

SAN DIEGO STATE UNIVERSITY
DEPARTMENT OF EDUCATIONAL TECHNOLOGY

*Initial Analysis of
Training Opportunities*

SPAWAR ERP Train-the-Trainer

*Prepared by John Bannon
for
Kristin Packer*

October 27, 2006

Initial Analysis

SPAWAR ERP Train-the-Trainer

Introduction

It is the quality, not quantity, of training that makes a difference for an organization. Great training should be active, engaging, contextual, outcome oriented, and most important about something—not about everything (Rossett, 1999).

An opportunity exists to enhance the instructional design for upcoming Subject Matter Expert (SME) “Train-the-Trainer” (T3) program for the 2008 SAP solutions ERP roll-out across SPAWAR Systems Centers.

Goals and Objectives

The goal of this training needs analysis is to identify different instructional strategies to enhance SME T3 training and defining what great training and/or great SME trainers would look like. Objectives of the analysis include identifying areas to improve SME T3 training.

Training Needs Assessment

In 2001, SPAWAR Systems Center San Diego conducted SAP T3 training. T3 training was provided to SMEs in a one day instructor led course. The 2001 class provided theory, discussion and content, but limited amounts of interaction, role play, or hands-on demonstration.

The Challenge

Using SMEs as trainers is an effective way to leverage organizational skill and knowledge (Wheatley, 2000). However, using SMEs as trainers is not without risk. SMEs are not full time trainers. Training is often a collateral duty, and presentation skills can vary.

The challenge is:

- Leverage organization SMEs to provide useful end-user training to get the rest of the co-workers rapidly up to speed.
- Define the best approach and strategies to T3 SME training.

Overall, SME training effectiveness is enhanced by not the number of people in training seats, but rather from effective and engaging instruction that is in manageable quantity, motivational, builds upon existing skills, and provide confidence and core trainer skills.

Literature Review

The literature review focused on defining what makes a good trainer, what makes good training, and best use of SMEs as trainers. Three themes emerged from the literature review:

- **Leveraging the most of SMEs as trainers.**
- **Increasing effectiveness of T3 training.**
- **Identifying the key communication and presentation skills.**

SME as Trainers

Using SMEs as trainers was cited as a successful organizational strategy (Wheatley, 2000; Trautman & Klein, 1993). SMEs provide credibility, local resource, and expertise. Instruction by outside vendors may not always be online with organizational specific needs, often is costly, and less flexible.

However, using SMEs comes with some risks. Problems may include: Ineffective communication/training skills, SMEs giving too much “in the weeds” information, and training losing focus and going off target. It was also noted that it is important to select the right SMEs as trainers (interested and skilled) and ensure supervisors support the initiative (Heller, 2002; Trautman & Klein, 1993). A comment in one interview stated that helping with the training is often not the problem. Rather, it is support by the managers as well as concern that “training” will become the new full-time job that was often a leading SME issue. Overall, literature supports T3 SME training as highly effective, if provided in a manner matched to the part-time SME trainer needs.

What is Effective T3 SME Training?

To gain the most out of using SMEs as part-time instructors, training must include solid instructional design theories, including also being learner centered, active, and engaging. Instruction should also not be passive, instructor centered, or beyond the scope of the SME needs. SME learning needs include defining their training role and providing them with tangible skills they can practice, relate to, and digest, such as classroom management techniques or how to gauge if students are learning. The goal is to avoid “cognitive overload.” The question must be posed on what is good to know, and what must they know. (Russo, 2004).

What Makes a Good Trainer?

The American Society for Training and Development (ASTD) and Training Journal provided several guides on training competencies needed by new trainers (Russo, 2004 & 2005; Hahne, 1986). Along with other data (including from interviews), the frequently cited traits for an effective trainer are:

- **Preparation:** Classroom preparation and practice with delivery.
- **Active listening:** Understood student concerns, questions and gauge if learning is being successful. Active listening helps the trainer ask the right questions.
- **Patience:** Able to adjust training to the needs/levels of the students.
- **Class management:** Able to resolve conflict and problems, and maintain tempo.
- **Confident Deliverer.** Uses all communication skills to provide effective training.

Needs Analysis

The needs analysis was posed by the client: How can we enhance T3 SME training within cost parameters and consistency? A brief audience and content analysis was conducted.

