

Project Proposal: How to Work with SMEs Online Tutorial

<http://www.designbydi.com/UCD/SME/>

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Instructional Context

Instructional Need and Opportunity

It is often difficult to know what information to gather from a Subject Matter Expert (SME) when creating training. When instructional designers (IDs) know how to work with SMEs and are able to gather the proper information, they are likely to create better training.

I had an opportunity to provide online training for IDs to enhance their ability to work effectively with SMEs. I conducted a survey to ask learners who may be interested in this training course and their thoughts on working with SMEs. Even though many of the respondents had some strategies for working with SMEs they still felt that it was challenging.

Why is it important to address this instructional need and opportunity?

It is important for IDs to know how to work effectively with SMEs. Some benefits of knowing how to work with SMEs are:

- Proper information is gathered
- Effective training is created
- Correct knowledge is obtained
- Credibility of training materials
- Buy-in from stakeholders

In a survey that I conducted 63.6% said that they had difficulty working with SMEs. So, by providing this online training for IDs they may learn at their own pace new techniques or strategies that will help them work effectively with SMEs. According to Dr. Mike Keppell (Keppell, 1997, 1999), Head of the Centre for Integrating Technology in Education:

Research on instructional design has not adequately addressed the conceptualization by the instructional designer of unfamiliar content as presented by a subject matter expert. There is widespread acknowledgement in the field of instructional design of its importance but there appears to have been no systematic efforts to develop a comprehensive strategy for the conceptualization and elicitation of subject matter knowledge. This paper addresses this 'gap' in the field of instructional design and outlines a number of key principles to consider in interacting with subject matter experts. Due to the crucial and unique role of the subject matter expert, the instructional designer must streamline the flow of information to prevent a communication 'bottleneck'. Without effective principles for interacting with the subject

matter expert, valuable time will be lost understanding and organizing the content, hence the need for an efficient and effective method to assist in the instructional designer–subject matter expert interaction.

As Dr. Keppell suggests, there is a valid need for IDs to learn to work effectively with SMEs. Most IDs interact with SMEs everyday in their jobs, so finding ways to save time, resources, keep deadlines, and keep the communication lines open is essential.

Rationale for Delivering Project on the Web

The decision to deliver this training online was made to address the fact that many of the learners I am trying to reach are either working or attending school or both. The time available to many of the learners is limited, so if I can offer them online training that they can take when they have time the learners are more likely to be able to take the training.

Instructional Solution

I plan to create an online/web-based learning course using immediate-feedback checkpoints, crossword puzzles, stories, and scenarios to guide the learners through an interactive experience about how they can work effectively with SMEs. The design goals that address this solution are:

1. Learners with a computer and Internet connection will have easy access to the course.
2. IDs should get training on various techniques and strategies on how to work effectively with SMEs.
3. Learners understanding of the content will be checked throughout the course and in a final assessment.
4. Learners will be provided with a checklist of how to work effectively with SMEs for future reference.

Outcomes

What should learners be able to do in their job or in their studies because of this instruction?

IDs will learn various tactics and strategies that they may use when working with SMES. These tactics and strategies will help IDs improve the relationship they have with the SMEs they work with and allow them to gather the correct information for their projects.

What specific results are desired?

For professional IDs the specific outcomes varies per organization. In the professional arena IDs should be able to work with the SME to obtain the needed information to create the appropriate training. Keppell (2000) writes there are a number of key principles that IDs should adhere to when working with SMEs:

1. Clarify roles and expectations
2. Adapt the interview format to the SME
3. Develop generic questions to use throughout the interview

4. Map out strategies to organize content
5. Create storyboards from the organized content

For students in the ILT program the ILT Competencies should be used as guidelines for creating instructional design. In this project the following ILT competencies will be addressed:

Reflective Practice

1. Take a systems view to understand the context of the project.
This competency is addressed from how the learner's needs were assessed, to developing the tasks, to creating the training, to the final evaluation.
2. Use cycles of reasoning as tools for problem-solving the various techniques and strategies used in the training.
This competency is addressed by using research and surveys and then analyzing the data to create the training.
3. Promote collaboration, partnerships, and relationships for full inclusion with stakeholders, clients, subject matter experts, team members, etc.
This competency is addressed by working with the learners through the surveys, course assessment, course user testing, and expert reviews.
4. Be a lifelong learner and professional
This competency is addressed by learning new software, such as, the Macromedia Suite 8 tools to create the online training. These tools would then be part of my toolset to continue creating future training.

