Enterprise E-learning roadmap

> This page is to discuss enhancements to Tiki to make it a better e-learning platform. Please see: e-learning for current functionality.

Tiki as a Learning Management System (LMS)

1. Introduction

This is a roadmap for deploying Tiki as an e-learning Extranet (outside the firewall, and password protected) or Intranet (within the firewall)

Main use case: Learning how to use new software or web applications.

- Thousands of employees
- Hundreds of teams
- Dozens of trainings (including items such as: software simulation videos, interactive demos, user guides, quick reference guides, quizzes, etc.)
- Multilingual

Could eventually apply to other forms of coaching/training, such as Improving customer service, Explaining benefits of a specific product, etc. We can also activate some of the social networking / collaboration features of Tiki (ex.: forums, comments, ratings, etc.) to enhance the e-learning experience. That way, during a training, store employees could correspond with other store employees or even provide feedback back to head office. These features could also be used even more if/when go beyond e-learning.

2. Key Components to Make This Happen

- Tiki
- Kaltura video management platform
- BigBlueButton webinars (if we choose to also have live webinars)

3. Why E-Learning?

- Can reach a wider audience
- More cost effective than traditional classroom training (when having to train thousands of people)
- More flexibility for time (ie. the time scheduled for an employee to take the training)
- The user can go at his/her own pace
- Unlike a live classroom training, there is less coordination cost for e-learning training esp. if there are

thousands of people to train
- Traditional classroom learning doesn't take advantage of new technologies

4. Types of Learning Material (created using desktop applications or web-based tools)

One or a combination of the following:

- Documentation (ex: procedures and policies, user guides / manuals, quick reference guides)
- Slideshow (ex: PowerPoint presentation)
- Video tutorial (ex: software simulations using Adobe Captivate, Camtasia, Screenr, etc.)
- Interactive demo
- Webinar (ex: WebEx, Arkadin, GoToWebinar/Citrix, BigBlueButton, etc.)
- Quiz (ex: assessment created within Adobe Captivate or directly in an LMS)

Concerns to Keep in Mind When Using Captivate to generate Training Material

- Mobile browsers often don't support Flash (HTML5 export is recommended)
- Updating content can be challenging:
  - May need to re-record, edit project, and re-upload files to a server
  - Subject matter expert or content creator may not have access or know-how to make the modifications by him/herself - reliant on those who have access to video tools
- Difficult to collaborate on a project and track changes
- Potentially pricey software licenses (and upgrades), and ensuring that everyone is using the same version.

5. Alternatives to Using Captivate... (see next slides)

PowerPoint or LibreOffice slideshow

Captivate is very powerful, and you can embed quizzes in the training. If you don't need the advanced feature of Captivate, just make a simple slideshow that can include some videos. If you want quizzes, add them to the LMS.

See: http://www.libreoffice.org/features/impress/

Author content directly in Tiki

- Update via the browser
- Native HTML authoring

- Easy to track changes
- Use Tiki Screencast to capture an image or video of your screen (with audio commentary)
- Update any content without the need to regenerate any job
  - Easy to re-use content and it updates everywhere at once. ex.: PluginInclude for wiki pages, or embedded Kaltura videos.
  - Easier to re-use multilingual content
- Works natively on mobile browsers. Please see: Mobile (**Note:** Tiki screencast videos only generate Flash at the moment)
- Branding can be managed via CSS, thus, all Tiki slideshows can have updated branding in one operation.

6. Knowledge Base (CMS-Groupware) vs E-learning (LMS) - features

- CMS-Groupware' (like Tiki):
  - Content features: web pages with text, audio, video, files
  - Social features: forums, comments, chat
- LMS':
  - Content features: web pages with text, audio, video, files, quizzes, reporting
  - Social features: forums, comments, chat

So there is a huge overlap in feature set. E-learning has an additional focus on practice and feedback.

7. Knowledge Base (CMS-Groupware) vs E-learning (LMS) - content

Most content you would want in your e-learning tool should also be in your knowledge base.

- Therefore, possible huge content overlap
- If two different tools are used (Knowledgebase vs LMS), more difficult to keep content in sync
- At the very least, reciprocal hyperlinks are a must

8. Proposed Approach
Web-centric e-learning

- It should be possible for someone to go through the whole training fully using web tools. If there are classrooms and/or tutoring, this is a bonus (ex.: for staff which had trouble with the online training)
- Enterprise needs
  - When a new application is deployed, thousands of people need to be trained in a relatively short time. We need to scale!
  - There are new hires every week, and thus, the lessons need to be able to start at any time. Please see: Personal learning environment

- - Designed to be asynchronous, but scheduled (and recorded) BigBlueButton sessions are an option
  - Take advantage of Tiki features (ex.: forums) to make it fun and collaborative and easy for students to learn from each other.

