

INSTRUCTIONAL SYSTEMS DESIGN

TODAY AND IN THE FUTURE



AN ASTD RESEARCH STUDY

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EXECUTIVE SUMMARY

The world of learning is in flux, going through multiple and simultaneous revolutions. There are changes in the way learning is designed, developed, implemented, and delivered. The line between what constitutes informal and formal learning has blurred enough that nobody quite knows where it is anymore.

Many companies continue to expand operations globally, bringing learners from diverse backgrounds and cultures together in one organization. Technology continues to advance at a rate that makes it difficult to keep pace, with organizations still trying to fully grasp the concept of “Web 2.0”—even as the age of “Web 3.0” is dawning.

In the face of these challenges, how has instructional systems design (ISD) changed? More importantly, how *must* it change to adapt to the fast-changing present and uncertain future? To find out, ASTD partnered with the Institute for Corporate Productivity (i4cp) to conduct a major survey on ISD practices. This report, *Instructional Systems Design: Today and in the Future* (hereafter the Study), is based on that survey, as well as on a set of interviews conducted with ISD experts and business organizations.

The Study finds that most companies have ISD programs that are, at best, moderately effective in achieving both learning and business goals and are not positioned well enough for the future. The bottom line: There is much work to be done. The Study shows what that work should be.

ISD PRACTITIONERS MUST BE MULTIFACETED

The traditional classroom course is neither dead nor, by the looks of things, especially unhealthy. Nearly all respondents (97 percent) say their organizations are currently using classroom environments. Therefore, ISD experts will continue to design classroom-based instructional programs.

But that is far from the *only* designing they must do. Learning today is becoming much more customized, informal, just-in-time, and technologically mediated. Blended learning (that is, combinations of synchronous and asynchronous, classroom, and e-learning) is being used by 69 percent of

Study participants’ organizations. Coaching and mentoring are also widely used. ISD experts must adjust to this increasingly diverse and blended world of learning.

To accommodate shifting demands, a majority of organizations use courseware authoring and rapid development tools. Although standard ISD software such as Captivate, Articulate, and Lectora are considered useful, the Study finds that many of the most popular tools are not those specifically designed for ISD. Applications such as Microsoft’s PowerPoint and Word, as well as Adobe’s Flash and Photoshop, are high on the list of tools instructional designers believe are important to what they do.

SOCIAL MEDIA REMAINS UNDERUTILIZED

As seen in ASTD’s *The Rise of Social Media: Enhancing Collaboration and Productivity Across Generations* study, most companies have not yet systematically embraced social media technologies for the learning function. This Study confirms that finding. However, there is evidence that these technologies are gaining momentum, with a significant percentage of participants saying their companies are *planning* to use them in the future. In fact, fewer than 5 percent of survey respondents do *not* think the use of social media will increase over the next five years.

This, too, is in line with the *Rise of Social Media* study, which finds that 83 percent of workers believe social media used for learning will increase at their organizations by 2012. *The Rise of Social Media* also corroborates other findings from this Study about the stages of development for certain ISD-related tools and approaches: Mobile learning, social networks, podcasts, and wikis are the top four tools under consideration.

To successfully implement a social media strategy, instructional designers need to have a broad spectrum of competencies. Not only does there need to be a familiarity with the various technologies available, subject matter, and learner needs, but ISD practitioners must also be able to market the concept of using these technologies to stakeholders within the organization. The ability to overcome resistance to these new tools is a skill that will increasingly be in high demand.

ISD SUFFERS FROM BUDGET, STAFFING, AND CREDIBILITY PROBLEMS

Instructional design professionals are confident that what they do is important to their organizations and that their skills will remain in demand. They are less confident, however, that management sees ISD in the same light. When asked about barriers to ISD success, many ISD practitioners cite a lack of skilled staff, a shortage of funding, and an inability to get a “seat at the table.” This lack of clout can make it difficult to convince the organization to try new ISD approaches.

One way to address this problem is by providing metrics on the effectiveness of ISD. “Measuring the impact on business is critical,” states Tony Bingham, president and CEO of ASTD. “When metrics that are meaningful to the organization are included, it helps demonstrate to senior executives that learning is more than relevant—it is crucial for organizational success.” Arriving at such metrics, however, can be a barrier to success.

Staffing and budget problems generate expertise concerns. Ninety-one percent of Study respondents agree that if they need to learn something about instructional design, they often look *outside* of their organization. By contrast, only about one-quarter say they often reach *inside* their organizations for help by using tools such as wikis, course modules, and internal social networks. The Study finds, however, that being able to reach *inside* for help is significantly correlated with ISD success.

ISD MUST GET FASTER, MORE STRATEGIC, MORE GLOBAL, AND MORE TECH-SAVVY

A majority of participants believe ISD will become more important to organizations in the future. In fact, 93 percent say that this is at least somewhat likely. And 91 percent say it is at least somewhat likely that there will be an increased focus on developing content for delivery to a global audience. The majority also predict that social media will become an essential tool for ISD.

Technology, as a whole, is likely to improve ISD productivity while reducing costs, which may in turn allow ISD

practitioners to become more strategic and less tactical. But despite the recognition of the coming advancements in technology, ISD professionals seem confident that traditional ISD practices will remain relevant and that traditional courses will continue to exist.

However, that is not to say ISD practitioners do not think there are problems in their field. Two-fifths agree that traditional ISD does not prepare designers for today’s learning environments. ISD practitioners may need to design their own instructional systems in radically different ways to fully prepare themselves for the learning environments of the future.

MANY PRACTICES EXIST TO HELP ISD PRACTITIONERS IN THE FUTURE

This sense that traditional ISD may be behind the times—coupled with the fact that many ISD professionals believe their processes are not as effective as they could be—indicates that there needs to be a shift in how practitioners approach ISD. They must be ready to help formulate instructional programs or products that have little to do with conventional classroom learning and more to do with other learning approaches. It is also important to assess both the needs of learners and the requirements of the organization as a whole.

There needs to be some evolution in education as well. ISD professors at the university level must prepare tomorrow’s designers for the challenges they will face. ISD professionals need to understand how new media and technologies and an ever-expanding global economy affects their design efforts.

Awareness of new technologies is crucial, but not enough. ISD professionals need to market the use of new tools within the organization and measure the outcomes of those efforts in terms of effectiveness and return on investment. These metrics will make it easier to get support from leadership for future ISD initiatives, provide an understanding of ISD’s role in the organization, and give practitioners the opportunity to become more strategic. This Study provides recommendations in these areas and more.

Instructional systems are a collection of tools, resources, and processes arranged in such a way as to facilitate learning. Designing these systems can be considered both an art and a science, as much of the theory behind ISD has its basis in many different disciplines, such as behavioral science, social learning, and cognitive psychology. Putting together all of the various pieces to meet the specific learning needs for specific groups of learners is what makes ISD an art form. The U.S. Army Field Artillery School defines ISD as the application of proven learning processes to determine the what, when, and how of training (U.S. Army, 1984).

ISD PRACTITIONERS TODAY

All participants in the Study perform ISD in their current jobs. The overwhelming majority of them (93 percent) perform their duties as an employee of their organization, while 7 percent are contractors who provide ISD expertise to diverse organizations. Among those who have ISD responsibilities, 44 percent hold a degree in instructional design or a related field, while 56 percent do not, as seen in Figure 1. Many practitioners appear to be learning experts and/or subject matter experts who also perform ISD tasks in their organizations or have otherwise gravitated in the direction of design. The Study finds that 46 percent of the total respondents identify themselves as trainers or training managers with ISD responsibilities at their organizations.

ISD-related degrees are considered essential to the people who hold them.

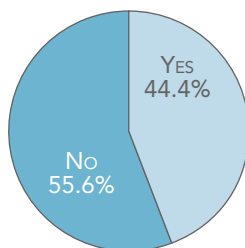
Those with ISD-related degrees tend to be well educated. Asked about their highest-level degrees, 19 percent report a bachelor's as their highest degree, a little more than two-thirds say their degrees are at the master's level, and roughly 12 percent have degrees at the doctoral level.

These degrees are considered essential to the people who hold them. Ninety-two percent of respondents with some type of ISD or ISD-related degree say that it is either important or very important for their career opportunities.

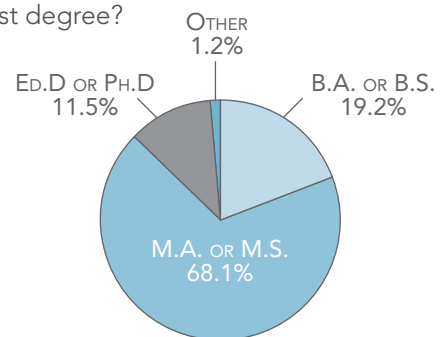
A smaller proportion of Study participants report official ISD certifications. Only 14 percent of all respondents say they hold such a certification—the most common being ASTD's Certified Professional in Learning and Performance (CPLP) certification, which is held by more than 40 percent of the respondents who report having certifications.

FIGURE 1 | LESS THAN ONE-HALF OF THOSE WITH ISD RESPONSIBILITIES HAVE A RELATED DEGREE

Do you have a degree in instructional design or a related field?



What is your highest degree?





THE EFFECTIVENESS OF ISD TODAY

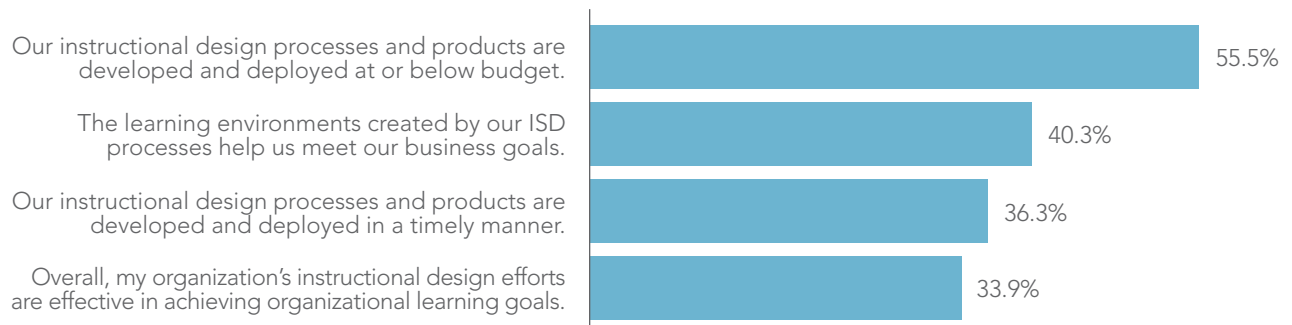
Many factors figure into an organization’s ability to conduct ISD well. Study participants were asked the extent to which they agreed with four different statements about instructional design, as seen in Figure 2.

These findings indicate that ISD is not as successful as many practitioners would like. Only about one-third indicate to a high or very high extent that their organization’s ISD efforts are effective in achieving organizational learning goals. Meanwhile, roughly two-fifths of participants say that their learning environments help their organizations meet business goals to the same extent. Meeting both learning and business goals should be the highest priorities of ISD practitioners, and there is clearly room for improvement.

The statement on designing and deploying instructional systems on or under budget received the highest level of agreement, with more than half of respondents agreeing to a high or very high extent that they are achieving this goal. This finding reveals that many organizations have become adept at working within budget constraints.

FIGURE 2 | WHILE MANY ORGANIZATIONS MANAGE TO KEEP THEIR ISD EFFORTS ON BUDGET, FAR FEWER BELIEVE THOSE EFFORTS ARE VERY EFFECTIVE

To what extent do you agree with the following statements?
(Percent of respondents answering high or very high extent)



Meeting both learning and business goals should be the highest priorities of ISD practitioners, and there is clearly room for improvement.

The area in which they are less adept is in developing and deploying products in a timely manner. While possibly related to the recession from which the United States is emerging, it may be more important in a weaker economy to deliver ISD products under budget rather than on time. ISD skeptics could argue, however, that conventional approaches to ISD are themselves slowing down projects, as discussed later in this report.

You should note that the four responses to the question in Figure 2 make up the Instructional Systems Design Index (ISDI). This index reflects the average of each participant's responses to the preceding questions and forms the basis for evaluating an organization in terms of its ISD effectiveness. Cronbach's alpha, a measure of internal reliability, is .82 for this scale, which is within the accepted range for use as an index.

ABOUT THE METHODOLOGY

For the ASTD/i4cp *Instructional Systems Design Survey* on which the Study is based, 1,546 usable responses were collected. Correlations in this report relate to either the Instructional Systems Design Index or to the Market Performance Index (MPI), which is based on self-reported performance in the areas of revenue, market share, profitability, and customer satisfaction. The MPI is used as a measure of market performance for the organization, with high performers designated as among the top one-third of scorers on this scale and low performers designated as the bottom one-third of scorers on this scale.

Correlations do not necessarily mean that a cause-and-effect relationship exists between the variables involved. Rather, when a correlation between two variables is found to be significant, it signifies that the relationship is not coincidental. The higher the correlation is, the stronger the association between the two variables or indices.

In the case of a negative relationship, one can assume that an increase in one variable is associated with a decline in the other. With a correlation of $p < .05$, there is only a 5 percent chance that the results occurred by chance. In other words, you can be 95 percent confident that the results are not in error and that you would get the same results if you conducted this research again. With a correlation of $p < .01$, which represents the majority of correlations reported on in this Study, you can be 99 percent confident that these results are not in error and are replicable.

Multiple regression analysis is a way to study the impact—as well as the magnitude of the impact—of more than one independent variable on a single outcome. Unlike simple linear correlations, multiple regression analysis does suggest a causal relationship. From a list of factors that are suspected to affect a particular outcome, multiple regression analysis can identify which of those factors has a significant impact on the dependent variable. Additionally, multiple regressions express how much of the change in the dependent variable is caused by the independent variables. For example, the productivity of a farm crop (that is, the dependent variable) is influenced by the amount of sunlight and rain as well as the soil conditions and fertilizer (that is, independent variables). To express the overall effect of the independent variables on the dependent variable, the coefficient of multiple correlations (R^2) is used.