Planning & Analysis

5. Conduct a needs assessment for learning or performance interventions
This competency is addressed by creating a survey for the learners, and using research results of experts in the IT field.
6. Conduct a learning or performance instructional analysis
This competency is addressed by using the results of the survey and research data to help in the development of the training.

Design & Develop

8. Apply various theories/strategies and current research, and consider local needs and constraints to design activities and experiences for learning.
This competency is addressed by using theories, such as, authentic or active learning strategies to help keep the learners engaged. These strategies include immediate feedback, games, and stories.
9. Design learning and performance products and resources that reflect an understanding of the diversity of learners and groups of learners
This competency is addressed by having online training that uses interactive learning with graphics. The training will engage the visual learner, the content learner, and the hands-on learners.
10. Develop products and resources to support learning and performance
This competency is addressed by providing an interactive experience through games, stories, and immediate feedback. Learners will also have a checklist about working with SMEs for future reference.

Evaluate & Assess

11. Evaluate effectiveness of programs, products, or practices
This competency is addressed through the user testing and expert reviews of the training before it is available to all users.
12. Assess student/participant learning
This competency is addressed through the checkpoints and final assessment at the end of the training.
13. Utilize research methods to investigate a learning or performance problem, issue, or trend.
This competency is addressed through the research I conducted on the performance problem and issues that IDs have when working with SMEs. I obtained the research through various internet searches, as well as, reading several articles found in online databases.

Implement & Change

14. Applying theories of diffusion, adoption, and change to a local problem, develop a change strategy is shown by using the data gathered from the survey and experts from my research to detail effective ways IDs should work with SMEs.
This competency is addressed with the active learning strategies that will give the IDs practice in how to deal effectively with SMEs in future interactions.

Management

16. Employing effective strategies to manage an Instructional Design project.
This competency is addressed in this project by planning the outline of my project and following the steps to completion. Managing my time to get the project completed by the deadline.

What indicators will be used to determine if desired outcomes have been achieved?

Throughout the training there will be checkpoints to reinforce the learner's understanding of the content. There will also be games, stories, and scenarios to further enhance that the learning is retained. The indicator that will determine whether all of the previous strategies worked is the final assessment at the end of the training. The final assessment will be scored so that I will know if the outcomes have been achieved.

Instructional Content

Learning Objectives for the Instruction

1. Given a list of training project roles the learner will be able to identify three roles of a SME and of an instructional designer after completing the course.
2. Presented with suggestions for how to work effectively with a SME the learner will indicate three strategies or tactics that are most appropriate for various situations after completing the course.
3. Given a list of good listening techniques the learner will be able to identify which techniques should be used when working with SMEs for the best results after they have completed the course.
4. Given a list of good questioning techniques the learner will be able to match the techniques to the best SME situation after they have completed the course.

5. Presented with a list of activities for working with SMEs the learner will be able to arrange the activities to designate when the activities would occur during the SME relationship after they have completed the course.
6. Presented with the process of conducting SME meetings the learner will be able to indicate whether the SME or the instructional designer is responsible for the project task after they have completed the course.

What learning resources will learners need during instruction?

At this time I do not plan to offer any learning resources that the learners will need during the instruction. If I do end up adding that type of instructional learning resource I would make it available as a downloadable link within the page where the learner would need the resource. I would also create a resources/job aid page at the end of the course to offer the learning resources as downloads for the learners as they finish the course.

How will you determine if learning objectives have been met?

Throughout the training there will be checkpoints to reinforce the learner's understanding of the content. There will also be games, stories, and scenarios to further enhance that the learning is retained. The indicator that will determine whether all of the previous strategies worked is the final assessment at the end of the training. The final assessment will be scored so that I will know if the learning objectives have been met.

What are the major topics that need to be included in the instruction?

Provide a high level outline.

Introduction

- Course Menu
- Course Introduction
- Course Objectives
- How to Navigate

Module One: Prepare to Work with the SME

- SME tasks
- ID tasks
- Define the purpose of the SME meeting
- Prepare by researching the content and the SME
- Organization is key
- How to conduct a SME meeting

Module Two: Work with SMEs

- Listen intently
- Carefully phrase questions
- Respect the SMEs time
- Different ways to interview the SME

Module Three: Follow-up SME Activities

- Ways to show SME appreciation

- Organize meeting notes and send for approval
- Schedule follow-up meetings

Module Four: SME Stories and Interactions

- Potential problems in SME meetings
- Effective SME meetings include creative listening and questioning techniques

Conclusion

- Course Conclusion
- Re-cap Objectives

Job Aids / Resources

- Question Methods
- Example Thank You Note
- Example Email Meeting Request
- Effective Listening
- Example Meeting Notes Template
- Strategies for Working with SMEs

Final Assessment

Learner Needs and Characteristics

Who are the learners?