Audience and Stakeholder Analysis

Several perspectives, including SMEs, trainers, and program managers were interviewed to help provide insight on what constitutes effective T3 training. Information from the brief audience analysis data supported the literature review findings.

Figure 1 below provides an overview of the key lessons learned and related outcomes. Further learner analysis needs is recommended.

Member	Position	Key Points	Related Training Outcomes
Kristen Packer	Client (ERP trainer)	<ul style="list-style-type: none"> • Creative cost effective solutions to enhance training by preparing SMEs to train a procedure or deal with student frustrations, for example • Practical skill demonstration. • Demonstration linked to procedural and principal training 	<ol style="list-style-type: none"> 1. Evaluation of different instructional design solutions and strategies to implement 2. Training should be interactive and engaging 3. Hiring consultants for training may not be the best training solution
Dr. Bob Stacey	Client's customer	<ul style="list-style-type: none"> • SMEs should convey positive support for the new SAP roll-out • A good trainer is: Prepared, skilled in evaluating learning, good listener 	<ol style="list-style-type: none"> 1. Training should focus on supporting change 2. Instruction should focus on evaluating (and measuring) if the learners are getting it.
Patty Crover	Trainer	<ul style="list-style-type: none"> • Confidence and preparation is important • Two trainers in class are beneficial • SMEs should explain, demonstrate, then do it 	<ol style="list-style-type: none"> 1. Use two SME trainers 2. Help SMEs learn to evaluate/monitor if learning is going on in the class 2. Focus on the small key areas they can readily adopt to improve training (eye contact, non-verbals, asking questions, using a clear voice)
Carl Dovenbarger	Trainer	<ul style="list-style-type: none"> • Credibility and practice is important • Set expectations on learning goals up front • Leverage advanced students to help 	<ol style="list-style-type: none"> 1. APPLE method for questioning: Ask, pause, pick someone, listen, evaluate answer 2. Pilot/practice training before first time 3. Support for smaller trainer classes
Patty Provencio	Financial Manager	<ul style="list-style-type: none"> • Practice is key; good trainer knows the material & presentation • Getting SMEs is difficult, the best SMEs may not be selected 	<ol style="list-style-type: none"> 1. Use hands-on exercise practice 2. Use two SME trainers 3. Use the best SMEs
Jerry Duong	Financial Analyst	<ul style="list-style-type: none"> • Preparation and delivery speed/pace is key • Use teach back 	<ol style="list-style-type: none"> 1. Use war stories to help in the training 2. Use the top SMEs

Figure 1

From the stakeholder analysis, the following four effective trainer competencies were noted:

- **Practice and preparation is important. Trainers need to know the material and be confident. Confidence supports credibility for the learners.**
- **Exercises are important for adult learning and retention.**
- **Basic trainer presentation skills are more applicable than trainers knowing adult learning theories, especially due to limited training SMEs will be used for.**
- **Trainers need to know and maintain the pulse of the class, as well as how to evaluate & measure if learning is being achieved. Are people getting it?**

2001 Training Content Analysis

Review of the previous T3 workbooks noted that the training provided a lot of detailed content on adult learning and training theories. Perhaps more instructional design information than ultimately required for part-time trainers. Concerns include, will SMEs actively use the print based workbooks or remember all the information?

Successful training should match the audience needs, as well as focused and reasonable. Content may be better served in “chunks” of need-to-know skills presented in smaller modules, engaging methodology, hands-on learning, and scaffold to prior skills and training modules.

Recommendations

From my analysis findings, the following recommendations are provided to improve SPAWAR’s SME T3 effectiveness. Future actions, Figure 2, and Appendices A-C will provide greater detail.

- **Use SPAWAR SMEs for SAP training versus vendor training. As well as use ERP trainers for the T3 instruction. SPAWAR personnel best leverage knowledge management, flexibility, insight to need to know information and costs.**
- **Develop a reusable T3 training workshop, based on sound instructional design and adult learning principles, suitable for all locations.**
- **Focus training on no more than seven to ten key concepts to prevent “cognitive overload.” Closely scaffold T3 training with roll-out presentation training and ERP support links.**
- **Incorporate engaging and active learning techniques, such as multi-media, role playing, and case studies. Provide objectivist and constructivist activities as well as an overall learner centered approach.**
- **Reconstitute existing content (2001 SPAWAR San Diego SAP training content).**
- **Use an instructional design framework, such as the ICARE Model (Introduction, Connect, Apply, Reflect, and Extend). Apply relevancy and context to learning concepts within a model of instructional design that is congruent with instructor facilitation, and learner centered training.**
- **Use a self-assessment pre-test, and follow-up learning with e-coaching support to increase the learning environment and learning transfer.**
- **Focus training on concepts the learners can identify and remember. Use proven techniques, such as APPLE or LEAPS (listen, emphasize, ask probing questions, paraphrase what the student asked, and summarize the conversation) for how to listen effectively.**
- **Develop an online website to provide training tools, support, and additional links. Advertise (and maintain) the training tool for all employees.**