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| SECTION I |

TOOLS AND APPROACHES THAT SUPPORT LEARNING

Classroom instruction is not receding into the shadow of emerging technologies and expanded informal learning. In fact, 97 percent of respondents reveal that their organizations currently use classroom instruction, with fewer than one percent saying they no longer use it. This finding is a strong indication that traditional instructional design is not going away anytime soon.

New forms of instruction will not replace classroom learning—at least in the short term—but rather supplement and shape such learning. As one respondent says, “E-learning will never meet all of the training and educational needs for our organization. Traditional face-to-face and blended learning are necessary to fill the gaps in learning styles.”

ADOPT NEW SKILLS

So what other tools and approaches are used to support the contemporary learning function? Many learning basics are still being used, and reliance on them may even be growing. Most companies use needs assessments, for example, and most also avail themselves of in-person coaching and in-person mentoring. Therefore, ISD practitioners may increasingly be called on to create programs for assessing employees who need help and then aid and train coaches and mentors to address any deficits.

There is an art to knowing how to combine different media into a cohesive and compelling learning experience.

The Study shows that the trend toward blending classroom learning with technological tools has become well established, as seen in Figure 3. More than two-thirds of respondents say their organizations use blended learning (combinations of synchronous and asynchronous, classroom, and e-learning). Synchronous and asynchronous learning systems are both being used by approximately 63 percent of respondents’ companies.

This helps explain why more than one-half of participants say their firms are using courseware authoring tools and about half are using rapid development tools. Of course, simply being able to use such tools is only part of the



battle. The trick is to use them well. There is an art to knowing how to combine different media into a cohesive and compelling learning experience.

USE THE MOST EFFECTIVE TOOLS AND APPROACHES

To further examine the differences among the stages of development, additional statistical analysis was run for each stage. The results show that companies currently using the tools report significantly higher ISDI scores than companies at any of the earlier stages of development.

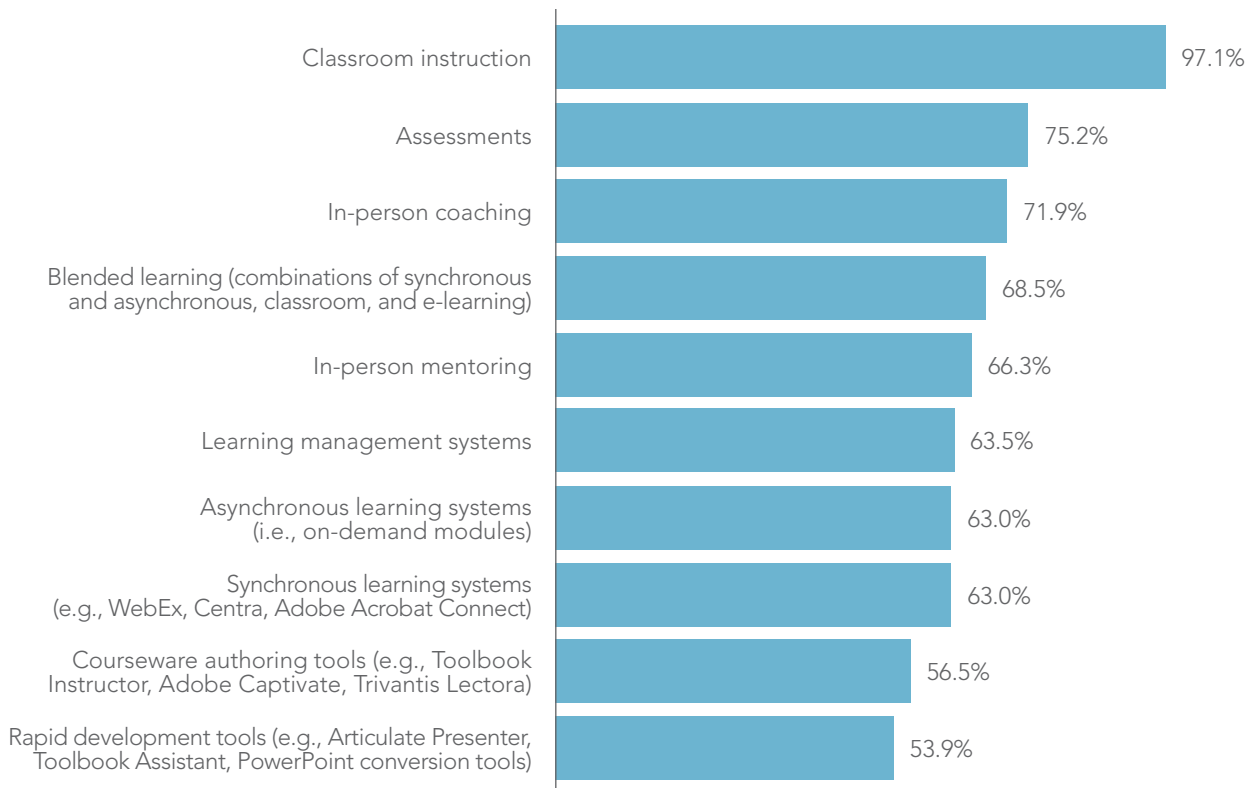
This is also true for all but three tools: learning management systems, virtual worlds, and wikis.

Integrating metrics

So which are the most effective tools or approaches? One approach linked to ISD success is “measurement of business impact.” This relationship indicates that ISD is more successful when companies are able to measure the business impact of learning practices. It makes sense, then, for ISD practitioners to emphasize metrics in the instructional design process when possible.

FIGURE 3 | THE CLASSROOM IS STILL KING IN SUPPORTING THE LEARNING FUNCTION

In terms of supporting the learning function, at what stage of development are the following tools/approaches within your organization?
(Top 10 tools/approaches currently being used)



The importance of metrics is consistent with the results of a previous ASTD/i4cp study, *The Value of Evaluation: Making Training Evaluations More Effective*. In that study, 86 percent of respondents said that their organizations should be measuring the business impact of learning, and 75 percent said that this measurement is highly valuable to their organizations. Yet, only 44 percent of participants in this Study say that their organizations are using “measurement of business impact.”

Facilitating the personal touch

There is more to ISD than using the right software. Two approaches that are associated with ISD success are in-person coaching and in-person mentoring. Although these types of learning are impossible to standardize, it makes sense for ISD practitioners to play two important roles. First, they can design the courses used to teach coaches and mentors. This requires having a solid understanding of the challenges and concerns associated with these practices. Second, they can design just-in-time tools that allow coaches and mentors to do their jobs better. These may include everything from lists of coaching dos and don'ts to automated tools that facilitate coaching or the mentoring process.

Leveraging technologies, games, and simulations

Serious games—or games designed for learning rather than purely for entertainment—are linked with positive outcomes, yet less than one-quarter of participants say their companies are using them. Therefore, learning how to create and use these games could give an organization a unique learning advantage.

Games can be similar to simulations in that they give employees a learning experience in a safe environment. Roughly one-third of Study respondents are considering using them, but slightly more have no plans to use them at all. The Study finds that both offline and online simulations are linked to ISD effectiveness.

Also linked to better ISD performance are asynchronous learning systems, mobile learning, blended learning, expert systems, podcasts, electronic performance support systems, and social networks.

The Study suggests that some of these tools and approaches represent cutting-edge practices that could potentially give organizations measurable learning advantages over their competitors. For example, only 15 percent of respondents say they engage in mobile learning approaches. In a world awash in cell phones and with the age of tablet computers just emerging, it would likely prove valuable to use these technologies as a learning platform, especially to deliver just-in-time information.

This approach makes special sense in light of the large Millennial generation now entering the workforce. A recent Pew Internet and American Life Project study found that in the United States, 80 percent of adolescents have slept with their cell phone in or near their bed; more than one-quarter access the Internet by cell phone; 54 percent use cell phones to record video; and six in 10 use cell phones to play music. “This device has become a communication and often entertainment hub in their lives,” says Pew researcher Amanda Lenhart (St. George, 2010).

Using design technologies/tools

We asked respondents to list the top three tools they need to design instructional systems, and a number of resources came up repeatedly. The tools most commonly used are Adobe's Captivate and Microsoft's PowerPoint. These two are mentioned more than twice as often as any other tool. A distant third is software from Articulate.

Applications from Adobe and Microsoft tend to dominate the list of important tools. In addition to Captivate, other Adobe programs listed include Flash, Photoshop, Dreamweaver, Creative Suite (which, depending on the version, contains many of Adobe's other applications), Presenter, Connect, and InDesign. Microsoft's software is represented not only by PowerPoint but also Excel, Office, Outlook, Project, Publisher, SharePoint, and Word. One survey participant says, “I am usually expected to deliver a lot of content with a low budget, so the big, pricey programs are out the question. I've learned to utilize many features of the Microsoft Office Suite.” Several other technologies are mentioned by brand name, including Lectora, Camtasia, SnagIt, and WebEx.

THE ADDIE MODEL

Whether intentional or not, designers often follow the ADDIE model when they create learning programs. To begin the process, there must be analysis of several components: the objectives of the program, the scope of the program, the current skills of the learners, the needs of the learners, and the skills necessary for the trainers—to name a few. Using the results of these analyses, it is time to design the program to achieve the desired outcome. The design can then be developed by creating the course materials, learner activities, technology infrastructure, assessments, and so on. Once developed, the program can be implemented, and once the training is complete, the program can be evaluated for effectiveness. Most often, the Kirkpatrick/Phillips method is used to evaluate learning. For more on evaluation, please see ASTD's *The Value of Evaluation* report.

Learning is not designed by software alone

Another item on the list of top tools is not really a tool *per se*, but enough participants mention “subject matter experts” (or SMEs) that it ranks quite high among the others. Clearly, ISD practitioners are highly dependent on SMEs to design and implement programs well. In addition, SMEs are doing more of the design and creation work today via new technologies.

There is debate, however, about whether SMEs should be doing design or if designers should become SMEs. One study participant says, “It’s easier for me to hire trainers who are SMEs in their content areas and then train them on ISD than it is to hire instructional designers and teach them to be subject matter experts.” Another participant simply states, “SMEs developing training is a bad idea.”

Some other tools mentioned are not specifically design applications, either. Some respondents say they rely on their learning management system when designing instructional systems, and several respondents indicate that all they really needed to design programs is a computer, the Internet, and their own expertise.

The ADDIE (analysis, design, development, implementation, and evaluation) model is also referred to several times as an essential tool (see sidebar for more information).

Several Study respondents also cite a learning content management system as an important tool, and social media tools are cited a handful of times. This is interesting because, as seen earlier, these items tend to be low on the list of approaches companies are currently using. Other non-software related tools listed include job analysis, storyboarding, project management skills, and research.

These findings support the results of an earlier study on instructional designers that concluded there are four basic competencies for instructional design professionals:

- 1| communication skills
- 2| knowledge of instructional design models
- 3| problem solving/decision making skills
- 4| technology skills (Kenny et al., 2005).

FOCUS ON SIX PRACTICES

When making improvements in ISD, companies cannot do everything at once, and every organization begins at a different level and has unique needs. However, if learning professionals are looking for a fixed number of initiatives on which to focus, they should consider the following six practices:

- 1| **Incorporate metrics into learning design so that it becomes easier to gauge the business impact of learning programs and systems.** By building metrics into systems, learning professionals will be better able to make good decisions about which programs are most worthwhile, which need to be modified, and which can be discontinued without a negative impact. Designers should have a clear understanding of the types of data in which business leaders are most interested and strive to link learning metrics to that data where feasible.
- 2| **Support coaching and mentoring programs.** Design or locate top-notch training courses for coaches and mentors and provide coaches/mentors with the tools they need to do their jobs better.
- 3| **Adopt serious games and simulations as a source of learning.** These are not widely used in today’s

workplace and may provide competitive learning advantages even while giving employees risk-free ways of experiencing new ideas and concepts.

4| Work to improve blended learning capabilities.

They are widely used in today's companies and are correlated with ISD effectiveness, but they can be difficult to do well. They encompass many other types of learning approaches, including synchronous and asynchronous, classroom, and e-learning. By experimenting with different "mixes," ISD practitioners will hone skills that will become increasingly valuable as new technologies are integrated into learning programs.

5| Encourage your internal ISD team members to share expertise in regard to specific applications. This will ensure, for example, that when your top expert in Captivate leaves the company, his or her knowledge does not leave as well. The loss of such knowledge can be a major productivity killer.

6| Learn where your organization's subject matter experts are. They will be of great value in the design and implementation of new programs. And make sure that subject matter experts who become immersed in an instructional design project also grasp basic ISD concepts.



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The Study looks at how much time it takes to develop learning courses as well as how much outsourcing there is in the field of instructional design.

We asked respondents how long it takes to design a one-hour classroom program and a one-hour e-learning program. Responses show that it takes longer to develop e-learning programs—about twice as long on average—as seen in Figure 4. The average time spent developing one hour of online training is 55.7 hours, while for one hour of classroom training, the average is 27.1 hours. That basic ratio continues to exist even at the upper limits, with one hour of e-learning topping out at 300 hours and one hour of classroom training peaking at 150 hours.

Other studies have also looked at such ratios. For example, below are a series of ratios showing how many hours it takes to develop one hour of specific learning programs, as determined by Chapman (2006, 2007):

- 34:1 instructor-led training, including design, lesson plans, handouts, PowerPoint slides, etc. (Chapman, 2007a).

