Europe

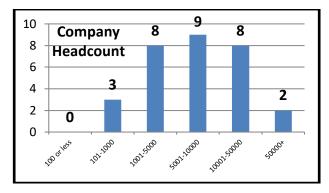
CEdMA Europe Market Barometer 1st Quarter 2017

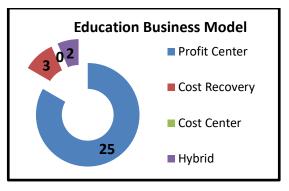
Introduction

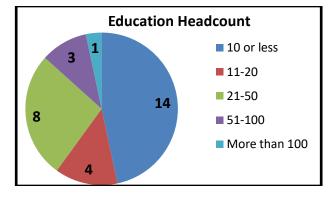
This report is compiled by CEdMA Europe for its members from input for their EMEA businesses. It is based around a series of absolute growth or decline percentages in the range +- 12.5%. Revenue refers to training services delivered in the quarter and not future bookings. Note that in this report, u/f/d is the number of members reporting up/flat/down, respectively. This report for 17q1 actuals is based on input from 30 companies.

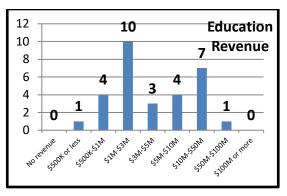












Changes to the Barometer

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, not some about volumes
- 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. Having been down to negative 2% in 2014, it's recovered to positive 2% increase.

Operating Profit is revenue minus all fixed and variable costs, excluding allocations, divided by revenue. It has recovered from a low of negative 2% during 2013 to a 2% increase now.

Live Classroom (ILT) is all revenue when the instructor is in the same physical location. It fell to negative 2% during 2014 but is now showing half a point below flat.

Virtual Classroom (VILT) is all revenue for instructor-led training via the web, with or without virtual labs. It dropped from 6% during 2013 to 1% in 2014 but is now just under 3%.

Public (scheduled) classes is revenue for ILT and VILT and now showing negative 3%, having been flat during 2015 but negative 3-4% in 2014.

Private (one-customer) classes is revenue for ILT and VILT, and showing an increase of 5%.

Self-paced is all revenue generated by training students without instructors, such as eLearning, video, and can be paid per use or by subscription. It's now showing an increase of just under 6% having been as low as negative 4% during 2014.

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/VLT/self-paced. The trendline is now a 2% increase.

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 was a decrease of 2.2% in 16Q1 but since then each quarter has shown small increases, 0.9% in 17Q1.

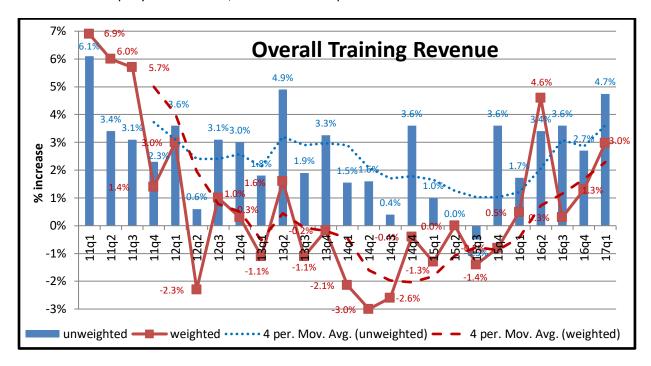
Learning Technologies is all revenue generated by learning tools, infrastructure, courseware and directly related training and learning consulting for these technologies. After increases of 3.6% in 16Q1 and 6.3% in 16Q2, 16Q4 sowed a decrease of 1.3% and 17Q1 a decrease of 1.1%.

New Learning Modalities is all revenue for social learning, gamification, microlearning, mobile. There have been increases averaging just under 8% in 2016, and 9.4% in 17Q1.

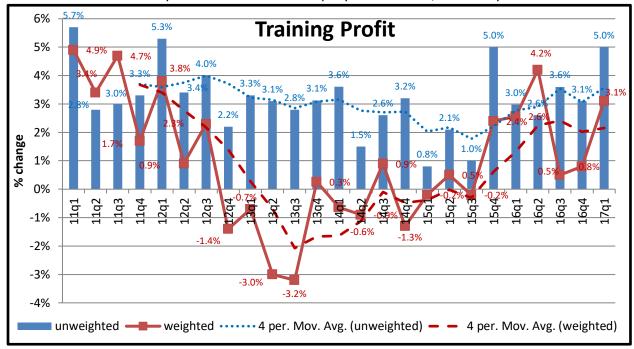
Subscriptions include all revenue from any of the above modalities included in subscriptions. Subscription revenue has grown on average 8% during 2016, with a 6.1% increase in 17Q1.