Once this works well, it will be simple to adapt to also be able to be a more traditional LMS.

> Note: Proposed Approach needs to be re-worked to discuss timeline, a roll-out for training. The start date and completion date can (and usually is) very specific.

An informal approach option

We've all seen the very formal Captivate presentations. Very professional, but can be boring and lack personality. Also, they require a lot of time, tools and planning. While this may be chosen in some cases, there should be an option for a less formal approach, as popularized by Salman Khan and Peter Norvig (see videos below). In Tiki, we could do this with Tiki Screencast and record from webcam to Kaltura, embedded in a wiki page or Tiki Slideshow. These would be done by the Subject Matter Expert (who we trust is passionate about the subject!). Could also be a recording of a BigBlueButton webinar.

Salman Khan

http://www.khanacademy.org/

Peter Norvig

"Flipping the classroom"

Richard Baraniuk

C. G. P. Grey Digital Aristotle: Thoughts on the Future of Education

Roles for Building and Using Training Material

Ideally:

- Business Owner: initiator of the project and the requester for training material
- Training Project Manager: dedicated to overseeing training rollout
- Subject matter expert (SME): Provides content expertise for the instructional designer. Also maintains/updates content. (Note: We want the same idea as a wiki...SMEs are able to update content on their own without relying on someone else to do it for them.)

- E-learning / Training Department: provides guidance for templates and evaluation of tools
- Instructional designer: develops training video in conjunction with other roles
  - Works with SME on storyboard / script
  - Works with Marketing department (graphic designer or illustrator) for templates and images
- Translator (English to French content and vice versa)
- (If audio is used: voice actor + audio editor)
- IT Department: Provide technical support for application(s) used; backups, server uptime, etc.
- Employees: Take the training and provide feedback (using the forums or feedback form)

Major Sections of the LMS

- User management (including groups/classes)
- Scheduling
- Capturing assets (Screencast, images, etc.)
- Build lessons
- Taking the lessons
- Testing
- Reporting

User management

- If outside the firewall
  - This permits staff to do training at home
  - Users self-register with their e-mail
  - Additional information (First Name, Last name, Interests, etc) are managed via User Trackers
    - Basic info is mandatory so team leaders can identify them and accept in their team
    - Additional info on skills and interests so we can tap into this when we want to recruit
  - They apply to a group ("I work in this team")
  - Team leader approves/declines Group Transitions
  - Team leader can remove team members when they stop working
- If within the firewall
  - To be discussed (could be similar to above or much simpler)

Capturing assets (ex.: Screencast, image, etc.)

- jCapture can do screenshots and short videos with audio
  - Since the app itself has a different interface in different languages, several recordings are necessary
- Screenshots can be annotated with Tiki Draw
- For videos, we could store in Kaltura
  - Where we can obtain stats, great performance, easy content re-use, etc.
- For videos, we could later add Video annotations

BigBlueButton Webinar - Presenter Overview

For live webinars, we can use BigBlueButton and the recordings can be used for future reference (like any video)

BigBlueButton Webinars - Student Overview

Build lessons

- Slideshow
  - Text
  - Images
    - Screenshot with jCapture
    - Upload from computer
  - Video and sound
    - Webcam recording to Kaltura
    - Screencasts with jCapture
    - The idea is to have videos be as short as possible (ie. show just one thing). Ideally, less than 60 seconds
      - Thus, if the application changes, it's easy to just re-record one small bit
      - It's also easier to record without a script. Record a few takes and keep the best one.
  - Quizzes
  - Can also use already made .SWF files
    - But there would be no connection with quizzes as this is something better done in the web application (for maintainability)

More fun

Medium term, we can make this more fun:

- Prezitations
- Slidecasting
- Video annotations

Nice to have

- PDF/HTML export to one file
- Easy transfer to BigBlueButton

Importing lessons

- For lessons in Captivate, just upload the files via WinSCP and link from a wiki page
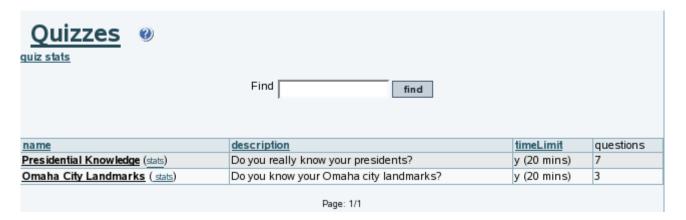 - Add quiz in that same wiki page