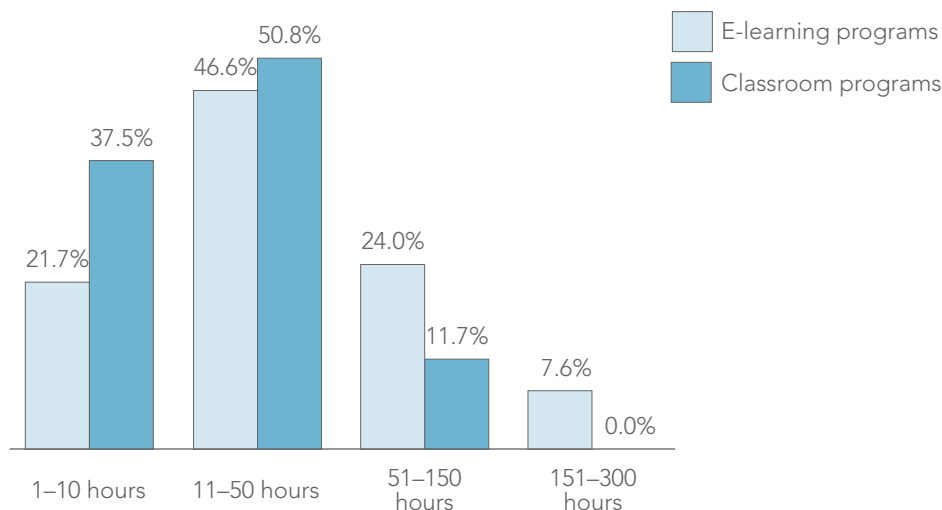
It takes longer to develop e-learning programs—about twice as long on average.

- 33:1 PowerPoint to e-learning conversion (Chapman, 2006a).
- 220:1 standard e-learning that includes presentation, audio, some video, test questions, and 20 percent interactivity (Chapman, 2006a).
- 345:1 time it takes for online learning publishers to design, create, test, and package third party courseware (Chapman, 2007b).
- 750:1 simulations from scratch and highly interactive content (Chapman, 2006b).

A previous study on instructional design development time also found that it took more time to develop e-learning

FIGURE 4 | IT OFTEN TAKES TWICE AS LONG TO DEVELOP ONE HOUR OF E-LEARNING THAN IT DOES ONE HOUR OF CLASSROOM LEARNING

On average, how many hours do your instructional designers spend to complete a one-hour learning program?



programs. In that study, it took an average of 114 hours to develop one hour of classroom training, and it took anywhere from 90 hours to in excess of 350 hours to develop an e-learning program, depending on the amount of interactivity involved and whether or not there were templates in place (Defelice & Kapp, 2009). While there may not be consensus on how long it takes to design learning programs, many designers agree that—as one study participant puts it—“no one in management comprehends the amount of time it takes to develop instruction.”

The complexity and interactivity of an e-learning program greatly influences development time. As an example, Carol Sue Jones, an instructional designer with air-conditioning manufacturer Trane, says it actually takes the staff longer to create classroom learning in which “you not only have to provide instructor talking points, but you have to explain how to set up an activity or you have to write additional notes for whatever questions might come up.” This can take longer than e-learning development because they have greatly simplified the content of their e-learning programs. “Our first e-learning had all the bells and whistles,” said Jones. “We had streaming video, we had scenarios, we had click-and-builds; it had all that stuff, but [the learners] just could not get it to function consistently and didn’t have powerful enough technology to download it in a lot of cases, so our e-learning has become very simple and straightforward.”

In some cases, employers may be tempted to improve efficiencies and save on resources by turning to outsourcing. However, outsourcing ISD is not very widespread. More than one-third of respondents indicate that their organizations do all of their design via in-house ISD, and just 14 percent outsource one-half or more of their ISD needs. One-half of a percent fully outsource all of their instructional design.

It is possible that this view of outsourcing is slightly skewed, as the survey instrument itself was aimed at people with ISD responsibilities, so their companies may not necessarily need to look elsewhere for ISD help. However, among survey respondents, 93 percent perform ISD for their own organization while only 7 percent are contractors, supplying third-party “outsourced” ISD services, for example.

“Our first e-learning had all the bells and whistles... but [the learners] just could not get it to function consistently and didn’t have powerful enough technology to download it in a lot of cases, so our e-learning has become very simple and straightforward.”

FOCUS ON CLARIFYING QUESTIONS

To maximize the use of resources, ISD practitioners should ask a series of questions to help clarify the needs of their organizations:

- 1| Is the extra time it takes to create an hour of online learning worth it? What does it provide in terms of economies of scale, saved labor, enhanced effectiveness, learner access, learner convenience, etc.?
- 2| Can we simplify online learning design so that it retains its effectiveness while taking less time to create?
- 3| Which tools and techniques allow us to create courses better and faster? Will investment in the right tools save us money by enhancing productivity?
- 4| To what degree is outsourcing ISD worthwhile? Where could it save us time or money or boost quality? Can we outsource more mundane ISD tasks so we can focus on more strategic issues?

A previous ASTD/i4cp study, *Transforming Learning with Web 2.0 Technologies*, found that few companies have made social media technologies a prominent facet of their learning functions. In that study, about 40 percent of participants indicated that their company used these technologies, but less than 9 percent said they played a major role in the learning function. In the most recent ASTD study on the subject, *The Rise of Social Media*, it was found that, aside from shared workspaces, not one social media tool was used often or all the time at work by more than 20 percent of respondents.

SOCIAL MEDIA HAS NOT YET BEEN WIDELY ADOPTED

The current Study also finds that social media technologies—such as wikis, podcasts, social networks, mobile learning, and virtual worlds—are not yet common in the design of instructional systems, as seen in Figure 5. Each of these tools is used by less than one-quarter of participants’ companies, and an even smaller number have these tools in development.

Yet each of these tools is at the top of the list of tools under consideration, with roughly one-third of organizations considering using each of those tools in the future. Although this suggests that social media technologies are perched to be the next big tools in the instructional design toolbox, there are almost as many respondents that say their organizations have no plans to use them at all. In fact, in the area of virtual worlds, nearly 60 percent of respondents say their organizations have no plans for them.

SOCIAL MEDIA IS LINKED TO BETTER PERFORMANCE

The Study finds that companies that are using podcasts, mobile learning, online simulations, and social networks tend to be more successful with their ISD initiatives, as evidenced by the correlations between the use of these tools and strong ISDI scores. In addition, companies that use those tools—as well as wikis—have stronger MPI scores than those that do not.

FIGURE 5 | SOCIAL MEDIA TOOLS APPEAR POISED TO SEE MUCH GREATER USE IN THE FUTURE

In terms of supporting the learning function, at what stage of development are the following tools/approaches within your organization?

| | NO PLANS TO USE | CONSIDERING | IN DEVELOPMENT | CURRENTLY USING |
|--------------------|-----------------|-------------|----------------|-----------------|
| Online simulations | 19.3% | 31.7% | 12.0% | 36.5% |
| Mobile learning | 34.0% | 40.7% | 10.1% | 15.0% |
| Social networks | 26.8% | 37.1% | 15.6% | 20.2% |
| Podcasts | 29.6% | 35.7% | 11.6% | 22.6% |
| Wikis | 31.2% | 33.0% | 12.7% | 22.6% |
| Virtual worlds | 59.0% | 30.2% | 5.3% | 5.3% |

Note: Rows do not add up to 100% due to the omission of no longer used responses.

USING PILOT PROGRAMS: THE MACY'S EXPERIENCE

One of the more effective ways to launch a social media learning initiative is through a pilot program. Starting with a small, controlled group of learners can help demonstrate the value of a particular approach. For example, retail giant Macy's uses SharePoint sites as a way for various teams throughout the organization to collaborate.

According to Dennis McGill, manager of Stores' Executive Development for Macy's, the sites are used as a communication tool where geographically dispersed teams can hold asynchronous discussions. McGill calls the program "extremely successful," and the company has plans to expand use of the sites to more teams.

McGill also says that Macy's has successfully used a closed group on LinkedIn to help begin early training of new hires. When candidates are selected, they are invited to join the LinkedIn group, where they can get communication from the company. Their profiles are shared, and the company and the new hire become familiar with each other before the person sets foot in the door on the first day.

ASTD's *The Rise of Social Media* study also revealed that roughly 40 percent of workers find podcasts and wikis to be valuable. That study concluded that people, especially from younger generations, expect to use social media technologies far more often at work in the future. That factor, coupled with the fact that so few instructional design professionals say their organization uses these technologies in the learning function, indicates that designers will need to pay closer attention to how they will fit into their instructional systems.

SOCIAL MEDIA SOLUTIONS REQUIRE CERTAIN COMPETENCIES

Perhaps the lack of widespread adoption comes from an inherent difficulty in implementing social media solutions. The Study finds that many ISD professionals believe it

takes an array of competencies to successfully design and deliver social media-based learning. In fact, most of the competencies listed in the Study are seen as necessary to a high or very high extent to implement social media learning solutions by at least two-fifths of respondents.

Subject matter expertise was considered the most necessary, and the competency significantly correlates to both the MPI and ISDI. What does this mean in the social media world? After all, when properly implemented, social media tools allow subject matter experts to step forward to share their knowledge. What ISD practitioners may need to understand most is how to set up social media tools in such a way that SMEs can and will help others in need of their expertise. This not only requires expertise in specific tools, but also in the most effective ways to encourage and facilitate interactions.

Other highly necessary competencies needed to deliver social media include information technology, project management, and instructional design. For ISD experts, the question is the degree to which they can purchase or otherwise gain access to free social media resources that can be integrated into their instructional programs. For example, retail giant Macy's (see sidebar) uses a closed group on the social network site LinkedIn to help begin early training of new hires. Using such existing networks may reduce the need for information technology competencies among ISD practitioners that wish to use social media solutions.

Beyond the list of competencies noted in Figure 6, Study respondents were asked to list "other competencies you believe are necessary to install, implement, or disseminate social media learning solutions." Below are some of the competencies referenced multiple times:

- awareness of and familiarity with social media technologies
- access to social media applications across the firewall
- audience awareness
- communication skills
- ability to market the concept
- willingness to take the risk and just do it.

There is much concern surrounding social media technologies and the loss of control they represent. Concerns about security and message control are valid. However, in an interview conducted with Michael Frank, dean of the Graduate School of Management & Technology at the University of Maryland, he stated, “The other side of it is that with hundreds of millions of hits per day on these social websites, to ignore them is to do so to the detriment of the future potential of any company. Yes, it’s safer to ignore them for now and say ‘we’re doing fine at the moment,’ but you don’t want to be playing catch-up four years from now with companies that have taken the risks now and learned how to manage it and are going to reap the benefits.”

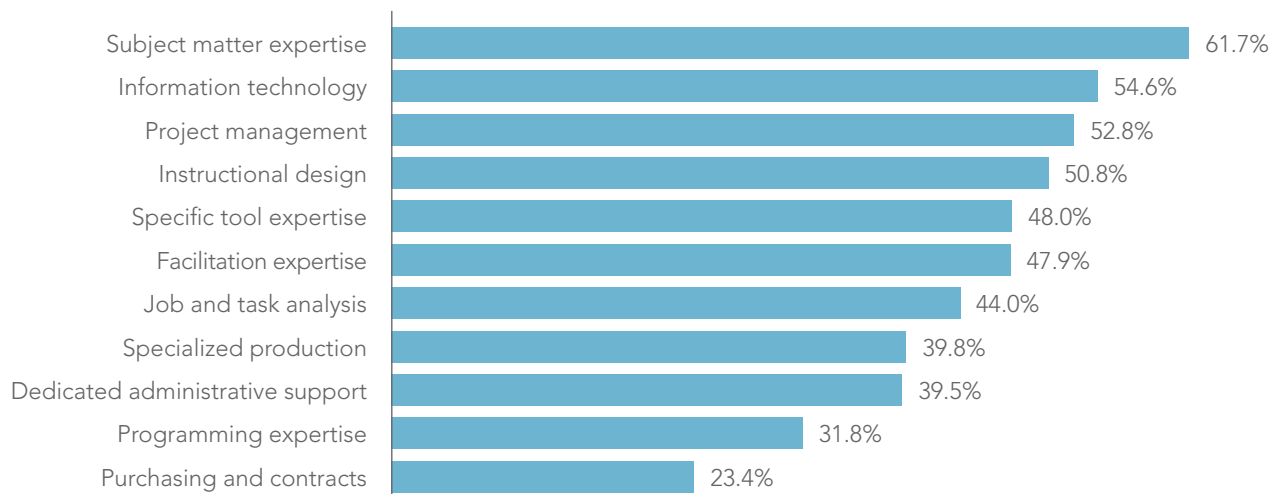
FOCUS ON SOCIAL MEDIA SOLUTIONS

Based on the survey findings and interviews conducted during the course of this research, five practices stand out as especially useful for implementing social media solutions:

- 1| **Consider using a pilot program to launch a social media learning initiative in order to build up competencies and expertise.**
- 2| **Market social media approaches to senior leaders.** Use the questions and reservations that management presents to frame the initiative. Do not develop a project and just hope leadership buys in.
- 3| **Create a team to examine the competencies needed to succeed in the area of social media.** Once the competencies are established, create a program for developing them internally or acquiring them from outside.
- 4| **Investigate existing social media tools and determine which can be most easily leveraged for the purpose of instructional design.**
- 5| **Begin strategizing on how to best leverage mobile learning in the near future.** Cell phones and other mobile devices are a natural platform for future learning.

FIGURE 6 | A WIDE ARRAY OF COMPETENCIES ARE NEEDED TO IMPLEMENT SOCIAL MEDIA SOLUTIONS

To what extent are the following competencies needed to implement social media learning solutions?
(Percent of respondents answering high or very high extent)



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In determining ISD success, the study finds that the following factors play a significant role: the lack of internal ISD knowledge; the effect of cultural, gender, and generational differences; perceptions of ISD; and the short supply of resources and support.

THE LACK OF INTERNAL ISD KNOWLEDGE

A recurring theme throughout the Study is that many firms do not possess the internal talent, knowledge, and technology to execute effective ISD. Yet, when asked whether they often look *outside* of their organization for help with instructional design, more than 90 percent of respondents either agree or strongly agree. Conversely, only about one-quarter agree to the same degree that they look for help *within* their own organization.

