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e-Magazine

THIS WEEK: Design Strategy

E-Learning for Customers: How to Build a Better Mousetrap

By Holly MacDonald and Jennifer Smyth

To paraphrase Ralph Waldo Emerson, "Build a better mousetrap and the world will beat a path to your door." In other words, if you can design an innovative solution to a common problem, you will be successful. We think that providing effective customer training without a huge sticker price is a common problem, and that we can help you design an innovative solution.

Moreover, because many organizations are looking for ways to improve their financial picture, we think that re-purposing existing materials is an effective way to innovate and have a positive impact on the bottom line. We intend this article to metaphorically help you "build a better mousetrap" for your organization's customer training, with a focus on online learning.

Background

In 2008, we embarked on a process to strengthen and expand customer training strategy for a local software company. To guide this strategic process, we posed the following question to ourselves, *"How can we re-purpose current learning products to grow customer training services?"* As a final project deliverable, we wanted to produce a document that would answer this question, thus enabling the client organization to make key business decisions about the future of customer-facing training services.

To kick off the project, we researched best practices in the learning industry. We quickly discovered that the industry literature primarily focused on employee learning, and there was not as much information available on customer training. After completing our project, we felt that this was an area where we could contribute, in hopes that others would find the information helpful.

Customer training is an e-Learning application that is often overlooked when thinking about design processes. This week's article corrects that oversight! The authors show you how they analyzed and updated customer training, and they share their valuable "lessons learned" with you.

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The customer training spectrum

Providing training to customers on products or services is a growing area. Technological gains continue to create new opportunities for companies to explore types of online learning that they hadn't been able to use previously. We hear more and more about organizations that are using mixed modes of online learning to support employees, customers, suppliers, partners, and other stakeholders. These modes include Webinars, Second Life, Podcasts, YouTube videos, and so on.

Many of us have experienced online learning as a way to figure out our cell phones, or even from our utility companies to learn how to save energy. Want to renovate your home? Go online … there is likely a plethora of choices to help you design or build it. Do you want to determine what your retirement plan should be? Financial institutions have online programs to help you. If you have children, you've no doubt experienced the blending of physical product with online product, such as Webkinz, Lego, or Barbie. These online products might be free, and you may not consider them "learning products," but they will undoubtedly enrich your understanding or experience with a product or service, or the producer.

Customer training drivers

We feel that customer-purchased training forces instructional strategies and design to meet exceptional standards. If consumers don't feel that the learning product is valuable, not only will they not use it, but with a few clicks of a mouse they can spread negative impressions globally. Corporate purchasers, understandably, have high expectations that the learning products are every bit as good as the original products. If they don't get what they pay for, the results can be severely damaging to the long term business relationship.

Lastly, and most timely, is the economic situation. Economic downturns force companies that primarily offer face-to-face training to explore different channels to train employees and customers. This is a time for opportunity, to try something new, to innovate. Perhaps your organization is ready to consider training for your customers in an effort to stand out from the competition. Perhaps training your customers can increase sales of your company's products, or represent a new revenue stream. Re-purposing is a way to breathe new energy into existing content.

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Our objective

Throughout this article, we use the term “learning product” to refer to any tangible item that an organization produces to help the customer or user learn how, when, and why to use the product. We want to demonstrate how you can look at your learning products from a consumer perspective and find ways to improve them, whether your goal is to generate revenue for them, save costs of producing or maintaining them, or increase product adoption.

Business drivers

We found that five strong business drivers cause our client organizations to undertake customer training as a strategic initiative:

- External economic pressures starting to impact customer uptake of face-to-face training offerings;
- No effort toward curriculum renewal for several years, leaving behind a stale and outdated content set;
- New product changes that serve a larger audience, holding a broader spectrum of learning need;
- Increased pressure on sales and profits from direct and indirect competitors; and
- Stable training revenue, with minimal growth experienced over the last five years.

