DEVELOPERS & LIFELONG LEARNING:

# The challenges & opportunities impacting your team

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Today's leading organizations realize their software developers provide a significant strategic advantage. In many cases, the ability to quickly create and deploy new solutions, often using innovative technologies, is what sets one organization apart from its competitors. But many organizations struggle to keep their developers on a lifelong path of learning: Under the day-to-day pressures of business and operation, education is often de-prioritized.

That's too bad, because it's this kind of short-term thinking that can carry a heavy long-term price. Fortunately, using modern approaches, organizations – and their software developers – no longer need to make that compromise.
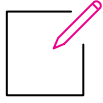
THE CHALLENGES OF TECHNOLOGY EDUCATION

It's fairly obvious why most organizations feel they have to compromise when it comes to technology education:

- Taking any professional "offline" and putting them into a classroom can seem wasteful, especially when there's always so much work to be done.

- Managers have a hard time determining if a class was effective, which makes it easier to justify not sending anyone to the class in the first place.

- It's sometimes hard to figure out what developers should even be taking a class for. After all, if they're already skilled in the organization's chosen languages and technologies, a class might not be able to add much value.

- Training has traditionally been expensive. A typical one-week technology class can cost upwards of $2,000, not including any necessary travel expenses or the "soft cost" of time away from work.

- The quality of traditional education is extremely variable. The right instructor can make all the difference, as can having the right class design, but it's difficult to find that perfect combination.

These are all completely legitimate concerns, but unfortunately they apply to an educational approach that has essentially remained unchanged since the first public schools were created centuries ago. Just as technology always moves forward, technology education continues to change. With that change comes new approaches and new opportunities.

IDENTIFYING THE REASONS FOR DEVELOPER TRAINING

It's important to ask a single question before even discussing how to meet your developers' training needs: Why are we doing any education at all? It's one of those things that people don't think about very often. In most organizations, technology training is generally considered to be a good thing, even if the organization has struggled to find quality providers or the time needed for classes. But we rarely step back and ask why we're doing it in the first place. Really understanding the drivers for education can help us think more broadly about how to deliver it. In the case of software developers, there are actually several reasons, some of which may not have consciously occurred to you or to your organization's leaders. Technology moves forward Suppose that your developers primarily use Microsoft's C# language to develop in-house applications, or they use PHP to develop your web applications. Neither of those technologies is static: They're constantly evolving, improving and gaining new features. While developers can continue to be effective using what they already know, they can often be more effective when they keep their skills up to date.

Take database technologies for example. SQL Server, Oracle and other popular relational database management systems don't typically experience revolutionary changes in new releases. They're mature technologies, and it would be easy to just ignore them when it comes to education, because they don't seem to change all that much. But ignoring them has an enormous cost, because each new release brings subtle evolutionary change. Tiny changes in how to best construct a query for the best performance, or structural changes that, if leveraged, can fundamentally change how you even think about performance. Keeping developers skilled on the latest versions can help ensure that you're taking full advantage.

Developers are a tactical asset

Who knows when a strategic opportunity will present itself to your organization? A new market, a new audience, a new product or a new service? When the opportunity does arise, it's likely you'll need some technology support to capitalize on the opportunity– and that's where an educated developer becomes an important asset. A developer who has a broad education in the latest technologies can quickly identify tools and approaches that are appropriate for a given situation. Those might not always be tools and approaches already in-use within your environment, so additional kick-start training might be required to get the rest of the team skilled up. But simply knowing which direction to go is the starting point. This means there's a business advantage in having developers who have a light educational grounding in what's new in the world of software, even if they're learning a little

that isn't going to be of immediate use. This kind of education is a strategic investment against future tactical need.

Developers get bored

Good developers are hard to find, and there's a good reason to try and keep them in your organization once you've found them. The problem is that good developers are also intelligent, and that often means they get bored. Working on the same project day in and day out can be trying, and a lack of variety is one of the biggest reasons developers get restless and start updating their resume. Providing ongoing educational opportunities can keep developers engaged and interested in their jobs by helping them feel like they're keeping up with their industry. Just as many companies offer a small allotment of "free time" for employees to pursue projects they find personally interesting, a little "open education" can make developers feel valued and help keep them interested even when their "real" job gets a little mundane.

MAKING EDUCATION HAPPEN

For all the upsides of ongoing developer education, the challenges we originally offered are still true. However, developers' unique work patterns, and the changing nature of technology education, mean that you have some opportunities to do the right thing without being killed by the consequences.