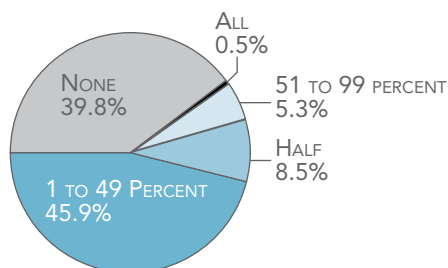
This result aligns with the number-one barrier to ISD effectiveness: the lack of internal staff with the necessary skills and competencies to meet the needs of the learning initiative. Despite this frank acknowledgement of their organizations' limitations in the area of ISD, more than 85 percent of respondents say their organization outsources less than half of its ISD, and 46 percent of those companies do not outsource ISD at all, as shown in Figure 7. One survey respondent recommends, "Know when to outsource—if you don't have internal expertise, go outside the organization and find experts."

A recurring theme throughout the Study is that many firms do not possess the internal talent, knowledge, and technology to execute effective ISD.

This lack of internal capabilities may cause more than just concern over how to meet the organization's learning needs. The Study finds that needing to look outside the organization for knowledge has a significant negative correlation with instructional design effectiveness.

Therefore, ISD practitioners can benefit from developing stronger expertise and networks inside their organizations when this is feasible. Creating communities of practice, social networks, and knowledge management systems within their companies could pay solid dividends. Of course, if there is a paucity of ISD staff and expertise within an organization, these efforts become more difficult. In that case, developing more trainers with ISD skills and documenting the specific skills and locations of subject matter experts may become the priority.

FIGURE 7 | MOST INSTRUCTIONAL DESIGN TAKES PLACE IN-HOUSE
How much of your organization's ISD is outsourced?



THE EFFECT OF CULTURAL, GENDER, AND GENERATIONAL DIFFERENCES

As shown in Figure 8, the Study finds that more than 60 percent of ISD professionals say generational differences among *learners* play a significant role in how they approach instructional design. However, only 47 percent believe that those same differences among *designers* play a significant role. Interestingly, the more strongly the respondents agree with the statement about designers, the lower their score in terms of ISD effectiveness. It may be that generational diversity among ISD practitioners provides a wider range of skills, especially in the areas of social media.

Although a majority of Study participants say that generational differences among learners play a significant role in their approach to ISD, the approximately two-fifths that do not agree with that statement may want to revisit the idea. If ISD professionals do not take the age of the learning audience into consideration, they may be designing ineffective programs. One respondent comments, “Generational differences that have placed different meaning for different terms will kill you if you don’t come to a common understanding of those terms before you begin your design.”

Cultural differences among learners do not appear to be as great a concern for a majority of ISD professionals,

with 48 percent agreeing that this was the case. However, as seen later in this report, one of the top five future ISD trends will be an increase in focus on developing global content. To do this well, cultural differences among learners will need to be considered. Therefore, we expect such differences to play a larger role in ISD in coming years. At least one Study participant agrees, saying, “Cultural differences play a large role in what is considered as acceptable training methods.”

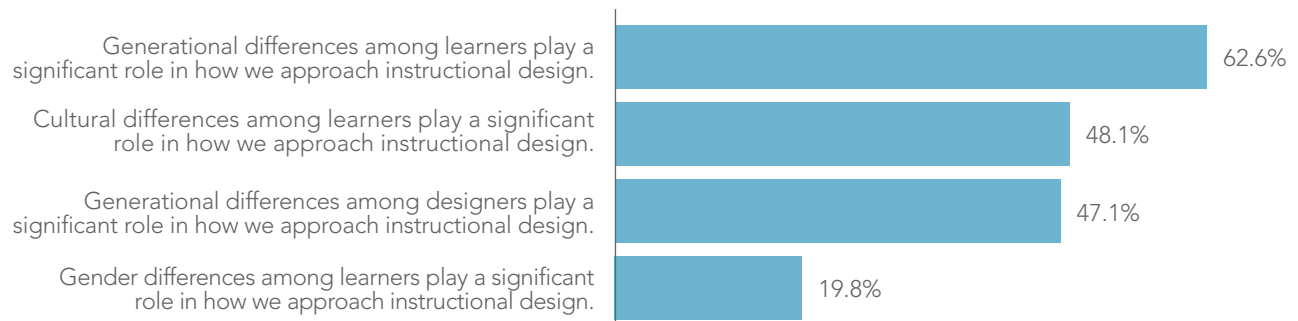
Meanwhile, gender differences among learners are clearly not a major concern among ISD experts, as only 20 percent agree that such differences play a significant role in how they approach instructional design.

PERCEPTIONS OF ISD

The vast majority of Study participants believe they are doing critical work, as shown in Figure 9. In fact, 94 percent agree with the statement, “I believe what I do is very important to the organization,” and more than half of those agree strongly. However, fewer agree that management believes the same thing, with only 81 percent agreeing with the statement, “My management believes what I do is very important to the organization.” Some ISD practitioners may need to establish better communications to demonstrate their value to management.

FIGURE 8 | GENERATIONAL AND CULTURAL DIFFERENCES PLAY A ROLE IN ISD

To what degree do you agree with the following statements about instructional design?
(Percent of respondents answering agree or strongly agree)



In organizations where management does, in fact, view the ISD expert's work as important, ISD initiatives are considerably more effective. That is, there is a very strong correlation between the ISDI score and management's perceived belief in ISD importance.

Although 85 percent of ISD practitioners say they are confident that their skills will remain in demand in the organization, at least some of those ISD professionals who believe what they do is important to the organization also sense that this will not remain true indefinitely.

THE SHORT SUPPLY OF RESOURCES AND SUPPORT

This Study explores the factors that influence ISD practices from multiple angles. In one instance, respondents were asked about cases in which they have discontinued the use of certain learning tools and approaches, as seen in Figure 10. The Study finds that the number-one reason was simply a lack of use. Once learners no longer respond to any given approach, it is time to put it away and move on. Such abandoned approaches have much to teach ISD experts about what does and does not work in the area of instructional design.

The second most widely cited factor is budget constraints. As with any initiative within an organization, success or

failure is usually determined by the level of support and the amount of resources allocated to the project. ISD is no different. Additionally, it turns out that organizations that have discontinued any initiative due to budgetary concerns are far more likely to have less effective ISD programs, as seen by a very significant negative correlation with the ISDI.

The Study also asked about the barriers to the success of ISD initiatives and found that the biggest obstacle to overcome is a lack of internal staff who are able to meet the needs of the ISD initiatives. Nearly 47 percent of respondents say this is a barrier to ISD effectiveness to a high or very high degree, and this barrier is the most negatively correlated with the ISDI. It is clear from these responses that many ISD practitioners perceive they just do not have enough staff to produce the quality or number of initiatives they would like.

Second on the list is "lack of proper funding for the right tool." This is, no doubt, tied to the "budgetary constraints" problem referenced before. Third on the list is the inability to get a "seat at the table." This speaks to organizational clout as much as anything else. Some ISD practitioners clearly think they do not have as much say in organizational learning as they would like and that they could be more successful if others listened to them more.

FIGURE 9 | INSTRUCTIONAL DESIGN PROFESSIONALS SEE THEIR SKILLS AS CRITICAL TO THE ORGANIZATION

To what degree do you agree with the following statements about instructional design?

| RESPONSES | PERCENT WHO AGREE OR STRONGLY AGREE | CORRELATION WITH MPI | CORRELATION WITH ISDI |
|---|-------------------------------------|----------------------|-----------------------|
| I believe what I do is very important to the organization. | 93.9% | | .18** |
| I am confident that my skills will remain in demand in my organization. | 85.1% | .13** | .26** |
| I am confident that my skills will be in demand should I leave my organization. | 83.8% | .11** | .21** |
| My management believes what I do is very important to the organization. | 80.7% | .12** | .33** |

** Correlations are significant at $p < .01$ (two-tailed).

Note: Only statistically significant correlations are presented in the table.

Then there is the related topic of metrics. As discussed previously in the report, ISD professionals find the measurement of business results to be an important ISD tool; however, that measurement may be easier said than done. One-third of respondents say the inability to measure the effectiveness of ISD is a barrier to a high or very high extent. This lack of measurement may also lead to other critical barriers, such as the inability to convince the organization to adopt new design approaches and the inability to get upper management to understand ISD and its importance.

Keeping up with emerging technologies is also seen as a barrier to effective ISD. It can be difficult for companies to stay abreast of today’s fast-evolving technologies, yet as those technologies change and as the workforce becomes more global, it requires the development of more online learning. This introduces the difficulty of developing content specific to different geographic locations. ISD professionals need a more global view of design if online learning is to be able to accommodate multi-national, multi-lingual, and international collaborations (Bartley & Golek, 2004).

The survey asked about a variety of other challenges as well, as seen in Figure 11. Further analysis revealed that all 11 of the possible responses to the question about ISD barriers are significantly *negatively* correlated with ISD success. To gain a better idea about which are the best

predictors, we performed a regression analysis that identified the following five challenges as the most potentially harmful to companies’ ISD initiatives:

- 1| lack of internal staff that have the competencies and skills required to meet the needs of the learning initiative
- 2| inability to get a “seat at the table”
- 3| inability to convince the organization to adopt new approaches to course and content design
- 4| too much maintenance required of the learning initiative once it is completed
- 5| difficulty developing localized content.

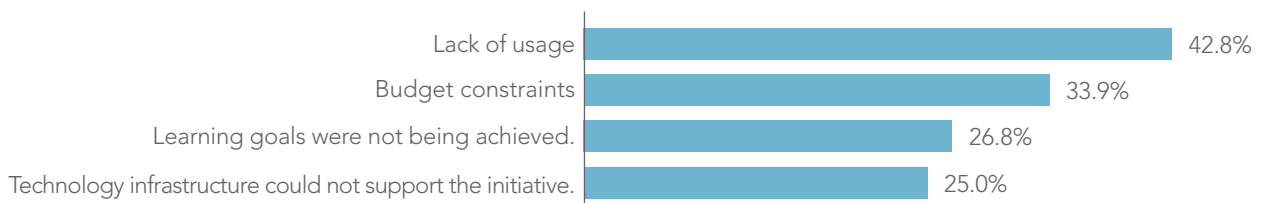
FOCUS ON FIVE KEY PRACTICES

To cope with the five most-cited barriers to success, as well as others noted in this report section, the research team developed the following five key practices:

- 1| **Cope with a lack of internal staff that have the competencies and skills required to meet the needs of a learning initiative.** Look to outsourcing, if necessary. Find the core competencies of the group and focus on those. Then, further develop the skills of existing staff members, sharing knowledge and expertise to avoid bottlenecks in specific areas of design and implementation.
- 2| **Communicate upward through the organization as soon as possible about new initiatives.** Use the questions and concerns of stakeholders to frame

FIGURE 10 | LACK OF USE AND BUDGET CONSTRAINTS CAN OFTEN END THE USE OF CERTAIN ISD TOOLS

For any of the tools/approaches your organization used at one time, but no longer uses, to what extent did the following factors play a role in the decision to discontinue their use?
(Percent of respondents answering high or very high extent)



the initiative. Consider how ISD can become more strategic, helping the learning function and the larger organization achieve important business goals. This should help convince senior managers to adopt new approaches to course and content design, especially if these new approaches help them achieve business goals.

3| Keep it simple when possible. This will make any maintenance of existing learning initiatives easier to accomplish. Also, try to make programs easily customizable. The idea is to have users and trainers maintain such programs themselves.

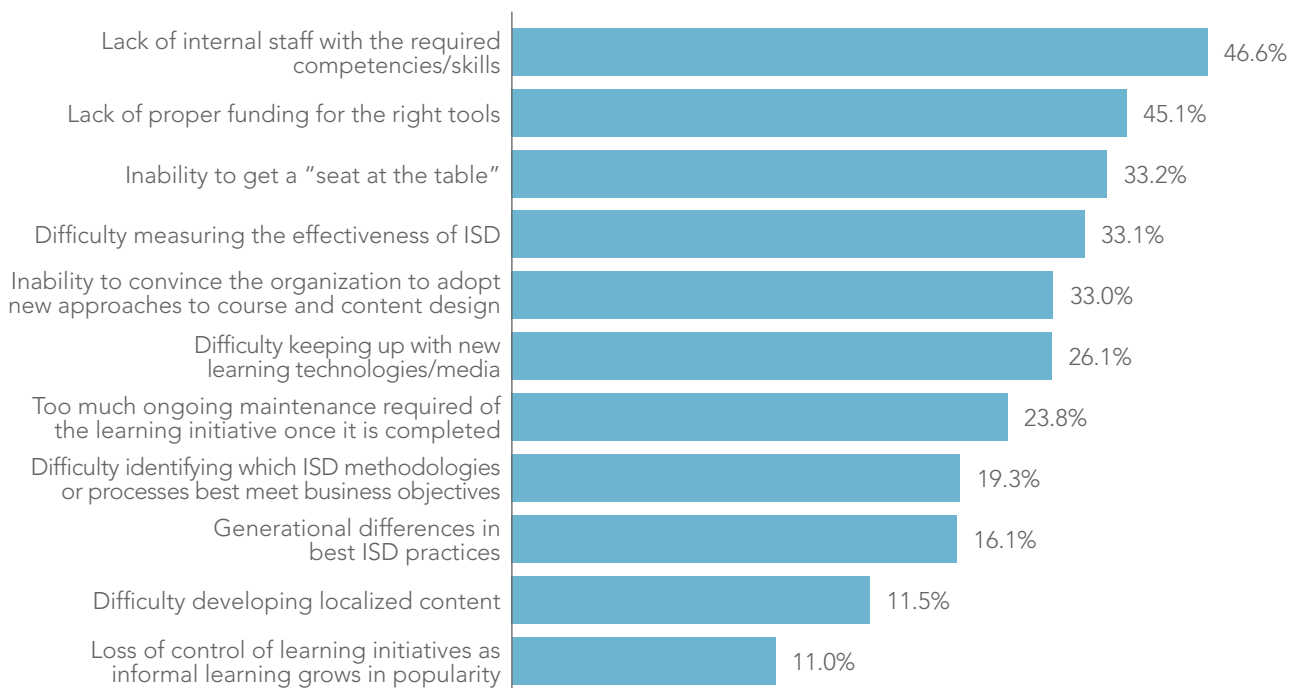
4| Make sure your organization has skilled people at the local levels, and create tools that allow them to develop their own content when it needs to be localized. Finding the right balance is especially important in global organizations.

