Tips, Tools, Techniques and Other Tantalizing Tidbits
By Harold D. Stolovitch

Becoming an effective instructional designer (ID) requires solid training in the skills needed to analyze, design, develop, evaluate and revise courses, programs and learning events or activities. As ID's, we practice and hone these skills with each project we undertake. However, as with any craft or profession, we also pick up tips, tools, techniques and other useful "stuff" from fellow seasoned, successful professionals. Often, we do the "picking-up" informally through observation, participation in professional get-togethers or from casual conversations. These gems, together with our training and practice, build our successes. From capable journeymen, we transform into talented master ID performers.

This article and two more which will follow in future issues offer you some of the things I've picked up or stumbled upon over the years as a practicing ID and teacher of instructional design. There are, of course, three objectives for this article series. (Would an ID dare to not state objectives?) You should come away from reading them able to:

1. Separate myth from research-based evidence on five commonly held beliefs about learning and performance.
2. Apply five tools to enhance your ID practice and decision-making.
3. Apply three powerful techniques that result in your learners' dramatic and rapid acquisition of new insights.

Let's begin with the first objective and a game called *Hit or Myth*. I often use this game activity to address commonly circulated beliefs about a given subject and challenge these via this game format. Here's how you play. Read each statement below and decide whether it is a hit – true – or myth – false. Then, read on to see how well you chose.

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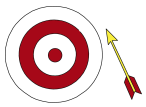
Statement	Hit	 Myth
1. Because some learners are more visual and others more auditory, this is a key consideration in instructional design.	☐	☐
2. More enjoyable instructional activities result in greater learning achievement.	☐	☐
3. Media have a powerful impact on learning effectiveness.	☐	☐
4. Consulting learners about what they know or don't know is useful as, in general, they are pretty accurate judges of their own knowledge and performance capabilities.	☐	☐
5. If you want novice learners to learn how to solve problems, give them problem-solving practice right from the start rather than have them study worked out problems.	☐	☐

Now for the feedback on selections. Please read what the research says and the tips for practice that emerge.

Hit or Myth	Tips for Practice
1. Myth: Research has shown there to be differences in which senses individuals favor for attending to and processing information. However, more powerful than these differences is the overall effect of stimulus variation. (Bishka,2010; Snow, 1989; Tobias, 1985.) [Click here for complete references.]	• Vary the stimuli you include in your learning activities. • Do not be overly concerned about "learning styles." It's a shaky concept. • Engage several senses at one time, but ensure that they all reinforce one another. • Engage the learners in many activities that require lots of practice.
2. Myth: Correlations between learner enjoyment/satisfaction and learning success vary from -0.85 to +0.75. There is no stability in the findings. Overall, enjoyment and satisfaction do not seem to be critical variables	• Challenge your learners in meaningful ways. • Provide practice with feedback – both corrective and confirming. • Demonstrate benefits for learning and constantly reinforce these. • Build confidence through

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Hit or Myth	Tips for Practice
for learning. Persistence and time on task appear to be more powerful. (Clark, 1980; Hartly, D. 2006; Remedios, Lieberman & Benton, 2000; Schnackerberg, Sullivan, Leader & Jones, 1998.) [Click here for complete references.]	graduated challenges and successes. • Manage the learning process through clear structure and direction.
3. Myth: 1913 – Prediction: demise of the classroom due to the invention of "moving pictures" – Thomas Edison 1940s-50s – Audiovisual boom 1960s – Educational television 1980s-90s – Computer-mediated learning 2000 – Web-mediated learning One of the most consistent findings in the research literature: all other things being equal, media has no significant impact on learning effectiveness (Clark, 1999.) [Click here for reference.]	• Don't get caught up in media-mania. Focus on design. • Make media "transparent." Bells and whistles distract. • Beware of "seductive elements." These decrease learning. • Use media and technology-based systems to improve learning access, efficiencies and message consistency.
4. Myth: A significant body of research demonstrates experimentally the poor "calibration" (correlation between confidence rating about one's specific skills and knowledge and actual performance) in judging ourselves. This extends to judgments about how much learners think they learned from instruction and how much they actually did learn (posttests). (Evans & Stanwyk, 1997; Glenberg, Sanocki, Epstein & Morris, 1987; Olson, 2000; Stone, 2000.) [Click here for complete references.]	• Take care lest you be overly swayed by what learners say they know and can do. • Verify by performance testing or performance data gathering. • Listen, but don't believe. Experts are no more expert about their knowledge and skills than are novices.