Taking the lessons

- Users have a list of available lessons, and they take them.
  - It's basically viewing the Slideshow and you can take a Quiz at the end.
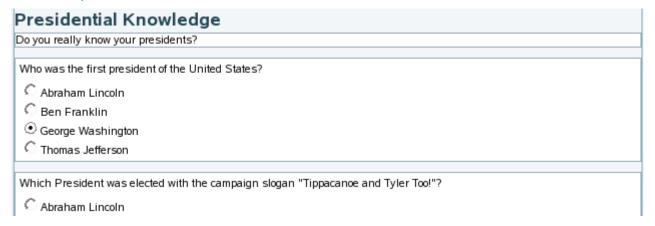
Testing

- Quizzes
  - Can take test once or several times?
  - Question types
    - Multiple choice
    - Yes/no
    - Mix and Match
      - One set can have more choices than the other
    - Free form answer (no points associated but the team leader can later assess)
  - Counts points
  - What is pass/fail grade?
  - Although the regular case is to have the quiz at the end, we would need a wiki syntax to get part of a quiz in a wiki page
    - {quiz id=x q:1,2,3}

List quizzes

Quiz questions

Quiz stats

Reporting

- System tracks
  - Who did what test
  - Score
  - What answers were good/bad
- Data is available to team leader
  - Permits personalized coaching
- What is aggregate average of teams on West Coast vs East Coast?

Benefits

- Integrated tool
- Future-proof
  - Browser-based
  - Makes it easy for subject matter experts to build lessons
  - Easy maintenance (text-based and easy to redo a new screencast when application is updated)
  - Tiki is FOSS Web Application with the most built-in features so if we want something more in Single Sign On, and same interface/app, there is a high probability it's just a click away
- Easy sharing of content with the wiki-based knowledge-base (where is the line between e-learning and a knowledge base?)
  - Easy content re-use can either from e-learning to the knowledge base or vice-versa. Useful video for e-learning, is likely also useful for the knowledge base.
- FOSS
  - No lock-in
  - Open Standards (clean data)
  - No license fees
- Readily available expertise of Tiki within the company

Long term benefits

- Current employees could be networked
  - We can do Enterprise Social Networking
  - Search for expertise
- Ex-employees stay in the system even when removed from a specific team.
  - We can send them Newsletters
  - Invite them to check out open job offers

Weaknesses

- New project
- Weak quizzes (not enough question types)
- Workspaces need some work. Some of which is planned for TikiFestBarcelona3
- Weak reporting

Todo

Urgent

- Exercise usage shouldn't make the slideshow advance:

http://dev.tiki.org/show:Enterprise+E-learning+example#s14

Ideas

- Start with BBB trainings (with simple slideshows) with a live class and get live feedback which is useful to build the asynchronous training material

Questions

- Quizzes & reporting? (self-study vs stats of use vs gvmt reporting vs pass/fail tracking)
- Who does follow-ups with staff/teams with respect to these reports?
- Preliminary list of trainings
  - Who are the people involve for each?
- Who will become the expert/champion of the LMS? (like we have for knowledge base)
- Do we prefer video with sound or no sound?

Next

- Determine Learning path vs topic vs lessons vs module
- Test jCapture recording size/length limit
  - increase RAM
  - Provide desktop alternative for these cases
- Dogfood
  - Slideshow done
  - Kaltura recording

- jCapture recording
- Clarify all the feature requests
- Check if BBB recordings including drawings on the slides
  - Coming to BigBlueButton 0.81
- Evaluate how to convert Tiki slides to a format suitable for BBB: Tiki Slideshow used in BigBlueButton
- Make a proof-of-concept site (and eventually perhaps a profile)
- Improve documentation for the SCORM support which was added in Tiki8
- Investigate Web FTP client options

Features that we won't do

Here is a list of features that are present is school-centric LMS systems and that won't be covered by this project (but that we'll do eventually)

- Assignment (no homework for staff 😃)
- Grading (we want some sort of employee evaluation system, but not like school grading)
- Certificates

An example of a quiz in a wiki page

This is done with PluginExercise

This week-end _____ going to go _____ we _____ best served.

You scored ~SCORE~ out of ~TOTAL~

Check your score

Related links

- http://blog.p2pfoundation.net/moocs-as-a-radical-challenge-to-the-traditional-education-model/2012/11/23
- http://www.good.is/posts/open-source-platform-allows-anyone-to-create-online-courses
- http://singularityhub.com/2011/02/13/yes-the-khan-academy-is-the-future-of-education-video/
- http://www.insidehighered.com/views/2012/12/06/essay-critiques-ideas-clay-shirky-and-others-advocating-higher-ed-disruption