5| Accumulate research and metrics, both internally and externally, to help convince others in your organization of the benefits and impact of ISD approaches. Especially where investments are required, managers will want evidence that there is or will be a return on that investment.

FIGURE 11 | A LACK OF RESOURCES IS THE BIGGEST OBSTACLE FACING ISD

Indicate the extent to which the following are barriers to the success of ISD initiatives within your organization.

(Percent of respondents answering high or very high extent)



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What does the future of instructional design hold? Consider these questions to help determine the answer.

IS ISD DEAD OR, AT LEAST, IN TROUBLE?

The question “Is ISD dead?” has been asked in the past. There are those who argue that ISD assumes a whole system of design and that the system is too linear, too deliberate, and just too slow. As management writer Marc Rosenberg put it as far back as 2004, “Often, the preparation and subsequent management review of documents such as needs assessments, task analyses, design documents, etc., take more time and more energy than that devoted to the design of the actual learning product” (Rosenberg, 2004).

ISD skeptics argue that the conventional approaches to instructional design are sometimes hindering, or at least not suitable for, the creation of blended approaches to learning. By blended, we mean not only the blending of technologies and classroom techniques, but the process of weaving together instruction into larger talent and performance management systems. Some also argue that ISD professionals and the techniques they use are not suitable to a learning just-in-time era in which there are new tools that allow subject matter experts to create their own instructional programs as needed.

The Study sheds some light on these arguments. To the question, “Is ISD dead or dying?” participants respond with a resounding, “No.” More than three-quarters (78 percent) say it is likely, highly likely, or extremely likely that ISD will become *more* important over the next five years, while just 15 percent say it is as likely that ISD will be *less* important over the next five years.

Meanwhile, 78 percent agree or strongly agree with the statement, “My organization will continue to rely on instructional designers and other experts to develop learning systems.” Only 8 percent strongly disagree or disagree.

WHAT WILL ISD LOOK LIKE IN THE FUTURE?

Assuming ISD is alive, well, and highly adaptable, what will it look like in the future? For one thing, it will have to become capable of delivering just-in-time learning, according to respondents. In fact, the single most likely occurrence out of the list of possibilities listed in the Study is that there will be greater emphasis to support “learning at the moment of need using expert systems, electronic performance support systems (EPSS), etc.” Eighty-nine percent of respondents said that this was likely, highly likely, or extremely likely. “ISD may not be dead for true instructional solutions, but as new, non-instructional interventions become more important, new, more expansive approaches seem needed,” noted Rosenberg (2004).

Clearly, ISD practitioners are placing some heavy bets on the virtues of technology. Three-quarters say it is likely, highly likely, or extremely likely that technology will improve the productivity of ISD practitioners over the next five years, and 58 percent say that technology will reduce ISD costs in that same time, as seen in Figure 12.

This is not to say, however, that technology will completely take over and make corporate learning an exclusively virtual experience designed using sophisticated software programs. As seen earlier in the Study, classroom learning has not gone away. As for the future, 49 percent of respondents say that it is not at all likely that the traditional course will no longer exist, and one-third says the same about traditional ISD practices. Neither of these possibilities is seen as highly or extremely likely by more than 10 percent of respondents.

WHAT ROLE WILL SOCIAL MEDIA PLAY?

As part of technology growth in the field, many ISD practitioners believe that social media will become increasingly essential to instructional design. Seventy-eight percent of respondents say that this is at least likely to occur over the next five years, with 47 percent saying it is either highly or extremely likely. This is in line with the findings of the *Rise of Social Media* study,

which found that 83 percent of workers believe social media use for learning will increase at their organizations by 2012. It also matches other findings from this Study regarding the stage of development for certain ISD tools and approaches. Mobile learning, social networks, podcasts, and wikis were the top four tools under consideration, as seen in Figure 13.

While they may not yet be widespread in the workplace and concerns over security and legitimacy linger, social media technologies are clearly destined for a larger role

in the learning function. There is little doubt that these technologies already influence how people learn on the job, and 48 percent of Study participants agree that social networking and informal learning are rapidly changing their approach to ISD. According to i4cp CEO Kevin Oakes, “Instructional design practitioners must immerse themselves in the social media space and not only get familiar with current and emerging technologies, but utilize them consistently. That’s a key ingredient to designing learning programs that will be effective with new generations of learners.”

FIGURE 12 | IN THE NEXT FIVE YEARS, GREATER EMPHASIS TO SUPPORT INSTANTANEOUS LEARNING IS EXPECTED FOR ISD

How likely are the following to occur for the future of ISD over the next five years?
(Percent of respondents answering likely, highly likely, or extremely likely)

| RESPONSES | PERCENT |
|--|---------|
| There will be a greater emphasis to support “learning at the moment of need” using expert systems, electronic performance support systems (EPSS), etc. | 88.7% |
| Trainers will have more involvement in ISD design and development. | 81.1% |
| ISD will become more important. | 78.2% |
| Social media will increasingly become an essential ISD tool. | 77.9% |
| There will be an increased focus on developing content for delivery to a global audience. | 77.7% |
| Technology will improve the productivity of ISD practitioners. | 74.8% |
| The quality of ISD practitioners will rise. | 69.8% |
| ISD practitioners will become more strategic and less tactical. | 68.4% |
| Technology will reduce the costs associated with ISD. | 58.2% |
| There will be more outsourcing of ISD. | 56.0% |
| There will be less outsourcing of ISD. | 31.3% |
| Traditional ISD practices will be less relevant in the future. | 27.3% |
| The traditional course will no longer exist. | 24.6% |
| ISD will become less important. | 14.5% |

WHERE DO TRAINERS FIT IN?

The lines between ISD practitioner and trainer have begun to blur with the advent of rapid development tools and other technological advances. Trainers and others in the field of talent management will have more involvement in ISD design and development as they collaborate to build and maintain systems that encompass performance issues and not just learning issues. One ISD professional in the Study notes that, “Having trainers involved in feedback beginning at the storyboarding phase increases the likelihood the content will be trained as designed.”

Many ISD practitioners understand these trends, which is why four out of five say “trainers will have more involvement in ISD design and development” over the next five years. Additionally, 58 percent agree or strongly agree with the statement that, over the next five years, “my organization will rely more on subject matter experts using rapid development tools to develop learning assets” (see Figure 14).

HOW DOES THE FUTURE OF ISD AFFECT THE GLOBAL AUDIENCE?

One of the top five predictive trends in ISD is an increased focus on developing content for a global audience. Seventy-eight percent of respondents agree that this increased focus is at least likely, and it received the second-highest responses of extremely likely. Correlation with the MPI shows that the more likely a respondent sees this trend to be, the higher their company’s market performance is. As earlier findings in this Study show, even though difficulty developing localized content is not seen as one of the biggest barriers to effective ISD, analysis shows that this difficulty is potentially one of the most harmful to ISD success. Therefore, the indication that ISD practitioners expect to focus more closely on global content is a good sign.

ARE ISD PROFESSIONALS PREPARED?

ISD practitioners believe that there will be more outsourcing of ISD in coming years rather than less. They also say it is relatively likely that the quality of ISD

FIGURE 13 | SOCIAL MEDIA TECHNOLOGIES ARE THE TOOLS MOST UNDER CONSIDERATION BY ORGANIZATIONS

In terms of supporting the learning function, at what stage of development are the following tools/approaches within your organization?
(Top five tools/approaches being considered)



practitioners will rise. Both of these findings may feed into the prediction that ISD practitioners will become more strategic and less tactical. As the quality of ISD practitioners increases, they will be able to take on more strategic roles, which will in turn lead to the outsourcing of the more transactional, tactical aspects of ISD.

But are they really prepared to take on these challenges? A large portion of Study participants (41 percent) agree that traditional ISD does *not* prepare designers for today’s learning environments. If this is true, then ISD will need to design its own instructional systems in radically different ways to fully prepare itself for the learning environments of the future.

FOCUS ON SIX KEY STRATEGIES

There are many challenges ahead for ISD professionals, but there are opportunities as well. To survive and thrive in the future, we recommend the following six strategies:

- 1| **Re-examine conventional ISD assumptions.** Do traditional models and work practices prepare ISD practitioners for the future that they themselves see coming? Do they have the skills and organizational credibility they will need to succeed? Are universities teaching the right skill sets to today’s ISD student?
- 2| **Communicate and collaborate with others**—including learning professionals, performance experts, SMEs, and senior managers—to get their viewpoints about how ISD can best contribute to organizational priorities and strategies in coming years.

FIGURE 14 | WHILE SOME ASPECTS OF TRADITIONAL ISD WILL REMAIN, NEW TOOLS AND TECHNOLOGIES ARE ON THE HORIZON



- 3| **Develop skills in developing just-in-time, technology-facilitated learning.** They must not only gain and maintain a solid understanding of synchronous and asynchronous online learning, but also of electronic performance support systems and social media solutions.
- 4| **Teach SMEs how to use tools and design concepts to the maximum effect, keeping in mind that SMEs often need to accomplish their tasks quickly.**
- 5| **Learn to create workable processes for delivering effective learning in a multicultural, global environment.** This is both a tactical challenge and strategic challenge, as companies decide how best to forge and maintain global cultures.
- 6| **Work with universities and other centers of training to ensure that ISD education is evolving in appropriate directions and that newly minted graduates have the skills they need to excel in the 21st century.**

THE BENEFIT OF AN ISD MINDSET

Many companies have difficulty with new tools and technologies if they are not properly implemented. According to Sona Haratunian, manager of learning design and publishing services for UBS Business University (the learning division of global financial firm UBS), companies can have trouble “delivering sophisticated e-learning solutions without first figuring out what behaviors the business wants to impact. Undergoing an upfront analysis and design effort are important to identify which new e-learning approaches can achieve the desired outcomes most successfully and which ones may not.”



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CONCLUSION AND POLICY RECOMMENDATIONS

As ISD struggles to maintain its identity in a rapidly evolving environment, ISD professionals may find themselves needing to add skills and competencies to their design foundations. Developing effective programs has always been a challenge, and technology, globalization, and shifting learner preferences are inevitably going to add to the ISD burden.

No two organizations are exactly the same, and neither are groups of learners. Effective ISD needs to be adaptable to changing requirements, yet inflexibility is one of the charges sometimes leveled at ISD by critics. Based on the results of this Study and interviews with ISD professionals, we offer the following concluding recommendations as ways to help improve the effectiveness of ISD initiatives:

- 1 **Be comfortable stepping outside of the formal structure when an initiative calls for it.** Designers should not be controlled by conventional, formal ISD processes.
- 2 **Take stock of the organization's internal capabilities.** Are there parts of the ISD process that could be outsourced to achieve better results or make internal staff more strategic? Identify resources that can provide the necessary knowledge.
- 3 **Take proper and meaningful measurements of learning programs.** Until the effectiveness and value of current programs is truly known, it is difficult to develop new programs.
- 4 **Learn how to market new learning initiatives.** Questions and reservations from leadership are not

necessarily barriers but rather can help shape the initiative. Early and continuous communication keeps stakeholders invested in the project.

- 5 **Be aware of emerging technologies.** There is no need to jump on every bandwagon, but not everything new is bad, either. Even if a brand name social media tool like Facebook or Twitter is taboo, the underlying concepts and technologies will have a huge impact on how people learn on the job.
- 6 **Be aware of the learning audience.** Learning programs that take advantage of the latest in graphics and interactivity may be compelling, but if the learners have neither the tools nor the skills to use it, it will not be effective.
- 7 **Multinational and global organizations should focus on localizing content when it is essential to good learning.** This goes beyond merely translating the content; it means finding the proper balance between standardization and designing courses that meet the specific needs of a local learning group.

ISD is far from dead, as some have suggested, but it does need to evolve to gain a vigorous new life. There are opportunities to meet challenges both old and new to make ISD a more strategic part of the learning function and, more important, of the organization as a whole.

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| ABOUT THE CONTRIBUTING ORGANIZATIONS |

The American Society for Training & Development

ASTD (the American Society for Training & Development) is the world's largest professional association dedicated to the training and development field. In more than 100 countries, ASTD's members work in organizations of all sizes, in the private and public sectors, as independent consultants, and as suppliers. Members connect locally in 133 U.S. chapters and with 30 international partners. ASTD started in 1943 and in recent years has widened the profession's focus to align learning and performance to organizational results, and is a sought-after voice on critical public policy issues. For more information, visit www.astd.org.

The Institute for Corporate Productivity

The Institute for Corporate Productivity (i4cp) improves corporate productivity through a combination of research, community, tools, and technology focused on the management of human capital. With more than 100 leading organizations as members, including many of the best known companies in the world, i4cp draws upon one of the industry's largest and most experienced research teams and executives-in-residence to produce more than 10,000 pages of rapid, reliable, and respected research annually, surrounding all facets of the management of people in organizations. Additionally, i4cp identifies and analyzes the upcoming major issues and future trends that are expected to influence workforce productivity and provides member clients with tools and technology to execute leading-edge strategies and "next practices" on these issues and trends. For more information, visit www.i4cp.com.

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SURVEY OVERVIEW

Target Survey Population

The target survey population of the ASTD/i4cp *Instructional Systems Design Survey* consisted of an email list of primarily high-level business, HR, and learning professional contacts from ASTD and i4cp. In total, 1,546 responses were collected from the survey. Respondents represented a variety of organizational sizes and industries.

Survey Instrument

Unless noted otherwise, questions in this survey used the well-accepted 1–5 Likert-type scale, with a 1-rating generally designated as “not at all” and a 5-rating as “a very high extent.” There were 26 questions in all.

Procedure

A link to an online survey was emailed to the target population during February 2010.