- Age Range: 20-80
- Gender: Any
- Educational/Professional Level: Some college to Graduate level or a professional in the work place
- Achievement Level: An ID who works with SMEs or wishes to work with SMEs
- Prerequisite Knowledge/Skills: Basic computer programs to create documents or programs; basic communication ability, wiliness to work with others
- Socioeconomic Background: Lower to Upper Middle
- Learning Style Preference: Desire to learn independently; self motivated
- Motivation: Middle to high
- Attitudes: Social, communicator, self-motivated with a desire for self-improvement
- Expectations: High

The audience for this program consists of student or professional IDs who need to work effectively with SMEs when designing educational training. These individuals could be undergraduate or graduate college students or professionals in the work place.

What do they already know about the topic?

Some of the learners that I surveyed felt that they did not need any help working with SMEs. However, with 63.6% of the IDs surveys feeling that the process of working with SMEs to be challenging there can be room for emphasizing known strategies and introducing new strategies for working effectively with SMEs. Most IDs in the survey have some strategies to help them work effectively with SMEs before, during, and after meeting with the SME. Many still felt challenged in how to best work with SMEs.

What should they know about the topic?

Many IDs in my survey felt challenged working with SMEs for the following reasons:

- Disconnected when SME is not located in same location
- Access to SME is limited
- Transfer of information is difficult to capture
- Response time of SME is slow
- Amount of knowledge from SME is too big, and scaling it down sometimes offends the SME
- Smaller detailed steps are often left out as SMEs do not feel it is relevant information to impart
- Quality of collaboration is small because of fears and individual personalities

The above challenges will be covered in the course and are within the topics detailed in my high-level outline. Overall IDs should know what they need to do before, during, and after meeting with a SME.

Do learners think the topic will be useful?

In my survey over half the survey respondents indicated that they felt it challenging to work with SMEs even though most of them had strategies to do so. One survey respondent said “Challenging because: Content is king and that SMEs are often trainers, but not IDs. **I am glad you are doing this course as this topic is often trivialized.**”

Technology Skills

The learners that I am trying to reach are university students or professional IDs. These learners use technology in their classes and at work. Many of the learners would very likely have taken online courses or even created online courses. The IDs technological skills and attention to detail they use in their work makes them good candidates for online training.

Motivational Characteristics - What factors could derail their success?

The learners I am trying to reach are either studying to work in the ID field and/or already work in the ID field. Their motivation to learn about working effectively with SMEs is high because most of the IDs today deal with SMEs in the training projects they create. In the survey that I conducted 63.6% of those surveyed feel working with SMEs is challenging, so those learners would be especially motivated to take this course to learn new or refresh techniques and strategies they use when working with SMEs.

Factors that may derail learners from taking the course may be that they do not have time or they may feel they already know everything they need to know about working effectively with SMEs.

What are their cognitive and physiological characteristics?

The learners that may take this course would expect the online training to be interactive, and informative. They would expect that the graphics would pertain to the learning, and the text would be concise, and the interactivity would add to the training to help reinforce concepts.

Under what circumstances will they be learning?

Most of the learners are either studying to work in the ID field and/or already work in the ID field so they have access to computers and browsers through school, work, or home. So, learners would be working on computers they already own or computers they access from school or work.

Under what conditions will they apply the instructional content?

In the survey that I conducted 63.6% of the learners felt that working with SMEs was challenging. Even though many of these learners already have some strategies they use with SMEs additional strategies would be helpful. These learners would be able to apply the new strategies the same way they apply their existing strategies in their everyday work.

Is their participation voluntary?

Participation in this online training is voluntary. Over half of the surveyed learners volunteered to take the training when it is completed. The training course will then be online for anyone to take as needed.

Project Management

Project Timeline

The milestones in my project are:

1. Needs assessment survey - completed
2. Research topic for content of course – completed
3. Project Proposal – April 9, 2006
4. Create content, images, interactivity for course – April 15, 2006
 - a. Expert Review – April 18, 2006
5. Website for online training project files – basic design in progress
 - a. Add content, images, and interactivity to webpages – April 18-25, 2006
6. User testing and evaluation of completed course – April 26- May 2, 2006
7. Final updates and go live – May 3 – 7, 2006
8. Project Journal – in progress, completion date May 08, 2006
9. Training course completed – May 08, 2006

List the resources to complete this project. What are the anticipated challenges in obtaining needed resources? What are your plans to overcome or minimize these challenges?