Figure 2 provides additional recommendation data.

	Recommendation	Current Condition	Optimal Tools and Strategies
1	Revised Course Material	2 prior designed course workbooks	<ul style="list-style-type: none"> • Use of ICARE instructional design modules (5-8 modules, 1-3 lessons/topics per module) • Module topics should include: Adult learning, Effective communication & Presentation skills • Chunking of course material more in tune with SME realistic T3 learning needs • Modules could follow the development of a “SME” and how skills/competencies are applied • Modules should build upon one another from fact/concept to principles/procedures
2	Update course	Instructor led	<ul style="list-style-type: none"> • Revised T3 course with engaging exercises and skill application • Include pre-class self-assessment • Use of multi-media to improve learning • Objectives linked to modules that “build upon one another,” scaffold in work context to the desired skill • Use two SMEs per course • One day course (8-11:30; 1-4:30). Limit class size to < 18 to increase learning attention and use of engaging exercises. Multiple course will ensure 100% attendance
3	Increased interactive practice & participation	Instructor led. Course focused mainly on remember fact/concept	<ul style="list-style-type: none"> • Learner centered multi-media exercises • Use of blended learning and multi-media • Use participation & practice to increase learning
4	Performance support tools	Course books; instructor	<ul style="list-style-type: none"> • Job aid (checklist) for use prior to training. Checklist will have performance tips & required actions for one week prior, one day prior, & morning of training • Pre self-assessment exercise
5	Intranet Website	None	<ul style="list-style-type: none"> • Links to modules, resources, articles, job aids, and self-assessment tool • E-coaching mentorship link • SAP tips
			Figure 2

Summary of Findings

Analysis supports implementing educational and performance technology applications to the T3 training by making it more interactive and learner centered as well as focused on what SMEs need to know versus what would be nice in a perfect world for them to know.

Options include use of a website for extended learning, interactive exercises allowing SMEs to practice, and use of job aids. Concepts for group exercises, training schedule, and website concept are provided in the appendices. In addition, follow-on reports will be provided on prototypes for the self-assessment, use of an ICARE model, and use of an interactive exercise.

Future Actions

In addition to the analysis report, follow-on assignments will include:

- **Design of a prototype self-assessment test to gauge the level of class experience for the instructors, as well as a tool for the SMEs to evaluate their strengths and weaknesses and direct them to training resources.** The self-assessment test will also prepare and introduce the SMEs to training and the ERP T3 website. Analysis due: 14 November 2006 and final product on 05 December 2006.

References

- Hahne, G. (1986). How can subject matter experts prepare themselves to be trainers? *Training and Development Journal*, (34)5, 16-21. Retrieved October 10, 2006, from the EBSCO database.
- Heller, D. (2002). *Train the Trainer: Darryl Heller. Affordable Option Brings Knowledge In-house*. Retrieved September 29, 2006, from <http://www.techsoup.org/learningcenter/training/page3304.cfm?CFID=23380185&CFTOKEN=70>
- Rossett, A., Sheldon, K. (2001). *Beyond the podium*. San Francisco, CA: Jossey-Bass/Pfeiffer.
- Russo, C. S. (Ed.). (2004). Teaching SMEs to train. *Infoline*, 9977. (Available from the American Society for Training & Development Press, <http://www.astd.org>).
- Russo, C. S. (Ed.). (2005). Basic training for trainers. *Infoline*, 8808. (Available from the American Society for Training & Development Press, <http://www.astd.org>).
- SPAWAR Train the Trainer Handbooks (2001).
- Trautman, S., & Klein, K. (1993, July). Ask an expert. *Training and Development Magazine*, 45-48. Retrieved October 12, 2006, from the EBSCO database.
- Wheatley, M. (2000, June 1). ERP training stinks. *CIO Online magazine*. Retrieved September 11, 2006, from http://www.cio.com/archive/060100_erp.html

Appendix A: Proposed Training Schedule

Example of a One Day Agenda (0800 – 1630), based upon seven modules, six learning objectives. Each module has one to three supporting lessons. Information is “chunked” to need-to-know information and context. Time per module is limited, use of six modules may provide greater time and practice (Quality vs. Quantity).