DEMOGRAPHIC/COMPANY PROFILE QUESTIONS AND RESULTS

Note: The following demographic questions were asked at the end of the survey.

Q1: Within which sector does your organization primarily work?

Respondents to the *Instructional Systems Design Survey* represent a wide variety of industries. The sectors with the greatest responses are healthcare (10 percent), government (10 percent), education (8 percent), and financial services (8 percent).

WITHIN WHICH SECTOR DOES YOUR ORGANIZATION PRIMARILY WORK?

| RESPONSES | PERCENT | RESPONSES | PERCENT |
|--------------------------------------|---------|--------------------------------|---------|
| Aerospace and Defense | 1.6% | Financial Services | 7.7% |
| Agriculture | 0.3% | Food | 2.0% |
| Automotive and Transport | 0.6% | Foundations | 0.1% |
| Banking | 4.3% | Government | 9.6% |
| Beverages | 0.4% | Healthcare | 10.0% |
| Business Services | 3.0% | Industrial Manufacturing | 3.6% |
| Charitable Organizations | 0.8% | Insurance | 7.1% |
| Chemicals | 0.8% | Leisure | 1.2% |
| Computer Hardware | 0.7% | Media | 0.5% |
| Computer Services | 0.8% | Membership Organizations | 1.0% |
| Computer Software | 3.0% | Metals and Mining | 0.6% |
| Construction | 1.1% | Pharmaceuticals | 3.8% |
| Consumer Products Manufacturers | 2.0% | Real Estate | 0.7% |
| Consumer Services | 0.6% | Retail | 2.0% |
| Cultural Institutions | 0.2% | Security Products and Services | 0.6% |
| Education | 8.0% | Telecommunications Equipment | 0.8% |
| Electronics | 0.7% | Telecommunications Services | 1.9% |
| Energy and Utilities | 5.5% | Transportation Services | 2.1% |
| Environmental Services and Equipment | 0.3% | Other | 10.0% |

Q2: What is the size of your organization’s workforce worldwide?

Seven percent of the respondent base is from organizations with fewer than 100 employees. Almost one-quarter of responses (24 percent) are from companies with workforces of 100 to 999 employees. Organizations with 1,000 to 50,000 employees represent just over half of the sample (56 percent), while companies with 50,000 or more employees comprise 13 percent.

WHAT IS THE SIZE OF YOUR ORGANIZATION’S WORKFORCE WORLDWIDE?

| RESPONSES | PERCENT |
|-----------------------------|---------|
| 1–24 employees | 3.4% |
| 25–49 employees | 1.3% |
| 50–99 employees | 2.3% |
| 100–249 employees | 5.6% |
| 250–499 employees | 8.4% |
| 500–999 employees | 9.8% |
| 1,000–4,999 employees | 22.4% |
| 5,000–9,999 employees | 12.5% |
| 10,000–19,999 employees | 9.2% |
| 20,000–49,999 employees | 11.5% |
| 50,000–99,999 employees | 5.8% |
| More than 100,000 employees | 7.6% |

Q3: Describe your organization’s type of operation.

Slightly fewer than half of the respondents (48 percent) describe their organization’s type of operation as national in scope (that is, having operations in one country only). Roughly one-third (32 percent) say they work for global organizations (that is, having a high level of global integration), while 21 percent work in multinational organizations (that is, having national and regional operations that act independently).

DESCRIBE YOUR ORGANIZATION’S TYPE OF OPERATION.

| RESPONSES | PERCENT |
|---------------|---------|
| Global | 31.6% |
| Multinational | 20.7% |
| National | 47.7% |

Q4: What is your current title?

Respondents represent a broad array of positions throughout their organizations. Slightly fewer than half of respondents (46 percent) are associated with training in some capacity (either as training managers or trainers), while 17 percent of the sample describe themselves as instructional designers.

WHAT IS YOUR CURRENT TITLE?

| RESPONSES | PERCENT |
|-------------------------------|---------|
| CEO/President/Chairman | 0.9% |
| Executive VP/Senior VP | 0.5% |
| Vice president | 2.3% |
| Director | 13.7% |
| Training manager | 31.2% |
| Manager (other than training) | 4.5% |
| Supervisor | 1.4% |
| Instructional designer | 17.0% |
| Trainer | 15.1% |
| Performance consultant | 1.4% |
| Learning consultant | 8.3% |
| Other | 3.6% |

Q5: What is your organization's total revenue worldwide?

Participants report a wide range of revenues for their organizations. Slightly more than one-quarter of respondents (28 percent) report revenue of up to \$50 million. A similar percentage of respondents say their organizations have an annual revenue of \$50 million to \$1 billion. Forty-four percent note revenues at \$1 billion or more.

WHAT IS YOUR ORGANIZATION'S TOTAL REVENUE WORLDWIDE (IN U.S. DOLLARS)?

| RESPONSES | PERCENT |
|-------------------------------|---------|
| Less than \$10 million | 16.2% |
| \$10 to \$24.9 million | 6.8% |
| \$25 to \$49.9 million | 5.0% |
| \$50 to \$99.9 million | 6.0% |
| \$100 to \$249 million | 7.5% |
| \$250 to \$499 million | 5.7% |
| \$500 to \$999 million | 9.0% |
| \$1 billion to \$2.99 billion | 14.0% |
| \$3 billion to \$9.99 billion | 16.6% |
| \$10 billion or more | 13.2% |

Q6: In what nation is your organization headquartered?

While a majority of respondents are from the United States (85 percent), the remaining 15 percent are from a wide range of countries around the world.

IN WHAT NATION IS YOUR ORGANIZATION HEADQUARTERED?

| RESPONSES | PERCENT |
|-----------------------------|---------|
| United States | 85.1% |
| Canada | 3.8% |
| Australia | 0.8% |
| Belgium | 0.1% |
| China, People's Republic of | 0.2% |
| Cyprus | 0.1% |
| Denmark | 0.3% |
| Finland | 0.3% |
| France | 1.5% |
| Germany | 1.4% |
| India | 0.1% |
| Ireland | 0.3% |
| Israel | 0.3% |
| Italy | 0.1% |
| Japan | 0.9% |
| Netherlands | 0.7% |
| New Zealand | 0.2% |
| Saudi Arabia | 0.3% |
| Singapore | 0.3% |
| South Africa | 0.2% |
| Spain | 0.1% |
| Sweden | 0.3% |
| Switzerland, Cantons of | 0.4% |
| Taiwan | 0.1% |
| Turkey | 0.1% |
| United Arab Emirates | 0.3% |
| United Kingdom | 1.9% |

PERFORMANCE QUESTIONS AND RESULTS

Note: For the majority of survey questions, a 1–5 Likert-type scale was used, with a 1-rating designated as “not at all” and a 5-rating designated as “a very high extent.” Unless otherwise noted, the average scores in each table reflect the average value on this 1–5 scale.

Correlation is abbreviated as “corr.” when used within the tables.

Q7: Compared with the past five years, how would you rate your company’s performance now?

Respondents primarily describe their market performance as holding steady, as shown by the higher response rate in the “about the same” category. However, despite recent economic difficulties, more respondents report that market performance indicators are “significantly better” than do those reporting their company’s performance as “significantly worse.” Of the four market performance indicators, customer satisfaction has the highest average score (3.47)—notably higher than revenue growth and profitability, both with an average score of 3.24.

COMPARED WITH THE PAST FIVE YEARS, HOW WOULD YOU RATE YOUR COMPANY’S PERFORMANCE NOW?

| RESPONSES | AT AN ALL-TIME LOW (1) | SIGNIFICANTLY WORSE (2) | ABOUT THE SAME (3) | SIGNIFICANTLY BETTER (4) | AT AN ALL-TIME HIGH (5) | AVERAGE |
|-----------------------|------------------------|-------------------------|--------------------|--------------------------|-------------------------|---------|
| Revenue growth | 2.3% | 17.1% | 40.3% | 34.2% | 6.0% | 3.24 |
| Market share | 0.5% | 5.3% | 51.3% | 38.6% | 4.4% | 3.41 |
| Profitability | 2.0% | 14.1% | 46.4% | 33.0% | 4.6% | 3.24 |
| Customer satisfaction | 0.3% | 3.2% | 51.8% | 38.9% | 5.8% | 3.47 |

Note: These four factors comprise the Market Performance Index (MPI), which is the basis for assigning a company a score based on market performance.

This question also gave respondents the option of “not applicable.” This table provides the percentages after the “not applicable” selections were removed.

Q8: Generally speaking, how would you gauge your organization’s performance?

Most respondents report better performance than their industry’s average (49 percent) or report their performance as about average for their industry (29 percent). Only 15 percent report being in great shape.

GENERALLY SPEAKING, HOW WOULD YOU GAUGE YOUR ORGANIZATION’S PERFORMANCE?

| WE ARE IN BAD SHAPE. (1) | WE PERFORM AT BELOW-AVERAGE LEVELS. (2) | WE ARE ABOUT AVERAGE FOR OUR INDUSTRY. (3) | WE ARE BETTER THAN AVERAGE.(4) | WE ARE IN GREAT SHAPE. (5) |
|--------------------------|---|--|--------------------------------|----------------------------|
| 1.5% | 5.3% | 28.9% | 49.4% | 14.8% |
| Average: 3.71 | | | | |

Note: This question was only shown to respondents who chose “not applicable” at least twice in the previous question.

Q9: To what extent do you agree with the following statements?

The following set of questions addresses the overall effectiveness of respondents’ instructional design efforts, and these questions form the basis of the Instructional Systems Design Index (ISDI). Overall, respondents agree that their instructional design products are developed in a cost-conscious manner, as evidenced by the higher average score this item received (3.53). However, the ability to control the budget seems to be offset somewhat by the extra time it takes to deploy instructional design processes and products (3.14).

TO WHAT EXTENT DO YOU AGREE WITH THE FOLLOWING STATEMENTS?

| RESPONSES | NOT AT ALL | SMALL EXTENT | MODERATE EXTENT | HIGH EXTENT | VERY HIGH EXTENT | AVERAGE |
|---|------------|--------------|-----------------|-------------|------------------|---------|
| Overall, my organization’s instructional design efforts are effective in achieving organizational learning goals. | 2.9% | 15.1% | 48.1% | 28.9% | 5.0% | 3.18 |
| Our instructional design processes and products are developed and deployed in a timely manner. | 5.7% | 17.5% | 40.5% | 29.5% | 6.8% | 3.14 |
| Our instructional design processes and products are developed and deployed at or below budget. | 2.8% | 10.6% | 31.1% | 42.2% | 13.3% | 3.53 |
| The learning environments created by our ISD processes help us meet our business goals. | 2.1% | 14.5% | 43.0% | 32.8% | 7.5% | 3.29 |

Note: This question was only shown to respondents who indicated being an employee with ISD responsibilities internal to their organization (non-contractor). This question also gave respondents the option of “don’t know.” This table provides the percentages after the “don’t know” selections were removed.

INSTRUCTIONAL SYSTEMS DESIGN QUESTIONS AND RESULTS

Q10: Do you perform ISD in your current job?

Three-quarters of respondents (76 percent) indicate that they perform instructional systems design in their current job. Only this portion of the sample is included in the ISD-related questions that follow.

DO YOU PERFORM ISD IN YOUR CURRENT JOB?

| RESPONSES | PERCENT |
|-----------|---------|
| Yes | 76.3% |
| No | 23.7% |

Note: At this point of the survey, if the respondents indicated they do not perform ISD in their current job, they were directed to the end of the survey.

Q11: Which of the following best describes your current status?

A majority of the sample (93 percent) have ISD responsibilities within their organizations. Only 7 percent of respondents identify themselves as contractors providing ISD expertise to other organizations. Several of the questions that follow were directed only to respondents who are employees with ISD responsibilities in a single organization. These tables will have notations indicating respondent status.

WHICH OF THE FOLLOWING BEST DESCRIBES YOUR CURRENT STATUS?

| RESPONSES | PERCENT |
|--|---------|
| Employee with ISD responsibilities internal to my organization | 92.7% |
| Contractor who provides ISD expertise to other organizations | 7.3% |

Q12: Do you have a degree in instructional design or a related field?

Slightly more respondents (56 percent) report that they do *not* have a degree in instructional design or a related field as compared to those who report having a degree (44 percent).

DO YOU HAVE A DEGREE IN INSTRUCTIONAL DESIGN OR A RELATED FIELD?

| RESPONSES | PERCENT |
|-----------|---------|
| Yes | 44.4% |
| No | 55.6% |

Q13: What is your highest degree?

The majority of those with a degree in instructional design or a related field report holding a Master of Arts or Master of Science (68 percent) degree as their highest degree. Nineteen percent hold a Bachelor of Arts or Bachelor of Science degree as their highest degree, while 12 percent hold a doctorate.

WHAT IS YOUR HIGHEST DEGREE?

| RESPONSES | PERCENT |
|--------------|---------|
| B.A. or B.S. | 19.2% |
| M.A. or M.S. | 68.1% |
| Ed.D or Ph.D | 11.5% |
| Other | 1.2% |

Note: This question was only shown to respondents who indicated having a degree in instructional design or a related field.

Q14: How important is your formal degree to your career opportunities?

Overall, respondents view their formal degree as a significant predictor of progress in their careers. Just under one-half of respondents (48 percent) say that having a formal degree in ISD is “very important” to their career opportunities. Another 43 percent report that their formal training is “somewhat important” to their career opportunities.

HOW IMPORTANT IS YOUR FORMAL DEGREE TO YOUR CAREER OPPORTUNITIES?

| NOT IMPORTANT (1) | SOMEWHAT UNIMPORTANT (2) | NEUTRAL (3) | SOMEWHAT IMPORTANT (4) | VERY IMPORTANT (5) |
|-----------------------------|--------------------------|-------------|------------------------|--------------------|
| 0.8% | 1.5% | 6.0% | 43.4% | 48.4% |
| Average: 4.37 | | | | |
| Correlation with ISDI: .10* | | | | |

*Correlations are significant at $p < .05$ (two-tailed).