1. Expert reviewers
 - a. Joni Dunlap
 - b. Dave Young
2. Expert Content reviewer
 - a. Scott Switzer
3. User testing volunteers
4. Computer with Macromedia software
5. Hosting server for website

Anticipated challenges for expert reviewers are that they have the time to review the material. To mitigate the chance they will not have time I am providing a timeline and providing materials as I get them done to allow them more time for review. The user testing volunteers are already lined up and to mitigate the chance that they will not have time I have given a whole week for user testing. Anticipated challenges for using the computer with macromedia software and the hosting company are that they may go down. Alternatives are to use my laptop or school computers. As for the hosting of the website, I would turn it in on CD.

How will the content for this project be obtained?

The content for the training course will be obtained from research that I am conducting. Mainly readings from experts in the field of ID work. I also have enlisted the help of two expert reviewers to help determine that I use good and correct information in the training.

Learning Activities

Describe overall instructional approach

The overall instructional approach uses some direct instruction where the learner will view information about specific techniques or strategies used when working with SMEs. Then there will also be some more active or constructivist approaches with the use of interactive feedback, stories, and case studies. These last more active instructional approaches allow the learner to take a more active role in the learning so that there will be more retention of the learning. These approaches are good for the audience in this training as in the ID field IDs create more active learning content and thus expect to see that type of strategy in the learning they take.

Support for the design decision chosen can be found in Michael Allen's book "Guide to Elearning" (2003):

To stimulate learning

- Require the learner to solve problems and do things
- Dramatically demonstrate the impact of poor performance
- Dramatically demonstrate the impact of good performance

To transfer skills

- Provide feedback
- Use job tasks as the basis for training design, case studies, and examples
- Embed the physical and psychological cues of the job into the instruction

Rationale for learning activities

The rationale for active learning activities is summed up by this statement by Malcolm Knowles, a leading learning theorist. Knowles (1980) suggests that adults in a work situation would want to learn skills associated with their job. As adults recognize the need to learn they may initiate the process of learning experiences and tend to offer personal experiences that raise the level of reflection in the learning. Then as they practice the learning skills or knowledge in a safe learning environment, the student's experience a higher level of accomplishment. As a result, the learners may then feel more confident to apply the new knowledge or skills in the actual work environment.

The reason for using the learning activities that I have chosen is to give the learner a chance learn new skills they may use in their work as IDs. Especially the interactive activities should allow the learners to retain what they learn and then be able to use that knowledge or skill at a later time in their work.

Appendix A

ID Survey

Hello everyone,

I am conducting a survey on how we, UCD/ILT students and professionals, work with Subject Matter Experts (SMEs) while managing and/or developing instructional design projects. Many ILT students and professionals will at one time or another need to work with SMEs and knowing how to do that effectively is a great skill to have in the Instructional Design (ID) field. My intent is to find out how ILT students and professionals are currently working with SMEs and then create an online training course to address areas where ILT students and professionals may lack the knowledge or the skills to work effectively with SMEs.

Please click on the link below to answer ten questions; five short questions where you select a Yes, No, or N/A answer and five fill-in-the-blank questions. It should take you no longer than 8 minutes to complete the survey depending on the length of your answers. The answers will be tallied through the my3q.com website and emailed to me, so you only need to submit your answers. Please complete the survey by the end of the day, Friday, March 24, 2006.