Making time for training

Developers often work in project cycles, and that provides a perfect opportunity to add training to the mix. For example, as a development "sprint" wraps up and a release is shipped, most organizations already take some downtime to evaluate that release and to solidify plans for the next sprint. That's a perfect time to drop in a day or two of training. It'll provide a nice mental break in the project, help your team quickly update some key skills, and show them that you're just as dedicated to their ongoing career as they are.

Eliminating the classroom

Many of the downsides of traditional technology education are tied back to the traditional classroom approach: the time away from work, the expense and so on. So eliminate the classroom. Frankly, the traditional five-day class model is usually less than 100 percent effective anyway, simply because the adult human brain can't effectively absorb 30-40 hours of new material in one sitting. On-demand training offerings that are conducted right in your office, or anywhere the developer happens to be, provide a better approach. Whether your developers prefer video training, books, online courses or some other modality, the ability to "dip in" for a little bit of education and then return to work offers a great balance between education and the demands of the production environment.

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Identifying the right training

So what should your developers be learning? In most cases, you should let them make that decision for themselves, because simply figuring out "what's hot" in the industry is part of the learning process. Unless there's a specific project they're skilling up for, selfdirected learning lets them explore the technology marketplace and develop the breadth of training that will make them a valuable tactical asset. Of course, effective self-directed learning depends on developers having access to a broad variety of training topics. Fortunately, today's technology education marketplace is delivering that breadth through an enormous variety of training modalities. That marketplace also helps ensure developers are learning from the best instructors, using the most welldesigned classes. The ability to shop for, select and implement training over the Internet provides massive and healthy competition between training providers, something that benefits you and your team. You're not restricted just to in-class offerings in your local area. You can literally choose from a world of options and select the best one for your organization.

Making training affordable

No matter how altruistic your organization, nobody can justify continual high-cost classes. Again, the emergence of a global marketplace for technology training has introduced more affordable options, without sacrificing quality. If you're still thinking that $2,000 is the going rate for a week of education, think again: Options exist where $2,000 could provide unlimited training for an entire year—for an entire development team.

Verifying the training

Of course, it's important to measure any investment and make sure it's achieving what you hoped it would. That's why it's important to verify that your developer education program is achieving your goals. One way to do that is to have developers complete short cycles of training, and then pass that training on to their peers through "lunch and learn" presentations, internal blog postings and other forms of communication. Monthly education "meet ups" provide teams with an opportunity to identify new training subjects, and to pass on what they've learned in the previous cycle. Some training companies provide assessment capabilities that can be used to verify a student's comprehension of key topics, and even to help identify learning opportunities going forward. Whatever approach you choose, "closing the loop" on training through discussion, internal pass-along and assessment is a vital part of the training lifecycle.

TECHNOLOGY EDUCATION WITHOUT COMPROMISE

At Pluralsight, we're passionate not only about technology education, but also about making it available and effective. We know that companies have a difficult time paying enormous weekly fees for training, and that developers hate to feel like they're falling behind. We don't believe companies should beggar themselves to keep their staff skilled up, and we don't believe that developers need to live without continuous training being available to them anytime, anywhere. We think that most business leaders fully recognize the value of ongoing, lifelong education for technology professionals, but that the traditional costs and downtime have simply made it impractical. That's what we're working to fix, by providing an enormous all-youcan- eat library of education, created by the world's best educators, for a reasonable price. But we can only do so much. We also believe that business leaders need to recognize the changes that have happened in the world of technology education, and understand that the old classroom model has been superseded. We believe developers themselves need to focus less on getting that once-a-year, week-at-atime education, and instead look to models that provide on-demand, just-in-time training whenever they have a moment to dip in and learn a little. Together, we can create a more educated, more flexible and more tactically sound industry for software development. We can help our developers excel, and we can do it without compromise.

Don Jones

Author bio:

Don Jones has spent over a decade developing computer-based training for a variety of outlets, including Pluralsight, CBT Nuggets, 1105 Media, Microsoft, Interface Technical Training, and Penton Media. He co-founded Concentrated Technology, a boutique technology education, analysis and consulting firm offering a variety of services to clients worldwide. He's been recognized as a VMware vExpert and Microsoft MVP (Most Valuable Professional), and is a regular contributor to the development of Microsoft official curriculum.

Real training.
Real business.
Real results.

If you want an elite technology team, give them training they can take seriously.

Ready to empower your team and say goodbye to classroom-based training? Contact us:

sales@pluralsight.com

1.888.368.1240 | 1.801.784.9007

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