Note: This question was only shown to respondents who indicated having a degree in instructional design or a related field. Only statistically significant correlations are presented in the table. No significant correlation was found with the MPI.

Q15: Do you have an instructional design certification (e.g., CPLP)?

A majority of respondents (86 percent) report that they do *not* have an instructional design certification.

DO YOU HAVE AN INSTRUCTIONAL DESIGN CERTIFICATION (E.G., CPLP)?

| RESPONSES | PERCENT |
|-----------|---------|
| Yes | 13.7% |
| No | 86.3% |

Q16: Please specify the name of your certification(s).

This question asked respondents to write-in the name of their certification. The five most common responses, which total roughly two-thirds of all responses, are listed below. For those holding a certification in instructional design, the Certified Professional in Learning and Performance (CPLP) was the most popular, with 42 percent report holding this certification.

PLEASE SPECIFY THE NAME OF YOUR CERTIFICATION(S).

| RESPONSES | PERCENT |
|---|---------|
| Advanced Certificate in Training and Assessment (ACTA) | 1.5% |
| Certified Professional in Learning and Performance (CPLP) | 42.0% |
| Certified Performance Technologist (CPT) | 6.1% |
| Langevin | 7.6% |
| University/college certification | 9.9% |
| Other | 32.8% |

Note: This question was not required and was only shown to respondents who indicated having an instructional design certification.

Q17: In terms of supporting the learning function, at what stage of development are the following tools/ approaches within your organization?

The average scores column indicates that classroom instruction, assessments, in-person coaching, and blended learning are the most likely tools to be in later stages of development (that is, in development or currently being used) in responding organizations. The correlations suggest that several tools have a significant relationship with the ISDI and the MPI. For the MPI, courseware authoring tools, online simulations, and mobile learning have the strongest correlations ($r = .11, .12,$ and $.11,$ respectively). Measurement of business impact, in-person coaching, and assessments were the tools most likely to be associated with higher scores on the ISDI ($r = .23, .21,$ and $.19,$ respectively).

IN TERMS OF SUPPORTING THE LEARNING FUNCTION, AT WHAT STAGE OF DEVELOPMENT ARE THE FOLLOWING TOOLS/APPROACHES WITHIN YOUR ORGANIZATION?

| RESPONSES | NO PLANS TO USE (1) | CONSIDERING (2) | IN DEVELOPMENT (3) | CURRENTLY USING (4) | NO LONGER USED (5) | AVERAGE (1-4) | CORR. WITH MPI | CORR. WITH ISDI |
|---|---------------------|-----------------|--------------------|---------------------|--------------------|---------------|----------------|-----------------|
| Rapid development tools (e.g., Articulate Presenter, Toolbook Assistant, PowerPoint conversion tools) | 18.3% | 17.8% | 9.3% | 53.9% | 0.7% | 3.00 | | .11** |
| Courseware authoring tools (e.g., Toolbook Instructor, Adobe Captivate, Trivantis Lectora) | 16.8% | 16.8% | 9.1% | 56.5% | 0.8% | 3.06 | .11** | .10** |
| Learning content management systems | 30.9% | 29.4% | 12.1% | 26.4% | 1.2% | 2.34 | .07* | .08* |
| Learning management systems | 6.8% | 17.8% | 11.2% | 63.5% | 0.7% | 3.32 | .07* | .09** |
| Synchronous learning systems (e.g., WebEx, Centra, Adobe Acrobat Connect) | 11.4% | 15.8% | 9.3% | 63.0% | 0.5% | 3.25 | .08* | |
| Asynchronous learning systems (i.e., on-demand modules) | 8.6% | 17.2% | 10.9% | 63.0% | 0.2% | 3.29 | .10** | .16** |
| Classroom instruction | 0.4% | 1.0% | 1.0% | 97.1% | 0.6% | 3.96 | .08* | .11** |
| Blended learning (combinations of synchronous and asynchronous, classroom, and e-learning) | 2.2% | 14.5% | 14.6% | 68.5% | 0.2% | 3.50 | .08* | .15** |
| Offline simulations (simulations in a "live" environment) | 20.4% | 23.8% | 8.5% | 46.9% | 0.4% | 2.82 | .07* | .17** |
| Online simulations (simulations in a "virtual" environment) | 19.3% | 31.7% | 12.0% | 36.5% | 0.5% | 2.66 | .12** | .13** |

Q17 (continued): In terms of supporting the learning function, at what stage of development are the following tools/approaches within your organization?

| RESPONSES | NO PLANS TO USE (1) | CONSIDERING (2) | IN DEVELOPMENT (3) | CURRENTLY USING (4) | NO LONGER USED (5) | AVERAGE (1-4) | CORR. WITH MPI | CORR. WITH ISDI |
|--|---------------------|-----------------|--------------------|---------------------|--------------------|---------------|----------------|-----------------|
| Serious games (non-entertainment games designed to further corporate training goals) | 35.4% | 32.1% | 8.7% | 23.0% | 0.9% | 2.19 | | .18** |
| Virtual worlds | 59.0% | 30.2% | 5.3% | 5.3% | 0.1% | 1.57 | | |
| Electronic performance support systems | 36.8% | 23.1% | 11.3% | 28.6% | 0.3% | 2.32 | | .13** |
| Expert systems | 56.0% | 24.9% | 6.9% | 11.9% | 0.3% | 1.75 | .09* | .15** |
| Mobile learning | 34.0% | 40.7% | 10.1% | 15.0% | 0.2% | 2.06 | .11** | .16** |
| Social networks | 26.8% | 37.1% | 15.6% | 20.2% | 0.2% | 2.29 | .07* | .13** |
| Podcasts | 29.6% | 35.7% | 11.6% | 22.6% | 0.4% | 2.27 | .08* | .15** |
| Wikis | 31.2% | 33.0% | 12.7% | 22.6% | 0.6% | 2.27 | .07* | |
| Localized content development tools or services (translating language and culture) | 51.2% | 17.7% | 8.1% | 22.7% | 0.2% | 2.02 | .09* | .09* |
| Assessments | 3.0% | 10.9% | 10.7% | 75.2% | 0.2% | 3.58 | | .19** |
| Measurement of business impact | 7.4% | 22.1% | 26.7% | 43.7% | 0.2% | 3.07 | .07* | .23** |
| In-person mentoring | 7.1% | 13.7% | 12.5% | 66.3% | 0.5% | 3.39 | .08* | .18** |
| In-person coaching | 5.6% | 11.3% | 10.8% | 71.9% | 0.5% | 3.50 | .08* | .21** |

*Correlations are significant at $p < .05$ (two-tailed).

**Correlations are significant at $p < .01$ (two-tailed).

Note: This question was only shown to respondents who indicated being an employee with ISD responsibilities internal to their organization (non-contractor). This question also gave respondents the option of “don’t know.” This table provides the percentages after the “don’t know” selections were removed. Only statistically significant correlations are presented in the table. Correlations include responses 1-4. “No longer used” and “don’t know” responses were excluded from correlational analyses.

Q18: For any of the tools/approaches your organization used at one time, but no longer uses, to what extent did the following factors play a role in the decision to discontinue their use?

Respondents who state that they no longer use at least one of the tools/approaches presented in the previous question were asked to identify the extent to which certain factors contributed to the decision to discontinue usage. “Budget constraints” and “lack of usage” had the highest average scores of the four responses. The greater the extent that “budget constraints” is cited as the reason for discontinuation, the less likely it is for respondents to report overall success with their instructional systems design initiatives (e.g., ISDI).

FOR ANY OF THE TOOLS/APPROACHES YOUR ORGANIZATION USED AT ONE TIME, BUT NO LONGER USES, TO WHAT EXTENT DID THE FOLLOWING FACTORS PLAY A ROLE IN THE DECISION TO DISCONTINUE THEIR USE?

| RESPONSES | NOT AT ALL | SMALL EXTENT | MODERATE EXTENT | HIGH EXTENT | VERY HIGH EXTENT | AVERAGE | CORR. WITH ISDI |
|---|------------|--------------|-----------------|-------------|------------------|---------|-----------------|
| Budget constraints | 28.6% | 17.9% | 19.6% | 14.3% | 19.6% | 2.79 | -.35** |
| Lack of usage | 37.5% | 7.1% | 12.5% | 32.1% | 10.7% | 2.71 | |
| Learning goals were not being achieved. | 53.6% | 7.1% | 12.5% | 21.4% | 5.4% | 2.18 | |
| Technology infrastructure could not support the initiative. | 51.8% | 7.1% | 16.1% | 16.1% | 8.9% | 2.23 | |

**Correlations are significant at $p < .01$ (two-tailed).

Note: This question was only shown to respondents who indicated their organization no longer uses at least one of the tools/approaches referenced in the previous question. Only statistically significant correlations are presented in the table. No significant correlations were found with the MPI.

Q19: To what extent are the following competencies needed to implement social media learning solutions?

In order to implement social media learning solutions, respondents identify “subject matter expertise” and “information technology” as the most critical competencies necessary to possess. Subject matter expertise also significantly correlated with the MPI ($r = .07$) and with the ISDI ($r = .08$). The ability to conduct job and task analyses as well as expertise in facilitation also correlates with both the MPI and the ISDI, suggesting that while these may not be considered the most important competencies, they do play an important role in overall success of instructional design initiatives and market performance.

TO WHAT EXTENT ARE THE FOLLOWING COMPETENCIES NEEDED TO IMPLEMENT SOCIAL MEDIA LEARNING SOLUTIONS?

| RESPONSES | NOT AT ALL | SMALL EXTENT | MODERATE EXTENT | HIGH EXTENT | VERY HIGH EXTENT | AVERAGE | CORR. WITH MPI | CORR. WITH ISDI |
|---|------------|--------------|-----------------|-------------|------------------|---------|----------------|-----------------|
| Instructional design | 5.3% | 11.5% | 32.4% | 40.0% | 10.8% | 3.39 | | .13** |
| Subject matter expertise | 4.7% | 6.2% | 27.3% | 46.6% | 15.1% | 3.61 | .07* | .08* |
| Specialized production (e.g., video, animation) | 7.7% | 16.5% | 35.9% | 32.0% | 7.8% | 3.16 | | |
| Programming expertise | 10.3% | 25.3% | 32.5% | 25.3% | 6.5% | 2.92 | | |
| Specific tool expertise | 5.2% | 14.6% | 32.3% | 38.5% | 9.5% | 3.32 | | |
| Dedicated administrative support | 6.9% | 19.4% | 34.2% | 29.4% | 10.1% | 3.16 | | |
| Job and task analysis | 6.5% | 15.8% | 33.7% | 34.5% | 9.5% | 3.25 | .10** | .09** |
| Information technology | 4.6% | 9.7% | 31.0% | 40.5% | 14.1% | 3.50 | | |
| Project management | 5.9% | 12.8% | 28.5% | 40.5% | 12.3% | 3.41 | | .09** |
| Purchasing and contracts | 15.0% | 27.1% | 34.5% | 19.1% | 4.3% | 2.70 | | |
| Facilitation expertise | 7.8% | 13.4% | 30.8% | 34.0% | 13.9% | 3.33 | .07* | .11** |

*Correlations are significant at $p < .05$ (two-tailed).

**Correlations are significant at $p < .01$ (two-tailed).

Note: Only statistically significant correlations are presented in the table.

Q20: How much of your organization’s instructional systems design is outsourced?

The majority of organizations either conducts *all* of its instructional systems design in-house (40 percent) or outsources less than half of the work (46 percent). Only 14 percent of respondents say they outsource half or more of their ISD work.

HOW MUCH OF YOUR ORGANIZATION’S INSTRUCTIONAL SYSTEMS DESIGN IS OUTSOURCED?

| 0 PERCENT (1) | 1–49 PERCENT (2) | 50 PERCENT (3) | 51–99 PERCENT (4) | 100 PERCENT (5) | AVERAGE |
|---------------|------------------|----------------|-------------------|-----------------|---------|
| 39.8% | 45.9% | 8.5% | 5.3% | 0.5% | 1.81 |

Note: This question was only shown to respondents who indicated being an employee with ISD responsibilities internal to their organization (non-contractor). No significant correlations were found with the MPI or ISDI.

Q21: Thinking about your organization presently and into the next five years, to what degree do you agree with the following statements?

When asked to think about the future of their organization, respondents most strongly agree that their businesses will continue to rely on instructional designers and other experts to develop learning systems and that their organizations will rely strongly on formal asynchronous online courses. Respondents are least inclined to agree that “traditional ISD does not prepare designers for today’s learning environments.” Interestingly, although few respondents agree with this statement, there is a significant negative correlation between it and the ISDI, suggesting that when respondents believe that traditional ISD does not prepare them for today’s learning environment, they are less likely to report successful instructional design systems overall.

THINKING ABOUT YOUR ORGANIZATION PRESENTLY AND INTO THE NEXT FIVE YEARS, TO WHAT DEGREE DO YOU AGREE WITH THE FOLLOWING STATEMENTS?

| RESPONSES | STRONGLY DISAGREE (1) | DISAGREE (2) | NEUTRAL (3) | AGREE (4) | STRONGLY AGREE (5) | AVERAGE | CORR WITH MPI | CORR. WITH ISDI |
|--|-----------------------|--------------|-------------|-----------|--------------------|---------|---------------|-----------------|
| My organization will rely more on subject matter experts using rapid development tools to develop learning assets. | 4.1% | 14.8% | 23.2% | 44.4% | 13.6% | 3.48 | | |
| My organization will continue to rely on instructional designers and other experts to develop learning systems. | 2.2% | 5.4% | 14.4% | 57.0% | 21.0% | 3.89 | | .22** |
| My organization will design more formal classroom training programs. | 6.7% | 21.5% | 24.0% | 38.4% | 9.5% | 3.22 | | |
| My organization will rely strongly on formal synchronous online courses. | 3.3% | 16.0% | 30.9% | 41.7% | 8.1% | 3.35 | | .12** |
| My organization will rely strongly on formal asynchronous online courses. | 2.0% | 6.2% | 27.8% | 48.0% | 16.0% | 3.70 | | .13** |
| My organization will increase its use of informal learning approaches (e.g., social networks, wikis). | 5.1% | 13.0% | 26.7% | 44.0% | 11.2% | 3.43 | | .08* |
| Social networking and informal learning are rapidly changing the way we approach ISD. | 7.1% | 14.2% | 31.1% | 35.5% | 12.1% | 3.31 | .11** | |
| Traditional ISD does not prepare designers for today’s learning environments. | 8.2% | 18.5% | 32.6% | 32.0% | 8.7% | 3.14 | | -.12** |

*Correlations are significant at $p < .05$ (two-tailed).