Training Revenue and Profit

The unweighted total training revenue increase was a 4.7% in 17q1 (u=20, f=2, d=7). When considering the weighted numbers, it was a 3.0%. The unweighted trendline shows an ongoing increase of 3-4%, but when size of company is considered, it's recovered to positive 2%.

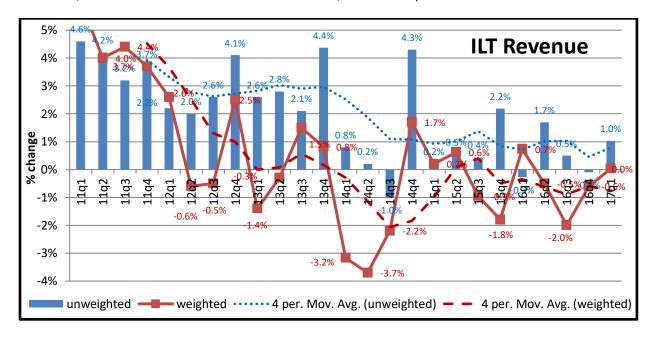


The unweighted total training profit grew 5.0% in 17q1 (u=21, f=4, d=1). And, with the weighted numbers, there was an increase of 3.1%. The unweighted trendline shows an ongoing profit increase of around 3-4% over the last year but when size of company is considered, it is steady at 2%.



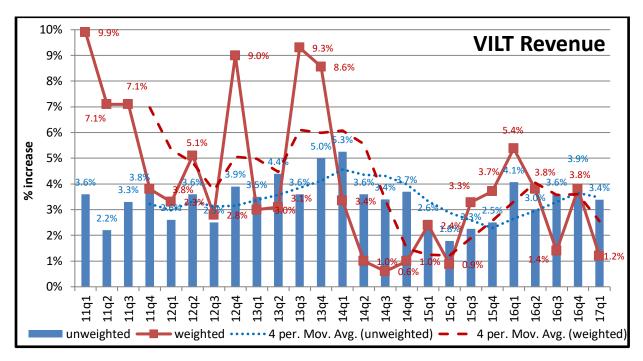
Live Instructor-led Training

This chart below suggests that ILT **revenue** for the larger companies has been the main cause of lower overall training revenue increases. The unweighted 17q1 increase was 1.0% (u=14, f=5, d=10) whereas the weighted number was flat. The unweighted trendline shows ongoing ILT revenue as half a point above flat, and when size of ILT revenue is considered, it is a half a point below flat.

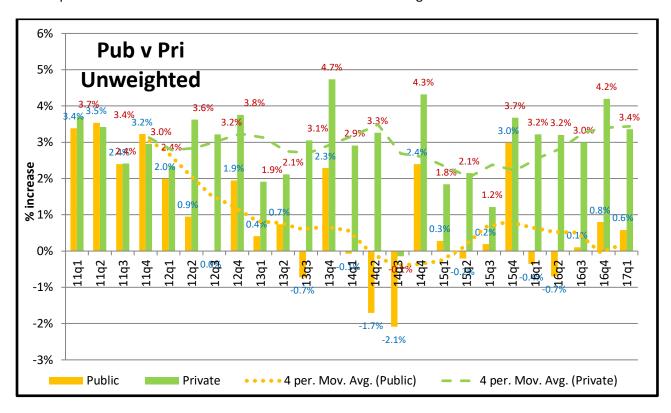


Virtual Instructor-led Training

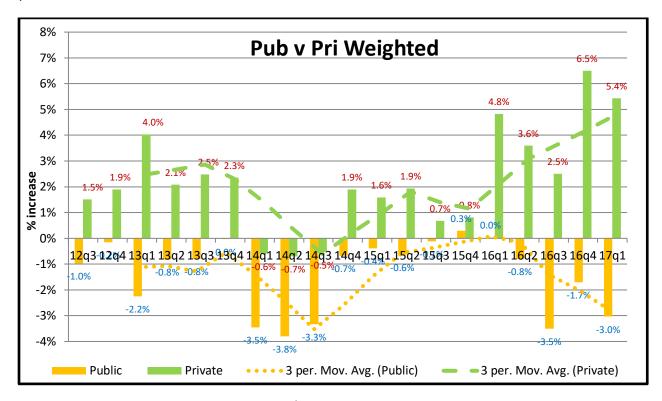
On the other hand, the VILT increase fell badly in 2014 but is now recovering. The unweighted 17q1 **revenue** increase is 3.4% (u=17, f=8, d=3) and the weighted increase is 1.2%. The unweighted trendline shows an ongoing VILT increase of 3-4% but when size of VILT revenue is considered, it was 6% in 2013 but is now 2-3%, having been from 1% in 2014. Note that 2 of the 30 don't use VILT.