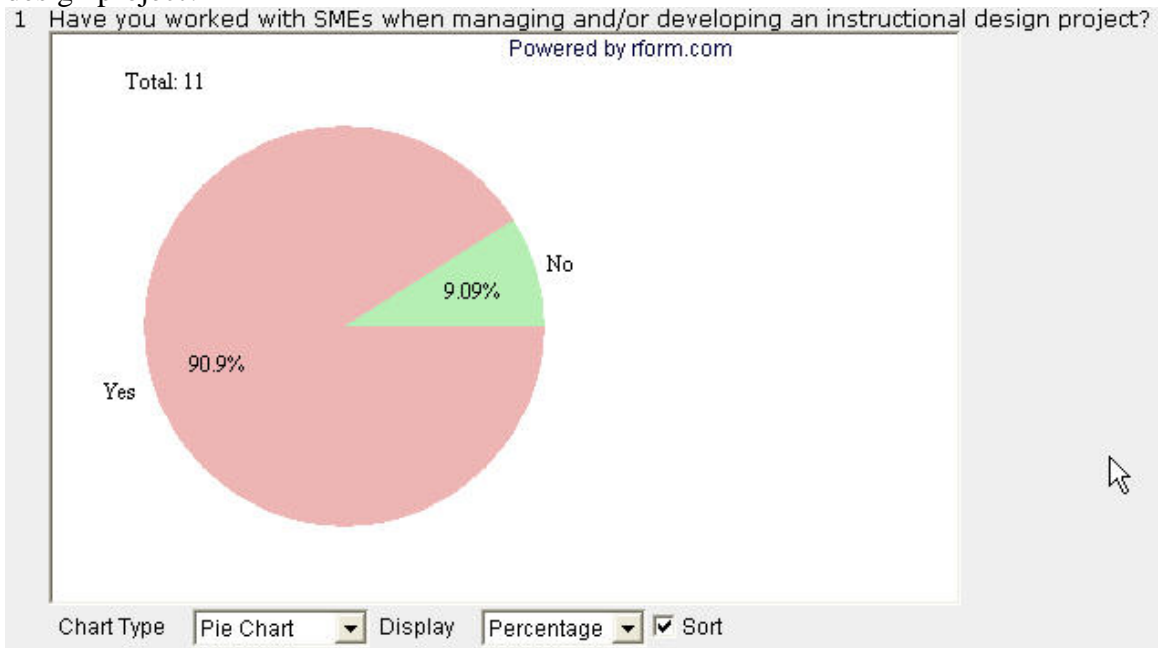
<http://www.my3q.com/go.php?url=dpeach2959/49202>

The results of the survey answers will be incorporated in my needs assessment paper. No names will be used. Thank you for your participation! Dianne Calhoun

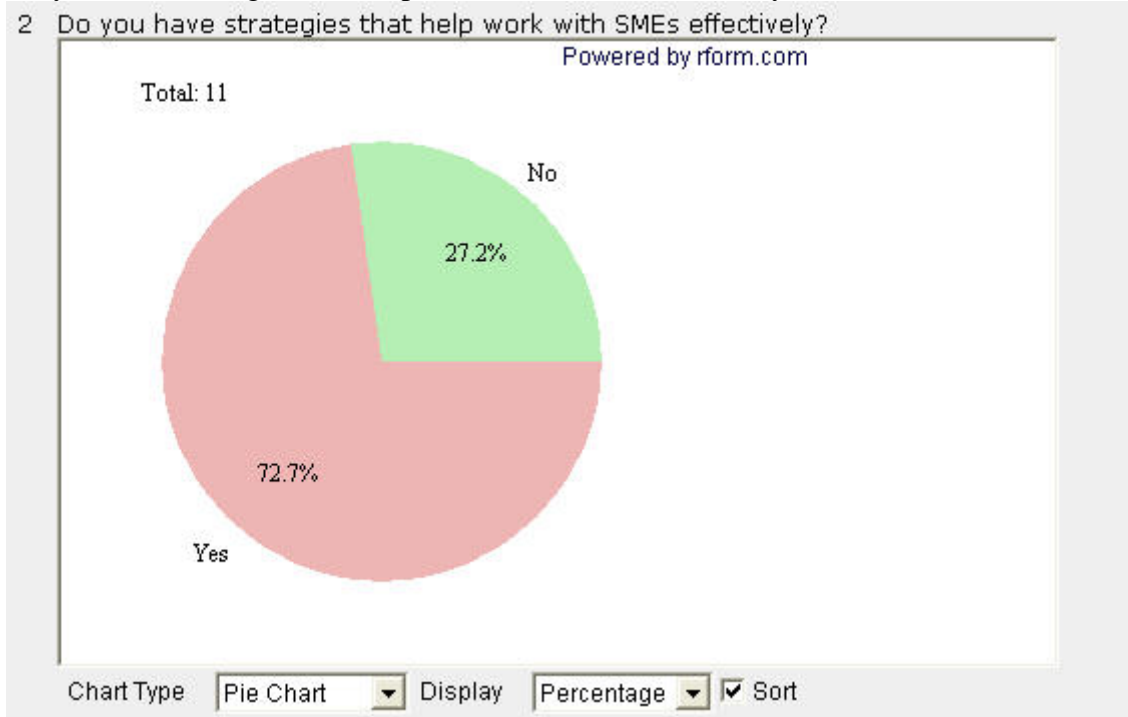
Questions on Survey:

Questions 1-5: “Yes”, “No”, and “N/A”. Questions 6-10: fill-in-the-blank answers.

