

An Exploratory Study for Building a Conceptual Framework of Customized Training

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Introduction

The term “customized training” has recently been used often when discussing training. Many training development companies and community colleges selling their training programs use it frequently for engaging prospective customers and companies considering purchase of their products. So, what is customized training?

Definition of Customized Training

A shift has emerged in corporate training¹ from a training-driven approach to a human performance-driven approach. In other words, people want the training to impact the bottom line by enhancing performance, not just for the training to occur for the sake of training itself. In order for training to influence business significantly, it needs to be closely aligned with business goals and also be designed to address these goals from the beginning. To fulfill corporate leaders’ growing need for training, it is critical that training should be customized for a specific company and for specific target audience and customization be embedded in the design and development of training products. So what do we mean by customization?

According to the definition in a dictionary, the term “customize” is to *make or change something to suit the needs of the owner* (Oxford Advanced Learner’s Dictionary, 6th Ed.). By employing this definition, customized training can be defined as training made or changed to address the needs of the target learners.

One training development company website defines customized training as follows:

“Customized training is the process of tailoring training to organization’s needs either by adapting an existing program or developing a new program....We can customize one of our existing programs or develop a course for you from the ground up.

(<http://www.corexcel.com/html/customized.training.contact.hours.htm>)”

In addition, New York State Department of Labor defines customized training as training “that is designed to meet the special requirements of an employer or group of employers.” (<http://www.workforcenewyork.org/qaojtctrng.html>)”

In the two definitions, one from a training development company and the other from a department of labor, customization requirements of employers and interests of organizations is emphasized since they regard customized training as products in high demand. In these definitions, both consideration for employees and the emphasis on the end user’s needs are invisible. Blackmon and Rehak (2003) put much more weight on trainees than employers in the definition of customized training.²

They described a model for role and competency-based customization by using learning technology standards (e.g. learner profiles, competency definitions, sequencing rules, learning objects). One of the most salient characteristics of the model lies in dynamic assembly of content objects extracted from content repositories to enable the creation of customized learning, and dynamic creation of optimal learning strategy that suits the needs of the learners. We can learn several ways to customize learning by considering roles and competencies of the target learners while customizing content and learning activities.

The characteristics described in the definitions presented so far are not sufficient to grasp a whole picture of customized training.

Purpose of Study

Throughout all these definitions (both of training and customized training), it is very clear that there are two different perspectives on customized training: employer’s vs. employee’s standpoint. However, in this study, these bipolar standpoints may not be differentiated under the assumption that all the training is intended and designed to impact the bottom line in the long run.

The purpose of this study is to explore the building blocks of the concept of “customized training” beyond its conventional definitions and to form a comprehensive conceptual framework³. Furthermore, the

current practice of designing and developing customized training in corporations is explored and investigated to answer the following research questions, which are two-fold. For the product dimension of customized training, reasons and ways for customizing training will be addressed. For the process dimension, major issues faced and activities involved in the design process of customized training will be identified.

For the product dimension, the four questions will be addressed:

- There must be assumptions about training. These can serve as rationale for customization. *Why is training customized?*
- The objects that can be customized may vary from content to methods to resources. *What is customized in training?*
- Training can be customized with regards to individual role and competency or current level of skill and knowledge. Sometimes, individual attitude or learning style can be considered for customization. *What do they consider for customization of training?*
- In addition, *how can the current customized training be improved for better quality?*

Description of the current process of design and development for customized training can give practical guidelines for practitioners. It is possible that any specialized process of customized training exists. For the process dimension, three questions will be addressed.

- *What are the major elements of design process for customized training?*
- *What are the major issues instructional designers have faced in the process of design for customized training?*
- *What is the ideal process of designing customized training like? How should your current design practice be improved?*

Answers to the questions will provide building blocks that can describe the current practice and systems for customized training. Understanding these components and their relationships can give insight to training designers on how to approach and actually develop customized training. Design and development for customized training needs a conceptual framework which can include all relevant elements and can depict relationships among those elements. The conceptual framework will help training designers to understand elements to be considered in training design and to see those elements from a systemic point of view. The value of this study may lie in explicit visualization of building blocks of design and development of customized training residing tacitly in training designers' mind.

