Forecasting Tool that Maximizes Training Efficiency
by J. (Jay) Bahlis, Ph.D., Eng.

One of easiest venues for improving training efficiency is to uncover the most economical way to develop, deliver, administer, manage, maintain and support training programs. For example, if instructor-led, web based and Internet virtual classroom can be used for IT training, then which option is the most economical – taking into account the complexity of the training material, stability of the content, course length, trainees throughput, trainee to instructor ratios, individuals that travel, and so forth. Similarly, if real equipment, trainers/simulators and virtual reality can be used for training pilots and maintainers, then which option should you choose? If the upfront and recurring costs of plausible delivery options can be easily and accurately forecasted – then savings would follow.

Training efficiencies are of course not limited to training media, but extend to other decisions as well including who develops, delivers, administers and supports the training material. For example, are internal developers more efficient then external contractors in developing core competencies? If the organization has multiple training units, which unit develops training most efficiently and why? If training/project managers engage multiple contractors, which contractor produces the most effective and economical instructor-led or web based training programs. If the development time and costs of similar training programs can be easily shared and compared – then once again, savings would follow.

Although overall historical values are adequate for forecasting training costs of similar courses, to similar audiences using the same development team and delivery option; additional details and analysis are needed to accurately forecast and compare the costs of plausible delivery options, identify the most efficient development team, as well as uncover other venues for improving training efficiencies. For example, assuming that the costs for an 8-hour project management course to 50 individuals are as follows:

	1st Year - Instructor-led **8 hours - 50 individuals**
Development Costs	$10,000
Delivery Costs	$25,000
Travel Costs	$ 5,000
Total Costs	**$40,000**

If we ignore inflation and assume that 10% of the content require updating, the cost of training for an additional 75 individuals in the following year can easily estimated as follows:

	2nd Year - Instructor-led 8 hours - 75 individuals	Comments
Development Costs	$ 1,000	= $10,000 x 10%
Delivery Costs	$37,500	= $25,000 x 75 / 50
Travel Costs	$ 7,500	= $5,000 x 75 / 50
Total Costs	**$46,000**	

The above computations, however, do not provide any insight on the costs and potential savings that may result from using alternate delivery options. To forecast the costs of an equivalent web based or Internet virtual classroom course, the cost breakdown of each component is needed. For example, the number of hours needed to develop the course. Assuming that 80 hours was logged by the development team for the 8-hour project management course, then:

	Instructor-led Course	Comments
Development Hour per Hour	10	= 80 hours / 8 hours
Hourly Cost of Developer	$125	= $10,000 / 80 hours

Based on industry averages, the effort needed to develop the project management course is "low" and the corresponding development hours per hour for an equivalent web based course is 50 and Internet virtual classroom course is 20. Moreover, the average time needed to complete the web based course can be compressed by 30% to 5.6 hours (8 hours x 70%). With this data in hand and assuming that the hourly rate of the web based and Internet virtual classroom development teams is similar to the instructor-led ($125 per hour), we can accurately estimate the development costs of the equivalent web based and Internet virtual classroom courses as follows:

	Development Cost	Comments
Web Based Training	$35,000	= 5.6 hours x 50 x $125
Internet Virtual Classroom	$20,000	= 8.0 hours x 20 x $125

Moreover, if the asynchronous web based course does not require instructors/facilitators and the synchronous Internet virtual class requires similar effort to the instructor-led format, then the delivery costs of the web based course is $0, and the Internet virtual class course is $25,000 for 1st year and $37,500 for 2nd year. In addition, since both the web

based and the Internet virtual classroom do not require travel, the travel costs in both cases are $0. By adding and comparing the costs of the three plausible delivery options over the two years period, it is easy to foresee how a web based delivery option (in this case) can increase training efficiency by $47,500 over the two year period.

	Instructor-led 1st + 2nd year	Web Base 1st + 2nd year	Internet Virtual Class 1st + 2nd year
Development	$11,000	$38,500	$22,000
Delivery	$62,500	$0	$62,500
Travel	$12,500	$0	$0
Total	**$86,000**	**$38,500**	**$84,500**

Conclusion

Of course, your development and compression ratios may be different then industry averages and other factors can influence the results as well. The key point however is that by utilizing common measures such as hourly rates of developers, instructors, administrators, managers and support staff; average time needed to develop, administer, manage and support courses with different levels of complexity, average trainee's per diem and travel costs; daily equipment and facility costs; and so on; you can significantly improve training efficiency by easily and accurately forecasting the costs of plausible delivery options for any training program.

In addition, a standardized approach for computing training costs facilitates:

- Carrying out what if scenarios and the discovery of new venues for improving efficiency. For example, how changes to course length, trainees throughput, frequency, % of individuals that travel, and so forth impact costs.

- Sharing, compiling and comparing data among project/training managers, and in-turn identifying and duplicating programs that are running efficiently and correcting problem areas.

Maximize Training Efficiency with ADVISOR

ADVISOR Enterprise "Manage Training Budget and Resources" module, uses the above methodology to significantly improve training efficiency with minimal effort. It is a web based decision support tool that utilizes your own time and cost ratios and/or industry averages to quickly and accurately forecast and compare money and resources needed by plausible delivery options to develop, deliver, administer, manage, maintain and support training programs. Moreover, ADVISOR stores all data in a centralized database making it easy to share, compile and compare costs among multiple training programs and managers. To request your free trial account, click here.

With a simple, quick and reliable tool for forecasting and comparing training costs, training decision can be continually improved without the need for time consuming forecasting exercises.

Contributions

Contributions, on what worked and didn't - including practical tips, advice, white papers, case studies, articles, reviews, online seminars, software tools and research reports - are welcomed. Please send to ✉bahlis@bnhexpertsoft.com. Full credit will be given to author.

For information, comments and questions please contact (Jay) Bahlis at (800) 747-4010 x 21 or ✉bahlis@bnhexpertsoft.com or visit the ADVISOR site at • http://www.bnhexpertsoft.com.

Click on following link • http://www.bnhexpertsoft.com/subscribe.htm
To receive free news and promotion