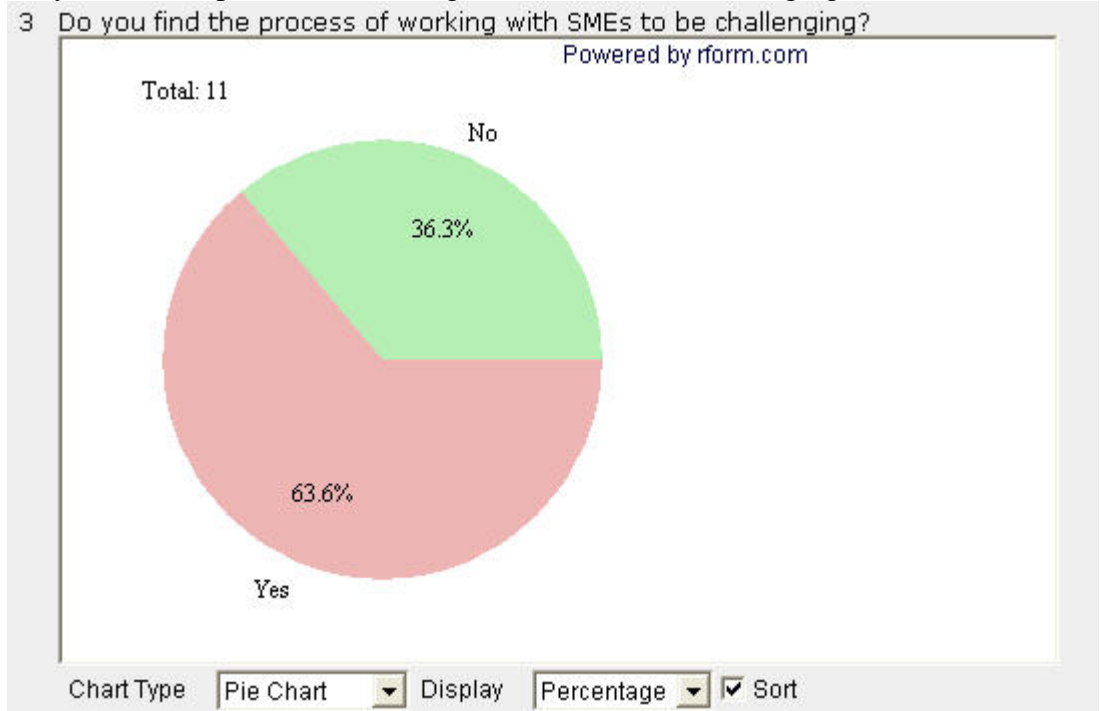
1. Have you worked with SMEs when managing and/or developing an instructional design project?



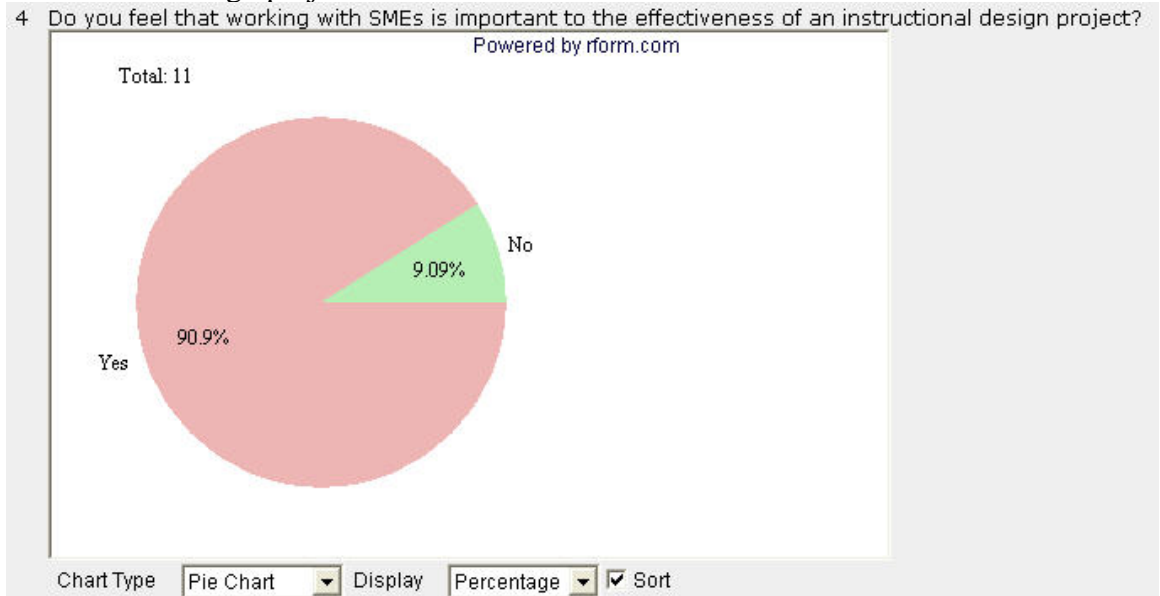
2. Do you have strategies that help work with SMEs effectively?