Method

Research Design

Due to deficient amounts of corporate research on customized training, it is necessary to meet practitioners who have experience in designing and developing customized training and to hear their narratives in order to understand the current practice and to investigate the research questions.

As Yin(2002) reported, "the case study has peculiar advantages when research questions are related to how and why, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context (p.1)." In order to utilize the full advantage of the case study, multiple methods were integrated. Hence, seven face-to face interviews as well as rich and in -depth document analysis of web sites and documents acquired from the interviewees were employed. When necessary, a follow-up interview was conducted via email or on an online synchronous chatting tool.

Cases

The units of analysis were seven training designers (developers) who have experiences in customized training. Real names of the interviewees are replaced by pseudonyms.

Kevin has 10 years experience as a training developer and is working as vice president in a custom training development company located in the mid-western part of the United States. Michael has 2 years experience as a training designer and is working for the same company as Kevin. Stella is working as a task analyst in a pharmaceutical company which is also in the mid west. Brad has 5 years experience as a course developer and is working for the same company as Stella. Eugene has 2 years experience as a training designer, working for a family restaurant company in Korea. Mira is working as a training designer in a company that produces food and animal feed additives in Korea. Susan is a training designer in a company providing information technology services. Kevin and Michael are working in a company that develops customized training for the client companies. The remainders are developing in-house training programs. In summary, three

male and four female, ages ranging from twenties to thirties were interviewed.

Data Collection

The Interview protocol was developed by adapting research questions for a more communicative style. The protocol was pilot-tested with peers to identify unforeseen problems and was revised based on the results of the pilot test. For face validity of the instrument, two experts reviewed the protocol, which was then modified according to their comments. All questions were open to allow new or modified questions as the interviews progressed.

Four interviewees in the U.S. were interviewed face-to-face. Three of the interviews took approximately 60 minutes while the one with Brad took 30 minutes. All the interviews were recorded with a digital voice recorder after acquiring permission and later transcribed word by word. The interviews with the other three in Korea were conducted through an instant messaging tool. All the texts of the interviews were saved as text files for further analysis. For validity, the researcher explained the scope and the purpose of this research to the interviewees to make sure that both sides interpreted the research questions in the same way.

Based on data from the first interview, the follow-up questions were sent via email to the interviewees in cases where further elaboration or clarification was needed. Through the follow-up interviews, additional in-depth and data were gathered.

During the interview, the researcher took notes that were utilized for asking more in-depth questions and for clarifying interviewee's answers.

Data Analysis

After completing data collection, the briefly summarized extracts of the interviews were sent to the interviewees to ensure reliability as a means of member checking. The transcripts were reviewed several times in order to find emergent themes.

Extensive literature was reviewed for gathering data to establish the conceptual framework of customized training. Considerable amount of web documents related to customized training were collected through the Google search engine and were later analyzed. Additionally, a recorded presentation by Kevin and Michael, a corresponding handout, and a whitepaper of their company were analyzed.

Results

Why is training customized?

Training should impact the bottom line From the organization's perspective, training should be a means for increasing profit. In order for training to address this need, it is required to be tightly aligned with business goals. As a rule, HRD strategies are established in conjunction with business strategies. Therefore, training, one of interventions driven by the strategies, is also expected to play a role in accomplishing business goals. Without considering business outcomes or having clear output images of training, training might be implemented in vain. In this sense, training should be customized to meet defined corporate business goals.

"I think all training in my company is customized. From the company's perspective, training is used as one strategy that helps employees accomplish short-term and long-term goals of the company. Therefore, unless it is not optimized, people complain about the training. Unlike schools, corporations have very concrete objectives and targets and require visible outcomes. We try to avoid unnecessary training that does not lead to business results. Therefore, business goals, business strategies and HRD strategies that inherited from the top management should be aligned with all training (Eugene)."

Business goals keep changing according to market trend, emergence of new product lines, change of management lines and environmental disruption. Training should be very keen to those changes and should respond to them aggressively. Most of the interviewees agreed that if it is separated from ever-changing business goals, training cannot satisfy the company or target learners.