**Correlations are significant at $p < .01$ (two-tailed).

Note: This question was only shown to respondents who indicated being an employee with ISD responsibilities internal to their organization (non-contractor). This question also gave respondents the option of “not applicable.” The table provides percentages after the “not applicable” selections were removed. Only statistically significant correlations are presented in the table.

Q22: On average, how many hours do your instructional designers spend to complete a one-hour e-learning program?

Forty-seven percent of respondents say that it takes between 11 and 50 hours to complete a one-hour e-learning program. For roughly one-quarter of respondents (24 percent), one hour of e-learning takes between 51 and 150 hours. Twenty-two percent say it takes just 1–10 hours. The average number of hours it takes to complete a single hour of an e-learning program is 56.

ON AVERAGE, HOW MANY HOURS DO YOUR INSTRUCTIONAL DESIGNERS SPEND TO COMPLETE A ONE-HOUR E-LEARNING PROGRAM?

| 1–10 HOURS | 11–50 HOURS | 51–150 HOURS | 151–300 HOURS |
|---------------------|-------------|--------------|---------------|
| 21.7% | 46.6% | 24.0% | 7.6% |
| Average: 55.7 hours | | | |

Note: This question was not required. The total responses included indications of “0 hours,” as well as greater than “300 hours,” and these outlier responses were removed for the calculations in the table. No significant correlations were found with the MPI or ISDI.

Q23: On average, how many hours do your instructional designers spend to complete a one-hour classroom program?

A slight majority of respondents (51 percent) report spending between 11 and 50 hours to complete a one-hour classroom program. More than one-third of the sample (38 percent) report that it takes 1–10 hours to produce a one-hour classroom program, while only 12 percent report spending more than 50 hours. The average number of hours spent per one-hour classroom program was 27.1.

ON AVERAGE, HOW MANY HOURS DO YOUR INSTRUCTIONAL DESIGNERS SPEND TO COMPLETE A ONE-HOUR CLASSROOM PROGRAM?

| 1 TO 10 HOURS | 11 TO 50 HOURS | 51 TO 150 HOURS |
|---------------------|----------------|-----------------|
| 37.5% | 50.8% | 11.7% |
| Average: 27.1 hours | | |

Note: This question was not required. The total responses included indications of “0 hours,” as well as a “greater than 150 hours,” and these outlying responses were removed for the calculations in the table. No significant correlations were found with the MPI or ISDI.

Q24: Indicate the extent to which the following are barriers to the success of instructional systems design initiatives within your organization.

According to respondents, the most significant barriers to the success of ISD initiatives are “lack of internal staff that have the competencies and skills required to meet the needs of the learning initiative” and “lack of proper funding for the right tools.” Both of these barriers are significantly and negatively correlated to the ISDI and the MPI, suggesting that the more respondents agree that these are barriers within their organizations, the lower their organization’s market performance and overall ISD success.

INDICATE THE EXTENT TO WHICH THE FOLLOWING ARE BARRIERS TO THE SUCCESS OF INSTRUCTIONAL SYSTEMS DESIGN INITIATIVES WITHIN YOUR ORGANIZATION.

| RESPONSES | NOT AT ALL | SMALL EXTENT | MODERATE EXTENT | HIGH EXTENT | VERY HIGH EXTENT | AVERAGE | CORR. WITH MPI | CORR. WITH ISDI |
|---|------------|--------------|-----------------|-------------|------------------|---------|----------------|-----------------|
| Difficulty developing localized content | 25.7% | 31.9% | 30.8% | 9.7% | 1.8% | 2.30 | | -.17** |
| Difficulty keeping up with new learning technologies/media | 9.5% | 29.1% | 35.2% | 22.3% | 3.8% | 2.82 | | -.14** |
| Loss of control of learning initiatives as informal learning grows in popularity | 24.7% | 36.2% | 28.0% | 8.9% | 2.1% | 2.28 | | -.11** |
| Generational differences in best ISD practices | 18.6% | 31.7% | 33.5% | 12.6% | 3.5% | 2.51 | | -.10** |
| Difficulty identifying which ISD methodologies or processes best meet business objectives | 16.6% | 31.4% | 32.7% | 16.0% | 3.3% | 2.58 | | -.22** |
| Difficulty measuring the effectiveness of ISD | 9.3% | 22.1% | 35.6% | 25.5% | 7.6% | 3.00 | -.08* | -.18** |
| Inability to get a “seat at the table” (i.e., getting upper management to understand ISD and its importance) | 17.3% | 22.7% | 26.9% | 19.9% | 13.3% | 2.89 | -.15** | -.28** |
| Inability to convince the organization to adopt new approaches to course and content design | 12.4% | 26.5% | 28.0% | 21.3% | 11.7% | 2.93 | -.12** | -.28** |
| Lack of internal staff who have the competencies and skills required to meet the needs of the learning initiative | 8.4% | 17.0% | 28.0% | 28.2% | 18.4% | 3.31 | -.12** | -.29** |
| Lack of proper funding for the right tools | 8.9% | 21.0% | 24.9% | 26.3% | 18.8% | 3.25 | -.19** | -.22** |
| Too much ongoing maintenance required of the learning initiative once it is completed | 8.9% | 30.7% | 36.6% | 17.7% | 6.1% | 2.81 | | -.09* |

*Correlations are significant at $p < .05$ (two-tailed).

**Correlations are significant at $p < .01$ (two-tailed).

Note: This question was only shown to respondents who indicated being an employee with ISD responsibilities internal to their organization (non-contractor). Only statistically significant correlations are presented in the table.

Q25: To what degree do you agree with the following statements about instructional design?

While many respondents believe that what they do for their organizations is very important, a somewhat smaller group says that management believes what they do is very important. When respondents report that management does see ISD as being very important to the organization, there is a positive correlation with both the MPI ($r = .12$) and ISDI ($r = .33$).

When respondents agree that “when I need to learn something related to instructional design, I often reach outside my organization for help (e.g., internet searches, community forums),” there is a significant negative correlation with ISD success. In other words, the more respondents report that they cannot find critical ISD-related learning materials in-house, the lower they report their overall success with ISD initiatives. The average for this question is 4.34 on a 5-point scale, suggesting that many respondents do, in fact, go outside their own organization to find these materials. On the other hand, when respondents say they stay inside the organization to find ISD learning materials, there is a significant positive correlation with both MPI and ISDI. Similarly, the more that generational differences between designers impact how ISD is approached, the lower the overall success of ISD is.

TO WHAT DEGREE DO YOU AGREE WITH THE FOLLOWING STATEMENTS ABOUT INSTRUCTIONAL DESIGN?

| RESPONSES | STRONGLY DISAGREE (1) | DISAGREE (2) | NEUTRAL (3) | AGREE (4) | STRONGLY AGREE (5) | AVERAGE | CORR. WITH MPI | CORR. WITH ISDI |
|--|-----------------------|--------------|-------------|-----------|--------------------|---------|----------------|-----------------|
| I am confident that my skills will remain in demand in my organization. | 0.6% | 3.3% | 11.1% | 51.8% | 33.3% | 4.14 | .13** | .26** |
| I am confident that my skills will be in demand should I leave my organization. | 0.5% | 2.8% | 12.9% | 54.4% | 29.4% | 4.09 | .11** | .21** |
| When I need to learn something related to instructional design, I often reach outside my organization for help (e.g., internet searches, community forums). | 0.9% | 2.6% | 5.8% | 43.4% | 47.3% | 4.34 | | -.10** |
| When I need to learn something related to instructional design, I often reach inside my organization for help (e.g., wikis, course modules, internal social networks). | 18.2% | 37.1% | 19.1% | 21.4% | 4.2% | 2.56 | .17** | .17** |
| Cultural differences among learners play a significant role in how we approach instructional design. | 4.4% | 17.1% | 30.5% | 38.6% | 9.5% | 3.32 | | |
| Gender differences among learners play a significant role in how we approach instructional design. | 9.6% | 34.0% | 36.6% | 17.9% | 1.9% | 2.68 | | |

Q25 (continued): To what degree do you agree with the following statements about instructional design?

| RESPONSES | STRONGLY DISAGREE (1) | DISAGREE (2) | NEUTRAL (3) | AGREE (4) | STRONGLY AGREE (5) | AVERAGE | CORR. WITH MPI | CORR. WITH ISDI |
|---|-----------------------|--------------|-------------|-----------|--------------------|---------|----------------|-----------------|
| Generational differences among learners play a significant role in how we approach instructional design. | 3.4% | 13.9% | 20.1% | 50.1% | 12.5% | 3.54 | | |
| Generational differences among designers play a significant role in how we approach instructional design. | 6.2% | 19.2% | 27.5% | 37.8% | 9.3% | 3.25 | | -.07* |
| I believe what I do is very important to the organization. | 0.4% | 0.7% | 5.1% | 42.1% | 51.8% | 4.44 | | .18** |
| My management believes what I do is very important to the organization. | 1.3% | 3.8% | 14.2% | 45.8% | 34.9% | 4.09 | .12** | .33** |

*Correlations are significant at $p < .05$ (two-tailed).

**Correlations are significant at $p < .01$ (two-tailed).

Note: This question was only shown to respondents who indicated being an employee with ISD responsibilities internal to their organization (non-contractor). Only statistically significant correlations are presented in the table.

Q26: How likely are the following to occur for the future of instructional systems design over the next five years?

The following were identified by respondents as the top three trends for ISD over the next five years. First, many respondents agree that there will be a greater emphasis to support “learning at the moment of need using expert systems, electronic performance support systems, etc.” Next, respondents agree that ISD will become more important, and more specifically, there will be an increased focus on developing content for delivery to a global audience. Respondents were least likely to agree that ISD will become less important or that traditional courses will cease to exist.

Overall, only a handful of projections concerning the future of ISD are found to correlate significantly with either the MPI or ISDI. Only one statement, “technology will improve the productivity of ISD practitioners,” was significantly related to both the MPI and ISDI. This finding implies that the more respondents agree that it is likely that technology will improve ISD practitioner’s productivity, the higher their MPI and ISDI scores are.

HOW LIKELY ARE THE FOLLOWING TO OCCUR FOR THE FUTURE OF INSTRUCTIONAL SYSTEMS DESIGN OVER THE NEXT FIVE YEARS?

| RESPONSES | NOT AT ALL LIKELY (1) | SOMEWHAT LIKELY (2) | LIKELY (3) | HIGHLY LIKELY (4) | EXTREMELY LIKELY (5) | AVERAGE | CORR. WITH MPI | CORR. WITH ISDI |
|---|-----------------------|---------------------|------------|-------------------|----------------------|---------|----------------|-----------------|
| ISD will become less important. | 59.9% | 25.6% | 10.5% | 3.5% | 0.5% | 1.59 | | |
| ISD will become more important. | 7.2% | 14.6% | 24.4% | 35.0% | 18.8% | 3.44 | | |
| The traditional course will no longer exist. | 48.8% | 26.6% | 16.3% | 6.2% | 2.1% | 1.86 | | |
| Traditional ISD practices will be less relevant in the future. | 32.9% | 39.8% | 18.5% | 7.2% | 1.6% | 2.05 | | |
| The quality of ISD practitioners will rise. | 8.7% | 21.5% | 36.6% | 26.3% | 6.9% | 3.01 | | .08* |
| Technology will reduce the costs associated with ISD. | 12.5% | 29.3% | 31.4% | 22.3% | 4.5% | 2.77 | .07* | |
| Technology will improve the productivity of ISD practitioners. | 3.5% | 21.6% | 33.3% | 32.5% | 9.0% | 3.22 | .10** | .07* |
| ISD practitioners will become more strategic and less tactical. | 7.4% | 24.2% | 35.4% | 26.6% | 6.4% | 3.00 | .08* | |

Q26 (continued): How likely are the following to occur for the future of instructional systems design over the next five years?

| RESPONSES | NOT AT ALL LIKELY (1) | SOMEWHAT LIKELY (2) | LIKELY (3) | HIGHLY LIKELY (4) | EXTREMELY LIKELY (5) | AVERAGE | CORR. WITH MPI | CORR. WITH ISDI |
|---|-----------------------|---------------------|------------|-------------------|----------------------|---------|----------------|-----------------|
| There will be more outsourcing of ISD. | 15.4% | 28.6% | 29.1% | 20.6% | 6.3% | 2.74 | | -.08* |
| There will be less outsourcing of ISD. | 37.6% | 31.2% | 19.6% | 9.2% | 2.5% | 2.08 | .08* | |
| There will be an increased focus on developing content for delivery to a global audience. | 9.0% | 13.3% | 26.3% | 31.2% | 20.2% | 3.40 | .08* | |
| Trainers will have more involvement in ISD design and development. | 2.4% | 16.6% | 37.3% | 33.3% | 10.5% | 3.33 | | |
| There will be a greater emphasis to support "learning at the moment of need" using expert systems, electronic performance support systems, etc. | 1.9% | 9.3% | 29.3% | 36.9% | 22.5% | 3.69 | | |
| Social media will increasingly become an essential ISD tool. | 4.8% | 17.2% | 30.5% | 31.6% | 15.8% | 3.36 | | |

*Correlations are significant at $p < .05$ (two-tailed).

**Correlations are significant at $p < .01$ (two-tailed).

Note: Only statistically significant correlations are presented in the table.



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