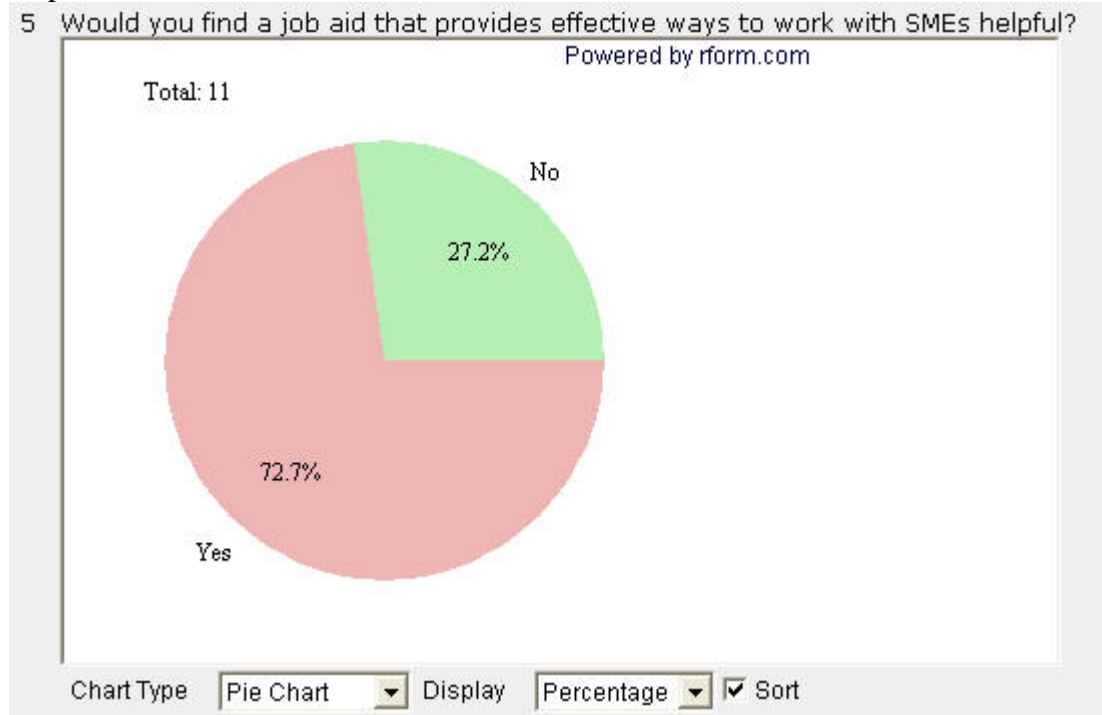
3. Do you find the process of working with SMEs to be challenging?



4. Do you feel that working with SMEs is important to the effectiveness of an instructional design project?



5. Would you find a job aid that provides effective ways to work with SMEs helpful?



6. What steps or strategies do you use before meeting with a SME?
- Provide SME with as much notice as possible, flag for them the topics I want to talk about.
 - Meeting face-to-face if possible. Writing up a list of content needed to meet the objectives. Studying the content as much as I can.
 - I send a letter of introduction that explains who I am, what the project is and what their role will be.
 - Never have worked with one
 - Define objectives and outcomes.
 1. Make a list of very specific questions. 2. Make a list of materials that you need from the SME in relation to the content as well as the format you need it in (diskette, hard copy, etc). 3. Clearly lay out the objectives of the project and my role in it.(not necessarily in this order).
 - Use 1st meet as an ice breaker, get to know one another
 - It is critical to explain everyone's role on the project. For example, if I have an editor assigned to the project, then the SME needs to know that so he/she does not take the time to "edit" a document. It is also important for the SME to either participate in or at least review any analysis documents and understand the "big picture" of the project. I also find that terminology is a big "issue" so it is important to have a glossary for everyone on the team, with definitions everyone can accept and use. It is surprising how long it sometimes takes to get this glossary written but it really does help reduce "friction" later.