Sample time is 0800-1600. The agenda could easily be adjusted to one & ½ days, two days, or more. One day is recommended due to limited trainer needs, time away from office, and learner needs.

0800 – 0810 Introductions, course requirements, expectations, purpose

0810 – 0825 Go over self-assessment, module overview, website, resources

0825 – 0905 Module 1 (What makes a good trainer video/questions)

0905 – 0910 **Break 1**

0910 – 0940 Module 2 (Effective communication skills, go over case study)

0940 – 1005 Module 3 (Solving classroom problems; video: What Should Mr/Mrs. Trainer do?)

1005 – 1015 **Break 2**

1015 – 1040 Module 4 (Identify student types: interactive game)

1040 – 1115 Module 5 (Effective Presentation tips, role play, group discussion)

1115 – 1120 Summary – discuss Module 6 and group exercise

1120 – 1230 **Lunch**

1230 – 1245 Module 1 – 5 refresher

1245 – 1330 **Module 6: Interactive Exercise (putting it all together)**

1330 – 1500 1 ½ hrs; 10 minute team presentations + 5 minute review (6 x3 mbrs)

1500 – 1510 **Break 3**

1510 – 1530 Go over Role Play

1530 – 1600 Module 7: Extend. Link to website, e-coaching, end in mind, resources, next step

Appendix B: Proposed Training Modules

A blended learning approach uses instructor facilitated class, multi-media instruction, active engagement, pre-assessment, follow-on instruction and use of job aids.

Under the ICARE model of instructional design, the following activities could occur:

- Introduction: Overview of the lesson, concepts, and objectives.
- Connect: Linking learning to theory or background knowledge; provide relevance, context. Watch a video on what went right or wrong.
- Apply: Linking learning to hands-on exercises. Automaticity and functional context.
- Reflect: Ability to put the learning into context, cognitive reflection.
- Extend: Applications that allow the learner to extend learning to other sources; Perhaps using a “fictional SME character” learning throughout each Extend module, culminating in prepared trainer.

The modules should be in contextual, and less focused on abstract “adult learning theories,” and more focused on applied techniques. Modules should scaffold and reinforce one another.

Module	Lesson	Exercises	Desired Outcomes
Module 1: Presentation The effective presenter	1. Multi-media 2. Effective presentation skills 3. Confidence 4. Define outcomes	A. Group exercise, design and give a short presentation B. Evaluate/critique	<ul style="list-style-type: none"> • Won't read from slides • Confidence • Eye contact, movement • Manage a presentation • Active learning • Public speaking
Module 2: Preparation	1. Room needs 2. Handouts 3. Exercises 4. Rehearsing	A. Use a job aid	<ul style="list-style-type: none"> • Practice = confidence • Minimize training snafus • Prepare/organize content
Module 3: Communication	1. Effective listening 2. Effective speaking 3. Verbal / Non-verbal 4. Questions/Feedback 5. Openings/Intros	A. Watch example/ non-example short videos B. Role Play C. Case Studies D. Tell me about you	<ul style="list-style-type: none"> • Communication skills • Listening (LEAPS) • Answer questions • Solicit audience participation
Module 4: Motivation	1. Define objectives 2. Relate objectives 3. Show value 4. Support learner confidence	A. Short video B. “See what John has to say about...”	<ul style="list-style-type: none"> • Knowledge Management • Context learning to office • Value of SAP • Instructor Credibility • Managing Change

Module 5: Evaluation	1. Defining learning outcomes 2. Are students learning? 3. Do students get it?	A. Short Quiz B. Student observe, practice, then do C. Team support	Link Instruction to Content Using Exercises to increase participation Student Expectations Group Dynamics
Module 6: Application	1. Team Teach 2. Handling problems 3. Dealing with difficult students 4. Managing class flow 5. Train a process/procedure 6.	A. Group Exercise B. Case Studies C. Video – “How would you handle it?” Or “LEAPS” How to listen, empathize with the students problems, ask the right probing questions, paraphrase their ideas, and summarize the question issues.	Handling Classroom difficulties Direct Learning Deal with difficult students Handling different questions Working with others Class Flow: Managing the class Preparation Time / Practice Learning Environment Gauging learning / Interest Presentation Skills Training a Process or Procedure

Using the ICARE module, both an online and paper copy for the class is recommended.