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Hit or Myth	Tips for Practice
5. Myth: In initial learning of problem-solving, learner cognitive load is heavy, thus overloading working memory. Providing learners with worked-out problems and having them study similar new occurrences lightens learner cognitive load and increases problem-solving success (K im, Weitz, Heffeman. & Crack, 2009; RIngenberg & VanLehn 2006; Van Merrienboer, 1997.) [Click here for complete references.]	• Provide clear problem-solving models and have the learners study them. • Debrief with learners what they learn from worked-out examples. • Guide application to new problems and provide feedback. • Gradually increase problem-solving difficulty.

Please note that the game itself, *Hit or Myth*, is a neat and simple activity to involve learners in content that requires dispelling rumors, clarification of half-truths, elimination of nonsensical notions or burial of myth-beliefs. For us as ID's, the content of this specific use of the *Hit or Myth* format provides us with useful insights and tips for practice.

In the next edition of *HSA e-Xpress*, I'll share some tools I've gathered that can help you manage ID projects effectively. Stand by. Also, if you have any feedback to offer, contact me (hstolovitch@hsa-lps.com). I love connecting with fellow IDers. Please pass along any tips, tools, etc. you would like to share with colleagues. We'll make sure you receive full credit.

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Tips, Tools, Techniques and Other Tantalizing Tidbits: Six Tools to Enhance Your Instructional Design Practice and Decision-Making

By Harold D. Stolovitch

The objective of this second article is for you to be able to apply six tools we have found extremely useful in our professional work that can enhance your ID practice and decision-making. We begin with a useful project starter preparation checklist, which we simply call **Ready…Set…Go?**

Ready…Set…Go?

Why the question mark? Have you ever experienced, as we certainly have, that what began as a conversation about a project somehow morphed into your becoming engaged in work activities on the project? Before you knew it, you kind of slipped into the project without any official starting gunshot or formal launch. It may have started with a meeting, some excitement, an informal distribution of exploratory task responsibilities or, in the case of external consultants, some upfront seed money. Then, without quite realizing it, all of a sudden you're into the project full-tilt.

With instructional/training projects, getting sucked in can happen quickly, especially if there are tight timelines and some big dollar figures attached to the project. Watch out, however. Danger! Fuzzy beginnings can lead to later frustrations and major headaches. Before you plunge in too deeply, stop and obtain a "Yes" for each of the **Ready…Set…Go? Preparation Checklist** items. Each "No" will eventually end up biting you in the…ankle. Work with your clients to obtain six great big "Yes's." Create contingency plans for each "No."

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Ready…Set…Go? Preparation Checklist

	Yes	No
1. You are officially assigned to develop the learning.	☐	☐
2. Your supervisor or client has approved the project.	☐	☐
3. You have negotiated adequate time to complete the assignment.	☐	☐
4. You have all the required business case or front-end analysis information for the project.	☐	☐
5. You have access to appropriate resources (e.g. content information, experts, equipment, software, instructional design support, materials).	☐	☐
6. You will be able to test your prototype with "live" tryout subjects.	☐	☐

Get sign-off on each "Yes." Make sure you get it from the "real" client – the one who ultimately has the final authority for the project and not a go-between without decision-making power. Simple and obvious as each item appears to be, many an experienced IDer has been caught and mauled because of a single "No."