The characteristics of the target audience are very diverse Just like other higher education fields, corporate training is very likely to encounter diversity in the target audience with regards to skill and knowledge level, learning style, and prior experience to name just a few. Especially if the company has several sub-industries and needs a training program to teach all employees across the industries, customization is crucial by taking into account the target learners' diverse characteristics, contexts where the training would take place, and the way that trainees would apply what they learn to their jobs.

We have our own way Every organization has its own procedure and learning culture. Of course all training cannot be developed by the organization itself. A considerably large proportion of training is supplied by vendors and neighbor universities. However, those training programs produced by others may not address all organization's unique procedure suitably nor care about the contexts. Therefore, training designers who build up in-house training programs feel that they need to provide customized training that fully attend to their own training needs and touch on their own unique way of doing things, especially if there is no adequate training material on the market.

"We customize because no materials exist either internally or on the market place. In our field there isn't a lot of pre-built training on sophisticated lab techniques or procedures. Also, 'the [pharmaceutical company name] way' is usually a little more stringent than standard practice because of FDA guidelines. So, a university course on how to perform a technique wouldn't be adequate (Brad)."

"The sort of business needs that they're addressing for companies or organizations. They cannot be adequately fit by a standardized generic training or books... often times their organizational problems that are very specific to [their] organization..you have your own culture and your own systems and so you need someone who can learn about and understand your specific challenges and then create training that addresses those specific challenges and in your context (Michael)."

If not customized, training doesn't work Compared to training designers for in-house programs, training program development companies might be more sensitive to the degree of customization of the programs they sell to the client companies because training in business settings never takes place in a vacuum (Molenda & Pershing, 2004, p.26) and the context where training would occur is hard to grasp at a glance from outsiders. Kevin and Michael stressed consideration of contexts where a specific company is located when they design and develop customized training. Also, they believed that there should be diverse versions of training customized to different target learners. They asserted that any training that does not consider the contexts is likely to fail. They reported that they need to understand what the target learners' jobs are and how they apply what they learn. Kevin stressed that training is not training at all but just information if it does not consider the context. Training designers should tailor training programs to address the context.

"As a matter of fact, it doesn't work if you don't customize it. I think so much instruction doesn't work. They try to address too broad audience and to fit in many organizations... You can write one book about management. But too many times, people don't learn from that book. You have to create an opportunity to learn from the book. You really want me to apply management back in my job. You need to understand what my job is. Need to understand how I apply. That's the principle. (Kevin)"

"I don't think that's instructional design inherently unless it focuses on customization. That's the design of our instructional design. Without it, it's just information. It's the instruction that doesn't take learners, context and business into account (Kevin)."

What is customized in training?

Based on data collected from the in-depth interviews with the seven training designers and document analysis, a taxonomy for what to customize in training is built in terms of what to learn, how to learn, when to learn and where to learn. By incorporating all the results, a provisional conceptual framework (see Figure 1) was constructed.

What to learn All the interviewees reported that they customize content to specific target learners. They adapt the scope and the depth of content. Sometimes they reorganize the content by adding real cases that help learners' understanding. Based on the result of front-end analysis, they customize the scope and the depth of content by taking the level of current knowledge and skill related to the content into account.

When there is a broad range of target learners, they create multiple versions of the same course by customizing the content.

"If we have a wide audience or a split audience with different needs and skill levels, we consider if multiple versions of a course would be the best solution. Recently we had a procedure that everyone in my department was required to be trained on. However, non-chemists didn't require as deep an understanding of the details of the procedure. So, we tailored the learning to the audience's

skill level and made the non-chemist course a little more basic with different learning outcomes and more background material. When appropriate we used course materials from the chemist course, which was more in-depth (Brad).”

So far the designers have reported that they customize what is to be learned by target learners during the design and development phase. However, there is another phase where customization frequently takes place. Training designers and supervisors of employees arrange and assign training programs to specific persons by considering their responsibilities and jobs. This phase comes after all training materials are already developed.

“Everyone has individual training plan. The training plan lists the classes and courses they need to take. Matching classes with job category is one of my tasks. This is considered customization. We have the courses like pieces, now we place those pieces to address job category needs. The object of customization is primarily about the content (Stella).”