Early indicators

In addition to identifying the business drivers, we needed to be sure that undertaking a project to assess the learning products was going to be worthwhile. Some indicators that there might be great potential in successfully re-purposing the content and refreshing the customer learning strategy include:

- Significant interest in both re-usable learning objects and performance support concepts, which dovetailed with other work happening in the services area;
- Timing – release of a new type of product, and support resources being short so that customers asked about support for the new product; and
- Customer surveys and discussion board comments that called for other types of training offerings, including “anytime, anywhere” delivery options.

Approach

In order to deliver a solid decision document, we needed to identify some options for approaching the work. We determined that there were at least three options:

1) Begin with defining the future state – how does the organization want things to work in the future? What is their vision? Where do they see things in three to five years? How will they measure success?
2) Describe what world-class companies do to train their customers, and use that as a model. What is the best practice for software companies? How do world-class organizations do this? What lessons could we learn, and is there a blueprint to follow or implement?

It was important to identify the learning products that currently supported customers, how the organization developed and maintained them, and how customers accessed them. This helped us create categories of learning products and map the existing content.

3) Document what the organization is currently doing, and make recommendations for incremental improvements. What is working? Where are the greatest opportunities?

We chose the third option for our approach; to catalog, assess, and analyze the existing learning products, and to document the current state, with the goal of repurposing existing content. Using other organizations as a benchmark was useful, but ultimately didn't provide enough guidance to implement any changes. And while envisioning the future was worthwhile, it was important to chart a course to get there. We saw the third option as a compressed gap analysis, and we created straw models to compare the future to the current state and find areas for improvement.

Step by step

The first thing we did was to create some guiding principles. These provided an anchor for the project, and a strategic framework to help focus the analysis. We wanted to look at four aspects of the learning products (see Figure 1):

- **Customers** – Who were they? Why would they use the learning products? What problems did they want to solve?
- **Industry** – Who was the competition, and what were the trends? We wanted to ensure that we knew what was happening with direct competitors, the general industry this software product supported, and also with the learning industry.
- **Organizational strategy** – How did the learning products support or interact with the brand and vision? Did the learning products help or hinder?
- **Organizational capabilities** – We wanted to map those aspects the organization could leverage to a greater degree, what things could be modified, and what skills were available to draw upon.

Catalog

It was important to identify the learning products that currently supported customers, how the organization developed and maintained them, and how customers accessed them. This helped us create categories of learning products and map the existing content.

The first step was to create the scope – what did we consider learning products? We created a spectrum of support to provide common definitions across the organization:

- **Technical support** involves supporting learners and customers with set-up tasks, installation, etc. These can be Help desk agents, software wizards, on-site support, manuals, quick reference cards, screen demonstrations, and other tools.
- **Learning support** is achieved through instruction, which can be in group settings or one-on-one, electronic or in person, short or long, live or self-paced.
- **Performance support** provides functional help. Performance support can help learners recall what they learned through instruction, or it can be instructional in and of itself. Performance support can be electronic, print-based, or personal (coaching is a form of performance support).

We then gathered all the learning products together to create an inventory, and entered information about them into a spreadsheet. We created a classification system that would help to identify linkages, and make it easier to assess the learning products. With this, we could create a strategy that would help the organization re-purpose existing content in a more effective way. This helped to paint a full picture of the learning products: what they did, who they were for, how they were created, who maintained them, when they were last updated, and how they were delivered.