Project Timeline…With A Twist

Almost all of us understand the importance of project timelines. Many use simple GANTT charts, even though project management software packages abound. From our experience, most of those are overkill for what we do. A well thought-out, straightforward timeline works perfectly well for most projects of one to four months duration (often even longer). Here, however, is a twist you can include. When you lay out your tasks and timelines, write in the number of anticipated person days (or hours) required to complete each task. In the following sample, *Task Analysis* has been estimated to take five days, but there will be three people working on it for a total of 15 person-days. Note these. Length of time and number of people involved appearing in a timeline help present the project realistically. When crunch times arise, timelines may be adjusted by adding bodies. In estimating project costs, the person-days really help pricing what the true cost of the project will be. This is a simple add-on to the traditional GANTT and well worth doing.

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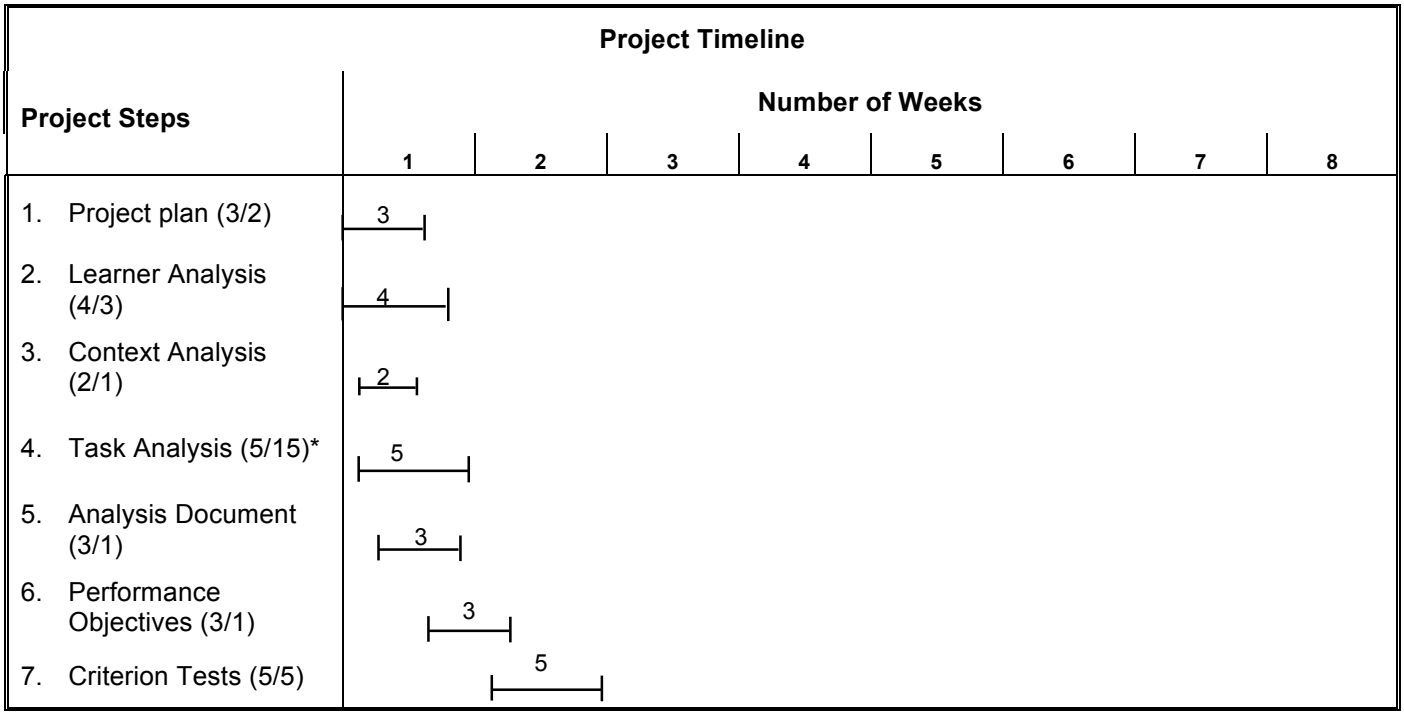
Project Timeline…With A Twist



*5 days to complete the Task Analysis involving 3 people for each of the days (15 person days)

RASCI Plus

Most of you have seen Responsibility, Approval, Support, Consult, Inform (RASCI) matrices. We have learned to not only love them, but also to get more mileage from them by adding another element to the usual RASCI chart.