We are now asking you to forecast both public and private classes and have enough history to show that private classes show a consistent steady **revenue** increase of around 3-4%. Public classes have recovered from a period of decreases to show flat **revenue**. This shows unweighted values.

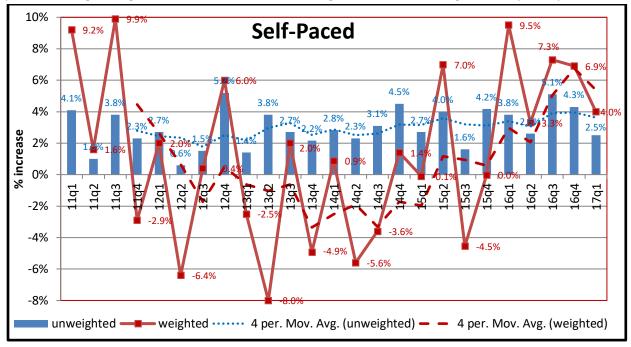


When weighted values are used, the **revenue** increases for public have dipped to negative 3% with private a 5% increase.



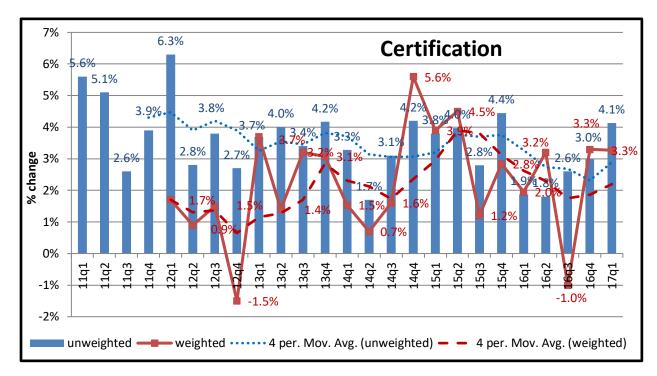
Self-Paced

The results for 17q1 (u=12, f=10, d=3) were 2.5% increase unweighted and 4.0% increase weighted. This shows how large projects in larger companies can have a significant effect on these averages. The 4-period moving average shows a 4% increase for unweighted and 6% for weighted. Only 25 reported.



Certification

Overall, certification has averaged an increase of around 3% year-on-year when unweighted. In that four-year period, the weighted scores grew from a 1% to 4%, too, showing a resurgence in the larger companies, but has now fallen back to 2%. The **revenue** increases for 17q1 (u=13, f=13, d=0) are 4.1% and 3.3% for unweighted and weighted, respectively. 26 out of the 30 companies offer certification.



Learning Consulting

Period	# responses	# up	# flat	# down	unweighted	weighted
16Q1	18	4	11	3	0.1%	(2.2%)
16Q2	18	6	9	3	1.0%	1.4%
16Q3	22	5	12	5	0.2%	1.3%
16Q4	20	5	11	4	0.4%	1.9%
17Q1	19	5	12	2	1.2%	0.9%

Learning Technologies

Period	# responses	# up	# flat	# down	unweighted	weighted
16Q1	16	2	12	2	0.0%	3.6%
16Q2	17	2	14	1	1.0%	6.3%
16Q3	20	3	15	2	0.9%	0.8%
16Q4	19	1	17	1	(0.3%)	(1.3%)
17Q1	19	1	16	2	(0.9%)	(1.1%)

New Learning Modalities

Period	# responses	# up	# flat	# down	unweighted	weighted
16Q1	15	6	9	0	2.7%	12.2%
16Q2	17	4	13	0	1.5%	2.6%
16Q3	20	6	14	0	2.3%	6.5%
16Q4	19	4	15	0	2.1%	9.0%
17Q1	19	4	15	0	2.1%	9.4%

Subscriptions

Period	# responses	# up	# flat	# down	unweighted	weighted
16Q1	20	10	10	0	4.5%	11.3%
16Q2	20	9	10	1	4.3%	4.3%
16Q3	24	11	11	2	4.5%	10.3%
16Q4	23	13	6	4	4.2%	5.8%
17Q1	24	12	11	1	4.5%	6.1%

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

- 1. Live Virtual Classes, Enterprise License sales
- 2. Public training (online) and certifications partner training drove this.
- 3. Big data
- 4. Apache Spark
- 5. Training Subscription and Onsites Classes
- 6. Custom Learning Projects
- 7. hybrid public class adoption, pop up public training events (new cities based on local demand)
- 8. Data Loss Prevention