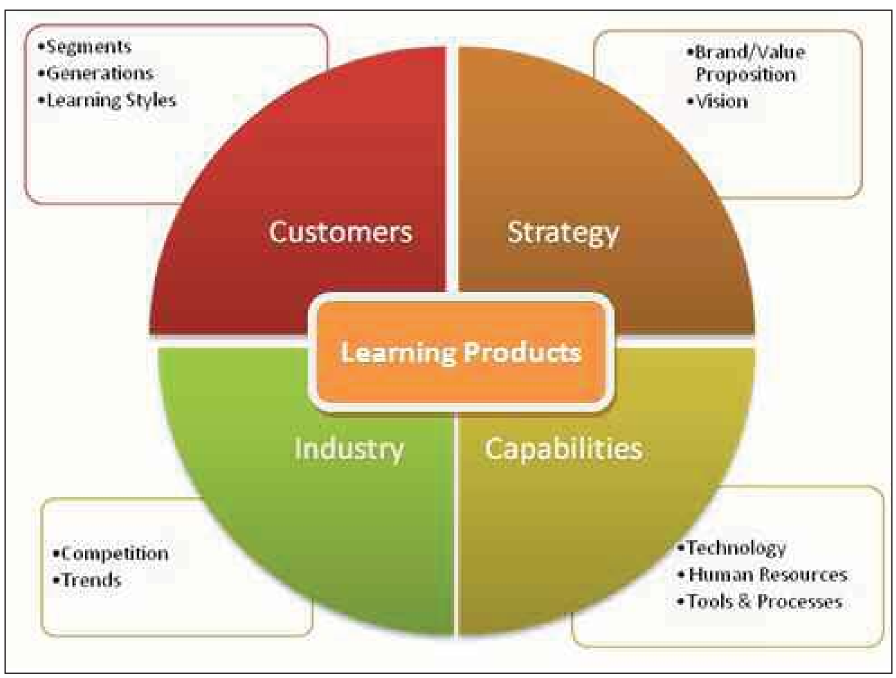
Each learning product was then classified into one of six categories:

1) Instructor-led Training (ILT)
2) Online Help
3) Online Learning (OLL)
4) Demos/Screencasts
5) Job Aids (which were called QuickSteps)
6) Webinars

What we discovered is that there was a range of learning products. Some were underutilized, and others were dominating the organization's attention. The classroom training options (and one course in particu-

Since we were looking at print material, instructor-led training and e-Learning, we created a custom set of criteria for the body of learning products. There were general categories, such as how well the learning product met adult learning principles, learning style classification, and the target domain on Bloom's taxonomy (cognitive, affective, or psychomotor objectives).

Figure 1 ***Strategic framework***



lar), were the most-used and most familiar of the learning products. We also quickly discovered that:

- There were many tools and/or learning products available to users that helped them use the software product (functional training);
- There was no central repository of information or centralized process to draw upon for creating or managing the learning products;
- Dates indicated that some items had not been updated for at least a year, some even longer; and
- Different tools were used to create each learning product, which resulted in conflicting or confusing information, versioning issues, and changes in tone or language, style, and access points, as well as a myriad of other barriers.

The fact that the company sold the software product worldwide added yet another level of complexity.

Assess

Once we had an inventory or catalog of the learning products, it was essential to review them from a "learning effectiveness" perspective, based on industry best practices. We reviewed the products, as well as the instructional design process, to determine if improvements could be made.

Learning products

Since we were looking at print material, instructor-led training and e-Learning, we created a custom set of criteria for the body of learning products. There were general categories, such as how well the learning product met adult learning principles, learning style classification, and the target domain on Bloom's taxonomy (cognitive, affective, or psychomotor objectives). We reviewed samples of each type of learning product, assessing against the criteria (making specific notations where necessary and providing examples to clarify), and, most importantly, made suggestions for improvement. We aggregated these at the end, and included estimates to make the changes.

For the online help, we used the following criteria:

- Table of contents,
- Indexes,
- Context-sensitive,
- Contained a search method(s),
- Navigational aids,
- Technical writing,
- Writing for the Web, and
- Procedural information described in user terms: a limited number of steps starting with an imperative verb, among other suggestions.

One source that was invaluable for us was: *Standards for Online Communication* by Dawn M. Stevens (see the References at the end of this article). For a good overview, see *101 Standards for Online Communication* by the same author, online at http://www.stc.org/confproceed/1997/PDFs/PG410-.PDF.

Interestingly enough, we discovered that the existing online help did not follow these guidelines, but the online learning modules did quite well when compared to these criteria. This meant that, with little effort, the organization could repurpose some of the online learning modules as online help.

We then turned our attention to the asynchronous online learning modules. We used the following criteria, based on several industry experts (See the References for Clark (2002), Driscoll (1998), Quinn (2006), Horton (2002), and Downes (2005)):

1) Interactive
2) Non-linear
3) Easy to use GUI/Usability
4) Structured lessons
5) Effective use of multimedia – primarily Ruth Clark's six principles of effective use of media in e-Learning
6) Attention to educational details
7) Attention to technical details
8) Learner control

We also looked at the number of words on each page, number and quality of diagrams, and the language and tone.