For those unfamiliar with this type of tool, here is a quick course on what it is, its use and the extra piece we add, along with a sample of a simple one.

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RASCI Plus

Steps	Project Participants				
	Client	**Training Coord.**	**Instr. Designer**	**Technical Experts**	**Employees**
Learner Analysis	C-A 1	S 0.5	R 21	C 2	C 16
Context Analysis	C-A 1	C 1	R 7	C 2	
Task Analysis	C-A 2	I 1	R 28	C 17	C 6
Analysis Document	A 2	C 1	R 7		
Performance Objectives Specifications	A 0.5	I 0.5	R 7		
Criterion Test Creation	A 0.5	I 0.5	R 7		
Instructional Method Strategy Selection		I 0.5	R 7		
Instructional Media/ Delivery System Selection		I 0.5	R 7		
Design Document	A 2	I 1	R 21		
Prototype Production	A 2	I 2	R 35		
Expert Verification and Revision	A 1	S 2	R 10	C 6	
Learner Verification and Revision		I 0.5	R 21		C 20
Production		S 1	R 14		
Reproduction and Assembly		S 0.5	R 7	S 2	
Dissemination and implementation	A 1	C 1	R 7	C 1	
Monitoring and Maintenance	C 2	I 1	R 7	S 1	
	15	**14.5**	**213**	**31**	**42**

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Along the vertical axis are all the project steps. Along the horizontal, the project players appear. Cell by cell, you note the role each player plays for each task. For example, in this project, for the *Task Analysis* step, the client (or his/her surrogate) acts to consult (C) and also approve (A). The training coordinator is simply informed (I) with not much to do, other than read, attend a meeting and/or monitor. The instructional designer is the person responsible (R) for doing the work. Technical experts and employees will be consulted (C), probably for inputs and validation. The letters R-A-S-C-I represent the roles played by each. Not every task requires all the letters. Every task, however, requires an "R" and often an "A" for sign-off.

The extra (plus) element is the little box included in each cell along with a number. The number represents estimated hours required to perform the task. This helps estimate person-days for the timeline and clearly shows how much time players will have to devote to a task. The vertical totals display the total number of hours each project player will have to invest in the whole project. The individual task days and the project timeline provide the basis for creating personalized calendars to help the project players plan their time.

Approval of and commitment to the RASCI chart must be obtained from the client and other project personnel. Their participation in reviewing and helping edit the RASCI is essential for a successful ID project.

Did I Do a Good Job Designing Instruction?

Here is a final pair of tools for the ID. Once the objectives and learning checks (criterion test items) have been developed and you begin to build instruction, regardless of medium, technology or training design, make sure each part of the instruction includes a strong, upfront *rationale* (reason to bother learning) *objective* (what the learner will be able to do as a result of his/her engagement, meaningful *activities* that lead to objective attainment, and a sound means for verifying objective attainment. Evaluation is essential along with both corrective and confirming feedback. The following five-step flowchart and worksheet can help guide you in this. Use it to bullet what is necessary at each step.