“We defined general competencies that our company expects all employees to have. But they are not job or task-specific competencies. Anyway, all employees can access a tool that diagnoses their own competencies. According to the results, the tool would prescribe training solutions including other resources for enhancing their competencies to the specific learner (Eugene).”

How to learn Once the topic, the scope and the depth of the content are determined, the designers customize instructional strategies or learning activities related to “how to learn” along with the selected content.

“In order to get performance, you want to focus on wonderful performance, then you have to develop, you can keep content system. It’s the context that you are to customize. How am I going to apply this information? Not what is the content? So I talked to my clients. You keep the basic management content. But what you need to change is the context in which I apply. (Kevin)”

Customization of the learning process involves considerations on the sorts of content and accessibility of target learners to the training such as infrastructure, time availability and their understanding of instructional strategies and learning activities.

“Also, we customize mode of delivery. By taking into account the characteristics of individual task, we select the most effective mode of delivery. For example, there is a topic that cannot be trained through off-the-job training. Ultimately, the reason why we optimize the mode of delivery with the training content and objective is to maximize the effect of the training. Also we customize learning activities and other instructional strategies (Eugene).”

When developing a training program for all employees across the departments of a company, training designers consider characteristics of industries because certain employees in a specific industry have preference to specific instructional strategies. They also customize performance support strategies including EPSS (Electronic Performance Support System), job-aids, and informal mentorship programs according to the characteristics of training topics.

When to learn This facet of customization depends heavily on organizational learning culture and availability of employees to be trained. If your organization encourages self-regulated learning, overall training would be provided with a form of printed-self-study materials, job-aids, EPSS, and web-based instruction. In order to allow flexibility, the training designers select appropriate mode of delivery.

They also customize the timing of training in order to assure effectiveness and transferability of what they learn from the training.

“It is not reasonable to train people on something that they are going to perform in 6 months from now. It does not make any sense. You will forget everything. I think that we are making a change on their individual training plans that will address their needs. Instead of assigning them training that is not relevant right now, we just assign the training when they are close to performing the task. We are calling it just-in-time training. When a maintenance guy receives a work order (request to fit something), he or she will request training on the task that the work order requires. He or she will take the training right before to performing the task so that he or she does not forget the information (Stella).”

Timing is one of the aspects that training designers invariably customize in their practice.

Where to learn _There are several options on where to learn. In previous years, training usually took place in an instructor-led classroom. However, the places for training can be customized by taking into account sorts of topic, time-availability and effectiveness of training. In order to avoid unnecessary discontinuity of jobs and to reduce expenditure on travel costs required to send employees out of the workplace, on-the-job training, printed-self-paced materials, and corporate universities are options for customizing the location of the training.

What is considered for customization in training?

The items answered to this question were interpreted as factors that training designers focus on during the analysis phase as well as align with training programs. The quoted factors by the interviewees must play an important role in current practice of design of customized training.

Business needs Business needs determine the direction of overall HRD strategies. Training is one of the interventions to increase employees' performance and to reduce performance gap between the current status and the desired. Performance is expected to be evaluated with measurements of tangible contributions to business outcomes. Therefore, training designers should assure that their products are addressing ever-changing business needs by aligning training programs with such needs. All participants reported business needs as the most important aspect they tried to align with training. These business requirements drive training development more strongly than any other needs. They take precedence over individual learner's needs or department's needs.

Organizational learning culture _Organizations have their own unique cultures in many regards. The company where Eugene works has stressed self-regulated learning culture in the last few years. Therefore, the training designers have designed and developed training to leverage its learning culture. They focus more on the flexibility of timing and location of training to target learners. They also developed self-paced materials rather than instructor-led in-class training programs. This is one example of customization of mode of delivery of training to fit organizational culture.

Collective learner characteristics All interviewees invariably reported that they align the characteristics⁴ of the target audience with training programs.

Other participants also reported that they analyze the comprehension of instructional strategies or learning activities, educational background, and training preference.

Individual learner profile In addition to collective consideration of learner characteristics at design and development phases, training designers also consider the individual learner profile including his job, tasks, required competencies, history of training, and his career plan during the development phase of an individual training plan.