Care should be taken on the design of the paper copy. It should be able to be printed from the online website.

For the course, a paper copy in the form of a professional small handbook should be created. All the modules should be printed. Space should also be available for notes. It is recommended that the modules should be drafted concise and to the point. Their size should be five by seven inches, and something the trainers could carry with them as a job aid.

Appendix C: Website Concept

An ERP Intranet T3 website has the capability to provide necessary resources on demand for the SMEs, additional refresher training, links, articles, e-coaching email link, copies of the modules, multi-media exercises, and evaluation links. Online resources provide up to date information and support.

Along with the self-assessment, the website provides long-term learning commitment. Learning should not be a single event, but rather a systematic and systemic approach. The following topics are recommended for the website:

- Modules and Lessons
- T3 resources (articles, training tips)
- FAQs on T3 training; SAP resource link
- “Tell me more” link: Video/podcast examples, like “Dealing with difficult students”
- Case studies
- Self-assessment link
- Job Aids (such as: preparation, content checklist, day before planning)
- ERP information
- Ask ERP! An e-coaching link (who would get the email? TBD)
- Evaluation link

An example of the Home page design:

<i>////////// Navy SPAWAR ERP Training //////////</i>		
MODULE 1 “Communication”	Upcoming training	Self-Assessment Link
MODULE 2 “Presentation”		
MODULE 3 “Preparation”	Resources	SAP Help Guide
MODULE 4 “Motivation”		
MODULE 5 “Evaluation”	FAQs	Ask ERP! (E-Coaching)
MODULE 6 “Application”		
	Job Aids	Practice Exercises
MODULE 1: Communication		
<p><u>Introduction</u> In this module we will go over several listening/speaking skills.</p> <p><u>Connect</u> Think back to training or maybe communication that you thought was good (or bad)...</p> <p><u>Apply</u> Now that we have discussed communication skills, practice...</p> <p><u>Reflect</u> Think back to past training. How would you improve it?</p> <p><u>Extend</u> Read this, look at this short video...</p>	<p>Pre-training Checklist</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Job Aid To do 1 week from training</p> <p>To do day before:</p> <p>To do 1 hr. before</p> </div>	<p>Latest news from the SAP roll-out:</p> <p>Update on how the roll-out is going.</p> <p>Great job by Bill and Sandi!</p> <p>Tips from the field:</p> <p>Has this happened to you?</p> <p>Powerpoint tips by Jim and Karen...</p>

Appendix D: Group Interactive Exercise

Hands-On Application

Successful instructional design for adult learning recommends hands-on application of the learning content simulating the working context. For the T3 Trainer, a group exercise that allows for the learners to practice training is recommended as part of the one day training.

A hands-on exercise can easily be incorporated into the training schedule. It is recommended as an afternoon exercise, to allow the learners to demonstrate some of the earlier training concepts. Total estimated time is between one and one-half hours for “paper slides” and two and one-half hours for computer teams.

The amount of time dedicated to the exercise will depend on the size of the class. The following exercise is recommended for a 20-25 person class:

- Break the class into five groups (of four people)
- Provide the class with the training objective and exercise overview.
- Provide them with sample training slides (if no computer access) or sample powerpoint slides to make time more efficient.
- Provide each member of the group with a role.
 - Trainer: Will perform the training.
 - (*There may be two trainers to simulate the SAP training)
 - Student (fill a role of heckler, questioner, doesn't care, talker): The student will perform as directed (Given comment cards).
 - Evaluator: Evaluate the training. The evaluator will be given an evaluation sheet.
- Give each group 15 to 20 slides. Have them create a training which uses 10 to 12 slides. Have them prepare one training objective and outcome.
- Give the groups 30 to 45 minutes to prepare.
- Have each group perform. The instructor will facilitate. The other groups will participate as “students”

- Each presentation should take no longer than 10 minutes.
- At the end of the presentations, provide an exercise lessons learned and facilitate a discussion.