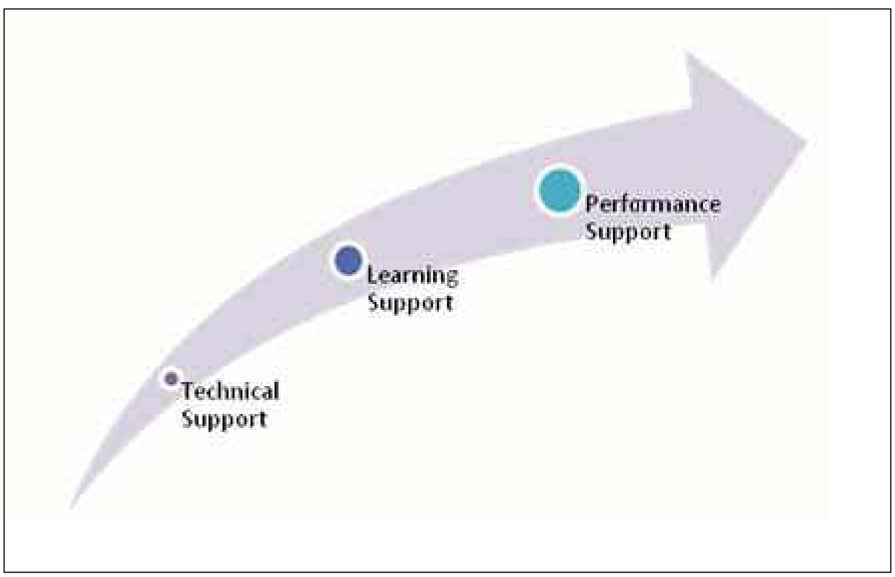
We used these criteria to grade the current learning, and provide constructive ways of modifying the existing training, focusing on repurposing content. We also provided a spreadsheet template that would allow for design guidelines and quality testing for new online learning products.

Instructional design process

We also reviewed and assessed the instructional design process, using ADDIE as our model. We reviewed documentation, interviewed the designers,

We couldn't find much internal documentation on instructional design strategies or decisions. We felt that this was an area for improvement, specifically in four areas: needs analysis, design documentation and standards, implementation timing, and evaluation techniques.

Figure 2 ***Continuum of user support***



surveyed the instructors, read Level 1 course evaluations, and sifted through any available customer feedback.

We uncovered what is likely a common situation. The organization had a history of relying on subject matter experts to design and deliver their courses. We couldn't find much internal documentation on instructional design strategies or decisions. We felt that this was an area for improvement, specifically in four areas: needs analysis, design documentation and standards, implementation timing, and evaluation techniques.

Analyze

After cataloging and assessing learning products, we reviewed the software product personas to pair the learning needs with the existing learning portfolio. (*Editor's Note:* In user-centered design, "personas" are fictitious characters representing the different user types, within a targeted demographic, that might use a product. Personas attempt to capture the goals, desires, and limitations of the users.)

More specifically, we compared persona proficiencies, learning styles, technical aptitudes, and learning access points (geographical location of learning – that is, mobile or on-the-job) with each of the learning products in order to identify gaps and overlaps in the current learning tool set. Results showed a large amount of content to repurpose; however, the current variety of delivery modalities was insufficient for our existing customer needs.

Recognizing this gap in delivery options, we then researched other software companies to better gauge comparative training strategies. We found a high percentage of software companies leveraging the offering of bundled training packages – a combination of face-to-face learning with supplementary e-Learning tools and resources. Moreover, it was apparent these companies were using such integrated strategies to push and pull customers through their value propositions – in other words, for marketing purposes.

Finally, we analyzed different cost structures and revenue streams to identify ways of maximizing value. Through this analysis, we considered how the organization currently generates content and ultimately delivers it to the customer. Several immediate cost savings strategies emerged, including better collaboration with the Technical Communication team, use of an in-house Learning Management System, and single-sourcing content strategy.