“All employees can access a tool that diagnoses their own competencies. According to the results, the tool would prescribe training solutions including other resources for enhancing their competencies to the specific learner. We also have a plan to develop a diagnosis tool for job-specific or task-specific competencies (Eugene).”

Content Characteristics Depending on the given content characteristics, training designers try to align the topic with appropriate instructional strategies. The characteristics include content domain (e.g. affective, cognitive, and psycho-motor), complexity, and volatility (e.g. stable or unstable).

Context in which learners apply what they learn In order to transfer what is learned from training into job performance, training designers need to understand contexts in which the target learners apply what they learn. Even with the same skills, learners have different environments, different tasks to do, and different ways to apply what they learn. Therefore, training designers try to align this context with training programs by thorough analysis of the job and the environment.

All of the themes and factors identified through interviews and document analysis were integrated into a single conceptual framework which describes the concept of “customized training”.

How can the current customized training be improved for better quality?

Most participants shared the sense that they are not fully satisfied with their current customized training and that there is room for improved customization. Even though they customize training by considering principal playing factors identified from needs analysis, learner analysis, and environment analysis, they all reported they are still lacking comprehensive and rigorous analysis owing to time and cost constraints. They all agreed that the more time they can spend on analysis and the better customized product they will be able to create.

One interviewee reported that it is very important for him to understand the client's business and learning objectives. Also, accessibility to subject matter experts (SMEs) that can provide what he wants is necessary. Close communication between training designers and SMEs should last until they ship deliverables to the client.

“Having a clear understanding of what their business and learning objectives are, having access to SMEs that actually are experts and can review. Making sure that they give you content you need. Having SMEs review your work and give feedback in timely manner, because we need to translate them into instruction properly and accurately. That's very important as well. (Brad)”

What are the major elements of a design process especially for customized training?

In contrast to prior expectation, all the interviewees did not distinguish the design process for customized training from the process for one-fits-for-all training because they all felt that what they work on is to design and build up customized training.

“I guess most training programs that companies develop by themselves are customized. It's very common practice in the corporate sector. So, it sounds a little bit awkward to label our practice especially as customization. Customization is being regarded as a must-have in all training design practice (Mira).”

All respondents followed Analysis -Design-Development-Implementation-Evaluation (ADDIE) process model. A prominent point drawn from the interviews is that they all put substantial weight on the analysis stage of customization.

Michael stressed iterative processes through recurrent and very close communication between the clients and the designers from the very beginning of the design process. All of the processes include the initial design of the company and approval from the clients iteratively.

“We followed ADDIE model...For new clients, to develop one hour of online training, it may take me 16 weeks to develop a course. For 16 weeks, maybe 4 weeks are for analysis and design. Another 6 weeks [are] for development. Another 2-3 weeks [are] for implementation and evaluation. At the end of the analysis and design phase, you have what you want to have. In the development phase, you have prototyping. During the prototyping, you will get feedback from the target audience to see if our assumptions are true and our design matches what we're looking for. We're not going to be 100% right but as we develop it we're still asking the same questions again. Is our assumption true? Is this a right balance between media and content? We keep asking these questions until we ship it to the clients (Kevin).”

In Kevin's case, they spend one quarter of the whole development process in analysis and design. Actually, the reason why he did not separate analysis and design into two seemed that two phases take place at the same time and they are very closely interwoven. Also, he stressed that they continue to show interim outputs to the clients and the target learners in order to assure they are on the right track in design and they are meeting the client's expectations. All feedback from the clients is used as a formative evaluation for revision.

Training designers who develop in-house training stated that almost all training programs are customized to address specific business needs, organizational traits and target learners' characteristics. They mostly build up training programs from the ground up. It is very rare to produce training by modifying or adapting existing training programs to specific needs or different target audience. The process does not significantly differ from what training designers in training development companies do. Differences lie in that in-house training program developers only contacted internal customers in their own organizations. Before entering the development phase, they tried to make sure that it makes sense to all related stakeholders.

However, most interviewees did not mention using a summative evaluation to see if the training is effective and lead the business outcomes. Brad admitted that evaluation is the weakest point in the whole training production process.

What are the major issues in the process of designing for customized training?