- i. -Organize priorities & objectives of the meeting; -Know as much about the subject as possible (Research); -Research background of SME; -Write questions; -Bring method of recording; -Bring business card
 - j. Agenda
 - k. I prepare questions, research the topic, get to know as much as I can about the SME
7. What steps or strategies do you use during the meeting with a SME?
- a. Asking their opinion, trying to build a personal rapport to have them want to support our training product.
 - b. Informal interviewing then more specific questions.
 - c. I have a clear idea going in of what I need to accomplish and this will have been communicated in the introductory email. Then, I let the SME do most of the talking. I ask clarification questions where necessary. At the end of the meeting, I always tell the SME the next steps and give them a timeline of when I might need their help again.
 - d. Never have worked with one
 - e. Flexibility.
 - f. Patience! Normally I set out an agenda with check boxes so we know what we need to do (if we haven't had a chance to do this collaboratively by e-mail first).
 - g. Listen Listen Listen
 - h. I have a form for SMEs where I ask them to "rate" changes. 1= critical change; it needs to be corrected or someone will get hurt. 2 = important change that needs to be addressed but it could wait. 3 = change we need to consider in the future and/or if time and resources permit.
 - i. -Discuss objectives and priorities; -Listen and encourage brain storming from the SME; -checkoff questions as they are answered; -Setup future communications
 - j. Flexibility, many tools in toolkit
 - k. Listen, take notes
8. What steps or strategies do you use after meeting with a SME?
- a. follow up with the SME to thank them for their investment of time, keep them posted on how the product is going.
 - b. Writing up everything that I can think of.
 - c. I develop a draft of the project and then send it back to the SME for approval. If I have questions for follow up, I contact the SME.
 - d. Never have worked with one
 - e. Document and distribute outcomes of meetings to make sure what was determined is clear and agreed upon.
 - f. Summarize the meeting and what was covered as well as send the checklist with things marked off and things that still need to be covered.
 - g. Capture and reflect information gathered
 - h. Since I don't find design and development a linear process, I don't exactly know what to say about "steps after meeting with a SME." Design and development, for me, are iterative as the team learns and grows together.

SMEs are usually helpful if they are an integral part of the team and understand the goals of the project.

- i. -immediately type out and organize notes; -Immediately write down more questions as they come up; -send copy of notes to SME and ask for additions and corrections; -Thank SME for meeting and verify next meeting by email
 - j. Notes
 - k. send copy of minutes, thank the SME
9. Please describe why you feel that working with a SME is either challenging or not challenging?
- a. Working with a SME is particularly challenging for me because they are recruited to help with our project in a fairly disconnected manner - I do not get to meet them or build rapport before they have to jump straight into a lot of work. Also, we never get to meet face-to-face, which would be hugely beneficial.
 - b. Getting access to SMEs is difficult because their time is limited. The transfer of their expertise is often difficult to capture if you don't know the subject.
 - c. The biggest challenge I have found working with SME's has to do with SME's being in remote locations. It is difficult to convince them that I have deadlines and that they need to respond to my emails or voicemails in a timely manner. On more technical projects, it can be difficult to convince the SME that all of their detailed knowledge is too much for the learner to handle and it can be difficult working with them to scale it down.
 - d. The info they provide helps guide design
 - e. As SMEs are so comfortable with the process that sometimes they forget to mention the smaller details.
 - f. I think it is challenging because people really don't have a culture of collaboration - it is almost a culture of know everything or nothing. Each has their fears about interacting (egos, self-esteem, etc.) and each has their own personality. Professionalism, focus, and well communicated objectives as well as expectations (the latter usually from bosses) really helps two individuals get together and work effectively.
 - g. It's a people issue, one really needs to build rapport with the stakeholders.
 - h. SMEs are not "remove and replace" entities but they are sometimes treated as such. "Thanks for the info, now go away." SMEs should be part of the team from beginning to end in order to create a solid team that trusts and respects each other. Like most project "problems" this too is often a management problem, e.g., the SME has not been given enough time to be a fulfilled member of the team.
 - i. Not challenging because I am a very organized person who enjoys listening to and learning from others
 - j. Challenging because: -content is king; -SME are often trainers, but not ID. Glad you are doing this - it is often trivialized. Would suggest that you

focus on making your recommendations non-linear. Complex problem that cannot have a linear solution.

k. It's challenging because you never know if the SME is going to be easy or hard to work with.

10. Would you be willing to evaluate the online course "Working with SMEs" once it is completed? If yes, please send me your name and email address to dpeach2959@aol.com and put "Evaluate SME course" in the subject line of the email. I will send you further details when the course is finished.

Author Note



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Beverly Dianne Calhoun is now a Masters student in Information and Learning Technologies,
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Resources

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