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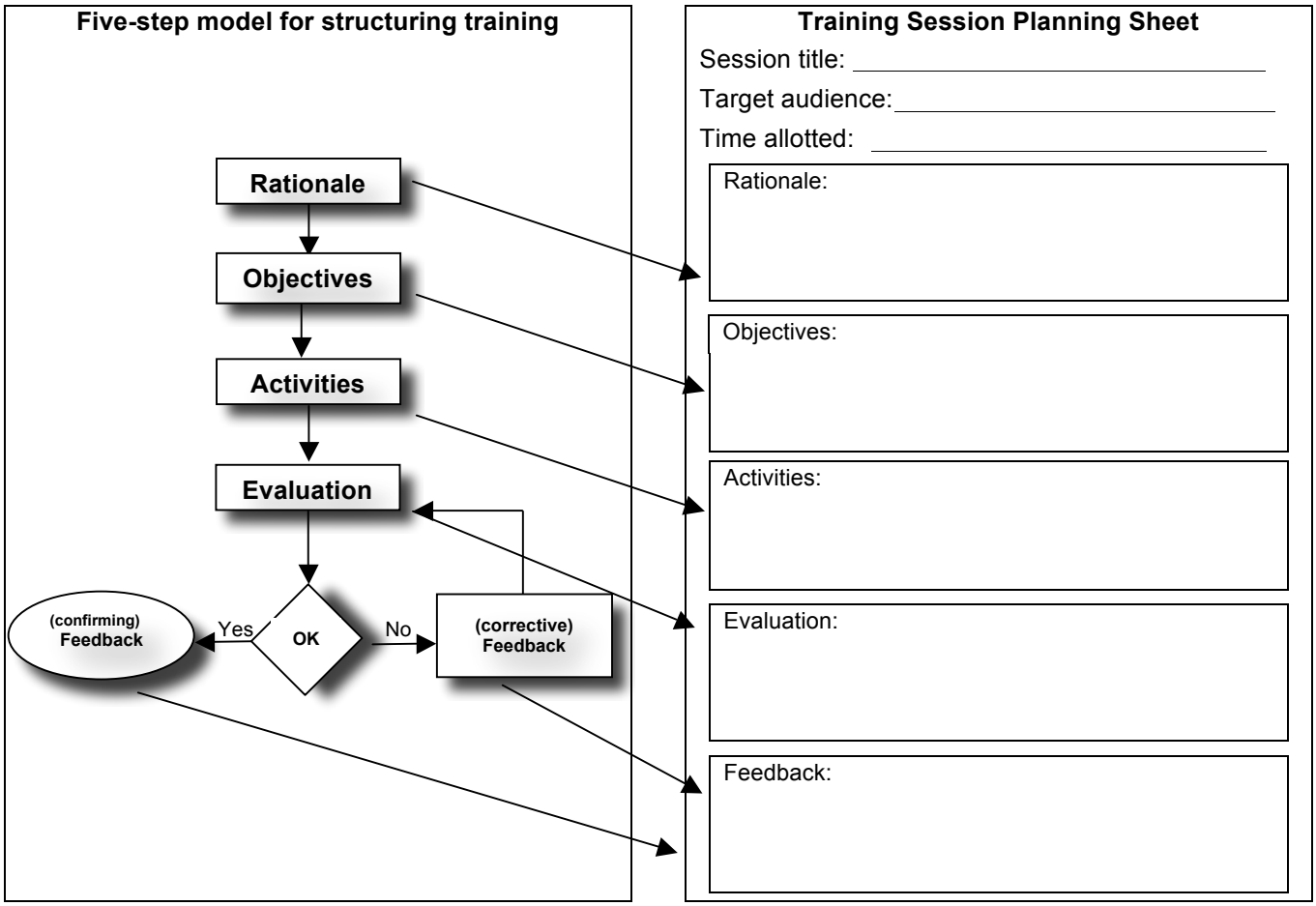
Training Session Planning Sheet



The following companion tool is a checklist to help you answer the question: "Did I do a good job?" in my design. It will help keep you honest.

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Did I Do A Good Job?

	Yes	No
The rationale is presented in terms of the learners.	☐	☐
The learners participate and contribute in building the rationale.	☐	☐
The performance objectives are stated in terms of the learners.	☐	☐
The performance objectives are verifiable.	☐	☐
The performance objectives are appropriate to the learners and the content.	☐	☐
The activities are appropriate to the performance objectives (lead the learners to attain the objectives).	☐	☐
The activities require learner participation at least 50% of the time.	☐	☐
Learners can participate and contribute during the activities.	☐	☐
Evaluation is appropriate to the performance objectives.	☐	☐
Feedback is appropriate.	☐	☐
The session can be conducted within the allotted time.	☐	☐

To Conclude

There are so many tools that can help an ID do a really good, professional job of designing and developing excellent instruction. The few tools included here are ones we have created, borrowing from others, and incorporated into our instructional design toolkits. They have helped us immensely in our work. We hope you find them as be useful in yours.

The final article of this series, in our next *HSA e-Xpress,* will focus on three powerful techniques that result in your learners' dramatic and rapid acquisition of new insights. Stay tuned.

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