Getting help from stakeholders Most participants reported that they definitely need to involve interested parties such as management, target learners, decision makers and subject matter experts in the whole process of designing and developing customized training. They asserted that it is critical to get SMEs, management and target learners to help them identify true training needs and to understand the context, learners' characteristics is really critical to their practice.

However, stakeholders reported that they are so busy with their own work that they cannot spare the time to provide the necessary information to them and to establish a long-lasting relationship with HRD people. There is a shared sense among developers that if they acquire commitment and support from management and target learners, their work would be much more successful than it is now.

Design trade-off Training developers strive to find equilibrium between investment in customization and its outcomes. With the limited time and budget, they are asked to produce training to maximize profits.

“More customized? No, it's already customized... I think there should be limitations in our process where we make certain aspects of the courses that are very similar to each other. To do a completely different style of course for every client would be less efficient. There is always a design trade-off. (Michael).”

“Invested time and efforts for customizing training should turn out to be a result (Eugene).”

What training developers usually do is to portray “persona”, that is, collective characteristics of target learners from the learner analysis and to customize training programs to the persona's needs for the pursuit of efficiency. These days, however, there are a system and technology standards (e.g. Content Structure (CP 2002), Competency Definitions (RCD 2002) Learner Information Package (LIP 2002), and Sequencing (SS 2003)) to prescribe required training content and optimal learning strategies to a specific individual on demand with the aid of technology (Blackmon and Rehak, 2003).

Don't assume and be ready to listen Customization always requires comprehensive and thorough analysis of learners, contexts, organizations, and environmental factors that influence the effect of training. Therefore, most interviewees agreed that more thorough analysis can critically enhance the quality of customized training.

As Susan reported, having subject matter experts or trainers review and confirm the identified needs from their perspectives is very critical in customization. Verification from diverse perspectives on training needs should be done before stepping into the design phase.

“I learned that the most important [thing] in customizing training is to listen. People tend to assume what others need and want without listening (they may ask though). This is what has historically been happening in the Performance Improvement group... I learned that if I have not asked people what they need, if I have not understood what they do, if I have not met people in their work environments (e.g. buildings, offices, manufacturing areas)... I would not be able to customize their training because I would not know what their wants, needs and frustrations are (Stella).”

Most participants emphasized that making assumptions regarding training needs, learners, environments, and contexts, should be avoided. They knew very well that training designers tend to start working on training design with rough assumptions which are often not based on real data due to time constraints and heavy workload.

Furthermore, all organizations keep changing in all aspects, including organizational hierarchy, strategies for market, and job description. Therefore, training designers should be very sensitive to all of these minute changes within the organization. If not, they may overlook critical factors to consider.

Discussion

By using semi-structured interview protocol, the researcher improvised questions to clarify or to ask more about unexpected answers from the participants. Here, the things that deserve attention are discussed.

Design from scratch & low rate of reuse of existing training All the participants reported that they usually design from scratch and it is rare to reuse or adapt existing learning objects. Even though they said they are using learning management systems in their companies that are compliant to learning objects standard (e.g. SCORM), they do not design and develop learning objects at present.

Evaluation, the weakest point Both Michael and Brad reported that evaluation is the weakest part in the whole process of customizing training. They had a sense that true evaluations should take place on the job a certain amount of time after a training program is completed.

“I think a true evaluation would be six months to year down the road on how the person’s performance on the jobs changed to reflect on what they learned. So that would entail some follow-up survey or interviews. I don’t know they do that. From the whole point of training I would say down the road. Probably that happens very rarely now (Michael).”

When customization takes place? There are two phases where customization takes place. Design and development phase is one and implementation phase is another. The participants reported primarily about design and development of customized training. However, Stella and Eugene mentioned that customization can occur when individual learners plan individual training plans based on diagnosis or assignment from supervisors.

In the latter case, there is customization of training plans based on learner’s profiles including required job competencies, training history, educational back ground, and so on. In Eugene’s company, there is a learning management system (LMS) that has a competency diagnosis tool for assessing the gap between the current competency and the expected competency, as well as for prescribing learning solutions to fill out the gap based on the diagnosis. At this phase, training programs in training repositories can be combined dynamically to customize their learning plan relevant to their needs.