- 9. Networking, Storage
- 10. New product release
- 11. Technical training
- 12. eLearning subscriptions again growing in Q2 FY17; Unlimited subscription started to grow
- 13. On-site Private ILT; Continuation of deals for 3 Clients
- 14. Async training
- 15. New product and solutions training; increase in customer and partner related projects; Partner training this does not necessarily come with revenue
- 16. elearning and certification
- 17. Private class programmes
- 18. Public Virtual Training
- 19. Networking
- 20. VILT
- 21. Private course delivery and Subscription based service
- 22. Private courses are accounting for our growth
- 23. On-demand learning subscriptions
- 24. End User Training
- 25. Workforce Management Cloud based
- 26. Adoption Services
- 27. Channel delivery
- 28. Programming

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

- 1. Public/Private schedule live classroom based and on-site
- 2. Self paced and live classrooms and private significant decrease
- 3. Certifications
- 4. Java developer (on Hadoop)
- 5. Light decrease in VT we didn't really focus as Subs is a far better value for both (us and customers)
- 6. Public
- 7. Only certification is struggling right now
- 8. Endpoint Management
- 9. Open enrollment
- 10. User training
- 11. In-Center public classes.
- 12. Phasing of Learning Technologies. Always expected due to mega deal last year
- 13. Private classes
- 14. Public Classroom Training
- 15. Public classroom, up on last year but not seeing the fill rates I would like
- 16. Public ILT

- 17. Live ILT
- 18. Premise based
- 19. Attach to product deals
- 20. Live Web; Intercompany business
- 21. Internal training
- 22. Old technology courses

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

- 1. Grey market and unofficial partner training activity
- 2. Decreasing backlog
- 3. Decrease of attendance in public ILT courses, especially in GB; Upskilling instructors to keep up with new products/product versions.
- 4. Getting engagement with sales people to sell training, especially onsites. Keeping the business running during a huge period of change (new processes, new people, new management) due to acquisition
- 5. Onboarding of new and own Customer Service team; Further stabilize our new LMS; Get the right level of support from our Outsourcer
- 6. Hiring People; Attach to Licenses low
- 7. Lack of point of sale attach from wider business. Customer/partner training programs and the confusion of having some of the learning paths crossing over at times. Which are free, which are for fee etc. Need to make clearer to both communities.
- 8. Lack of approved contract Instructors with language skills other than English. No-shows in classes
- 9. Combining companies. Expectation over actual. Customers who wanted asynchronous delivery but then did not like what was delivered.
- 10. Moving partners across on to new contract and fee structure. This has pulled some revenue forward, inflating the Q1 revenue but it should be off set with a decrease in following quarters.
- 11. Getting the acceptance of customers of virtual classes instead of in-class; Finding contractors to grow delivery
- 12. Training program delays impacted by delayed customer go-lives or postponed budgets. Low price competition in territory markets (France and Germany) continues to be a threat
- 13. Other (internal) training priorities resulting from change in CRM system meant that resources were severely stretched continues to hold true
- 14. Motivating sales to attach training. Implementing reporting changes around new LMS.
- 15. Training attachment to product deals; Speed to market in developing and deploying the training
- 16. Identifying delivery partners in Asia; Engaging the product sales team
- 17. Selling training into accounts that already have "free" education entitlements.
- 18. Still Attach
- 19. Hiring; And hiring again!
- 20. Delivery and content in languages
- 21. Resourcing as ever having sufficient trainers with the right skills; Pressure from business to do more with less
- 22. Instructor morale and attrition due to perception that On-demand learning will overtake ILT;

 Transition from Revenue centric to Profit centric business focus

- 23. Changes to the compensation model for license sales that no longer comps Sales on training.
- 24. Partner fees; Revenue through product attach and reduced product sales
- 25. Decrease in attach to product new course releases and impact to the business
- 26. Regionalisation; Free Learning; Higher partner discounts; Gray market competition
- 27. New version release; Competition with ATC's.
- 28. Managing both an ATC program and my company's training revenue. Dollar value

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

- 1. Ahead of H2 forecast on revenue and margin for both EMEA and JAPAC
- 2. Move to cloud and subscription brings requests for free training.
- 3. Further great adoption of our Learning subscription.
- 4. Subscription model is the way forward but the amortization of services revenue can be very tricky, when you have up front delivery costs...
- More customers are looking to deliver their training themselves through a Train the Trainer program. IP protection is a concern. Customers in EMEA accepted to use Digital Guides the default delivery mode. Customer requesting more virtual offerings or blended approaches
- 6. Revenue is no longer a driver for me student days is the measure I use now.
- 7. More acceptance of Virtual training
- 8. Very competitive
- 9. We are going through a transition and will have new courses and new e-sub in Q2 2017
- 10. Returning to growth is harder each year.
- 11. Modular/pay as you go model becoming more prevalent.
- 12. Some areas are moving to VILT, with more demand from EMEA than previously