Lessons learned

As with most projects, we found that there were many things that could be of use for others embarking on a similar journey.

Lesson #1 – Success measures – a dashboard is more powerful than single metrics of sales or Level 1 evaluation of learning

At some point in the project, we realized that the organization's definition of successful learning products was primarily financial. This is not to say that they didn't care about the user, but the organizational measurement to gauge this was ad hoc. As long as the overall learning products were making money, then they considered all was well. When we looked at usage rates, we realized that 60% of the revenue was derived from the attendance of one instructor-led course, and only 1% of the revenue came from online learning. We had paper copies of Level 1 course evaluations for instructor-led training, but no information indicating if the learning was successful beyond that, and no documentation on any online learning products. We proposed that the organization think about a broader set of metrics to focus the instructional design, sales, and support of the learning products. See Figure 3 for our suggested "dashboard" metrics.

We felt that these aspects were important enough to measure and track, and that the customer's satisfaction and learning (beyond Level 1) should be considered before financial contribution, since the first two are leading indicators of success, while the last two are lagging indicators.

Lesson #2 – Needs analysis is critical – know your audience and their circumstances

One of the first concepts that we crafted was to

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Figure 3 ***Dashboard metrics***

segment the learners at a basic level. We began talking about capable, proficient, and expert users. We asked leaders to think about what they wanted – lots of capable users, who could or would use the software, or fewer, but more expert, users. The answer was a unanimous focus on capable users. This provided the first step to creating a better profile of users.

From an instructional design perspective, knowing these goals, and uncovering learner characteristics, is something that the organization needs to put effort towards. One of the suggestions that we had was to build learning products that help users solve problems. In order to do that, an instructional designer needs to know what types of problems the user would solve. Given this, it is possible to build the learning objectives and instructional activities to help them. Because of the reliance on subject matter experts as designers, this step is often skipped, as it is assumed that these folks know. However, in this situation, we felt it was important to confirm with the customer.

An additional challenge was to determine how to best to conduct a needs analysis from a business perspective. How should they decide on the types of learning products to give away for free? What types to sell and how to bundle or package them? What business model should they use – selling to a corporate buyer or an individual (this software training provides continuing education credits for an industry certification). The needs analysis has to capture more than just technological parameters and heuristic aspects; it must provide solid business rationale as well.

Lesson # 3 - Treat your learners as consumers – define, market, and listen to them as consumers

When we began to define the learner, and look at our catalog of learning products, the biggest question for us was, "How do we know which learning products are best for which learner?" We knew that connecting these two together was critical to developing the right learning architecture.

We used Amazon.com as our inspiration, and approached the learning architecture in a way that could dynamically deliver options based on preferences, previous purchases, product bundles, and other de-fined characteristics. The things we like about Amazon.com are that it remembers your previous purchases, offers suggestions for other products that are similar, suggests things that others like you would buy, gives user reviews, and allows you to place items on a wish list – plus it was a familiar concept. These all had direct applicability to learning products, particularly when selling them.

For example, we identified one Webinar built around "Seven Steps" the client organization offered. The 45-minute Webinar was free to customers or buyers, but we saw a potential for the organization to sell a series of follow-up synchronous online learning sessions. These would provide a more in-depth approach to help the learner apply the thinking. We did the basic math, thanks to William Horton's article "Hey, I Don't Cost You Money, I Make You Money" published March 26, 2002 in The eLearning Guild's *The eLearning Developer's Journal*. We were able to show that if 25% of the audience who attended the free Webinar were to sign up for a series of paid one-hour synchronous sessions, it could contribute $60K. That was just one idea. We also identified that they could sell those one-hour sessions as face-to-face instructor-led workshops, both public and customized for an organization or industry. We could derive a number of other revenue-generating learning products from that concept. The key was to map out some potential scenarios for each user type and classification of learning, á la Amazon.