Conclusion

Through in-depth interviews and follow-up interviews, several noticeable facts were identified. First, corporate training designers customize training because 1) training should impact the bottom line, 2) target audience of training is very diverse, 3) each organization has own ways that cannot be addressed by external training solutions and 4) training will not work unless it is customized.

Based on collected data from the interviews and from document analysis, we identified four different themes to describe aspects of training that training designers customize. They are content, learning/instructional strategies, timing for training, and location.

In order to maximize customization of training, training developers consider business needs, and workgroup’s needs, organizational learning culture, collective learner characteristics, individual learner profile, content characteristics and context in which learners apply what they learn.

Most of the participants shared the sense that they are not fully satisfied with their current customized training and that there is much room for more successful customization. Even though they customize training by considering principal playing factors identified from needs analysis, learner analysis, and environment analysis, they all reported they are still lacking comprehensive and rigorous analysis owing to time and cost constraints

As the major elements of design process for customized training, they mentioned typical ADDIE steps. However, they emphasized a comprehensive and thorough target audience and stakeholder-involved process and front-end analysis.

Training designers seem to have common issues in developing customized training. They stressed that it is really hard but critical to get help from stakeholders and there is always design trade-off by means of seeking equilibrium between investment and return. Also, they stated that they should avoid assuming what variables are at play in training since assumptions are not the result of analysis.

Limitations

This study adopted case study research methods proposed by Yin (2003) for inquiring unexplored questions. Since the number of participants was small, the conclusions of this study may not be generalizable to all corporate contexts. In-depth interviews with more participants in more companies in diverse industries would make this study more rigorous by guaranteeing external validity. Also, the average length of experience as training designers is around 3 years. It would be desired to have subjects with more experiences.

The interview protocol was reviewed by one peer and two experts in order to have face validity. The sources of data were multiple (interview, follow-up interview, and document analysis). However, it would be better if data analysis were done by two more people beyond the author for ensuring reliability and validity. For future study, triangulation should be sought in terms of the source of data and data analysis.

¹ ASTD (American Society for Training and Development) defined training as follows: “Training focuses on identifying, assuring, and helping develop, through planned learning, the key competencies that enable individuals to perform their current job. Training’s primary emphasis is on individuals in their work roles (McLagan, 1989, p.3).”

² They defined customized learning as “presenting just the right material to the learner on demand.”

³ A conceptual framework is a set of interrelated concepts, principles and ideas that help organize and direct thinking about a concept under study. It is used to assist understanding of the concept, which is usually represented with graphics. The conceptual framework which can include all elements related to customized training and can depict relationships among those elements, is useful in designing customized training and development. The conceptual framework helps training designers to understand elements to be considered in designing and to see those elements from a systemic and systematic view.

⁴ Kevin’s company has quite comprehensive rubric for analyzing this aspect: 1) Size: Is the target audience is large or small? 2) Location: Is it decentralized or centralized? 3) Accessibility to Training: Is it poor or good? 4) Skill Level: Is it diverse or uniform? 5) Motivation: Is it high or low?

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What to Customize	What to Learn : Content	How to Learn : Instructional Strategies	When to Learn : Timing	Where to Learn : Place
	<ul style="list-style-type: none"> •Scope •Level of difficulty •Details •Sequence •Scenarios 	<ul style="list-style-type: none"> •Learning Activities (simulation, Scenario-based, Goal-based, Action learning) •Locus of control (instructor-led, Facilitated, Self-paced) •Modality •Performance Support Supplement (Job-aid, EPSS, Mentors) •Mode of Delivery (Web, CD-ROM, Video/ Print) 	<ul style="list-style-type: none"> •Flexible training Schedule for considering maximum Effectiveness •Just-In-Time training 	<ul style="list-style-type: none"> •On-the-job •Off-the-job (Corporate Univ. External training center)

What to Consider	Individual Learner Profile (Role/ Competency/ Skill & Knowledge/ Motivation/ Learning Styles/ Career Path/ Location/ Accessibility/ Ed.Background)
	Collective Learner Characteristics
	Context in which learners apply what they learn
	Content Characteristics
	Organizational Learning Culture
	Business Objectives, Department Needs

Figure 1. A conceptual framework of customized training