Lesson #4 – Learning architecture is important – have a good understanding of your business model and how it will be implemented

Using our inventory from the cataloging process, and the conceptual idea of an Amazon-like dynamic approach, we were able to create a compelling learning architecture. We recommended pursuing a reusable learning object strategy to ensure consistency and efficiency. While the organization may not achieve true "reusability" from the content, we felt that pursuing this approach would build habits of reuse. The learning architecture created scaffolding that was very useful in terms of analyzing the learning products and the users. We outlined what types of learning should be given away free, and what types had the potential to generate revenue, based on the research we had done throughout.

Lesson #5 - Strong design standards, templates, and a disciplined approach to the look and feel is important both in meeting customer expectations of the brand, and also to streamlining production process

There were many areas where better design standards would help. Firstly, when we assessed the learning products, we did a comparative section. This evaluated some procedural training that the client offered, and the results demonstrated how subtle differences in the writing of the training could confuse the user. For example, one procedure had steps that guided users through a wizard, but the writers used differing terms for the same thing in the online help versus the online learning module. Some of the aspects we looked at were quite granular, such as the

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use of numbering or bullets, bolding, fonts, and other aspects of a style sheet that had implications for the user. We were clear that we wanted to produce the types of learning products that would give users supreme confidence, and that would create the demand for more learning products.

Secondly, we felt that having a common set of design standards would allow for a better design process. This is not only a potential money-saver, but also one which should allow getting learning products to market faster. The common design standards, coupled with a central repository and a re-usable learning objects approach, could allow for learning products which fit seamlessly with marketing materials, and allow release worldwide simultaneously.

Lesson #6 – Consider rapid content production, and don't ignore ongoing maintenance

Within a competitive environment, it is critical for training production teams to rapidly develop just-in-time training to offer to the market. As such, training teams need to compress traditional instructional design processes into shorter timeframes. It is not possible to go "underground" for six months to develop a new training offering. Instead, competitive environments require strategies that offer "bite size" training tools that can be bundled with complementary resources.

Moreover, learning products require frequent review, assessment, and course corrections. This is likely a common challenge for organizations, as there is a lot of effort involved in getting things off the ground, but nothing can erode your hard work over time like lack of maintenance.

When setting up any learning program, it is a good idea to build in review processes that make sense for the organization and the material. For software companies, there is often a release schedule for updates, and this is a natural time to budget small amounts of time and effort towards maintenance.

On an annual basis, gathering a group of stakeholders to review the instructional approach and strategies can help keep the content current, fresh, and interesting. Review what is working well, what you could improve, what opportunities have arisen since the last review, and what you could retire. Having a cross-functional group do this is another excellent way to draw upon other perspectives and to tie-in to different strategies. For example, the marketing group may have a new campaign that could provide an outlet for learning products. Or, you may be keen to introduce a new type of technology, and the help desk has a way of monitoring customer feedback. Moreover, the use of a customer advisory board is a terrific way to stay connected to your audience and adjust your instructional design documents.

Lesson # 7 – Foster strong partnership with other functional departments

And finally, although listed as the last lesson learned, we recognize the importance of forging strong partnerships with other functional departments. Product Management, Sales, and Marketing teams can offer a tremendous amount of customer data to help inform the design and development of new learning products. Working closely with IT and Technical Support can provide insights that will strengthen the learning products and should reduce user support calls. In return, training teams can offer customers on-the-job experience with product features and functionality.

Conclusion

Circling back to the initial question, *"How can we re-purpose current learning products to grow customer training services?"* we found a three-step approach helped us best inform our business decision:

1) Catalog – Map the current products and how they are developed, maintained, and accessed;
2) Assess – Measure learning effectiveness based on industry best practices; and
3) Analyze – Scrutinize learning products according to learning personas (needs, proficiencies, and styles).

Through this project, we surfaced seven lessons learned: (1) identify success metrics, (2) conduct a needs analysis, (3) treat your learners as consumers, (4) shape a learning architecture, (5) set design standards, (6) consider rapid development and ongoing maintenance, and (7) foster a strong partnership with other functional departments. While this article focuses on development of learning products for customers, many of the lessons are applicable to internal employee training as well. We hope that when you embark on a review of your training offerings or learning products, you are able to use our lessons learned to make your life easier.

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