
Meeting the Challenge of Global Training Programs

Challenges and solutions in multi-language, localized training applications

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Corporate Training is in the throes of a major change driven by the rapid globalization of the corporation. The traditional model for training, centered on classroom-based instruction is being challenged by the need for rapid scale up and global coverage. Training needs to be delivered to thousands of people at hundreds of locations in tens of cultures. The problem is further compounded by the demand to demonstrate a high rate of return on investment in training dollars. Corporate training is required to deliver more and more for less and less

A contemporary approach to resolving this dilemma has been the adoption of technology to develop and deliver training to a dispersed audience. Technology enabled training methods today include the synchronous distance-delivered training using satellites and web technologies; and asynchronous training using archived sessions and e-Learning.

The use of technology which enables delivery to a global audience creates the need for training material being created in one language to be made available in several additional languages. Today, multi-lingual programs are expensive and time consuming and are avoided by trainers. Studies show that adult learners, across all cultures, are unaware of significant misunderstandings in translation and display a lack of comprehension while learning in a second language. They consistently fail to realize how much of what they think they understand is wrong. Consequently, the engagement with the learners of a global workforce turns out to be inadequate. Offering multi-lingual courses that are consistent, on target, timely, maintain relevancy, and are cost effective is a major managerial issue.

The challenge goes beyond simple translation. Spanish language training needs to be *localized* for Spain, Mexico, and other parts of Spanish-speaking Latin America. The problem is compounded by several tactical considerations like validation, availability and suitability of fonts, audio narration etc. Machine translation has not reached a level where a computer can take all these variables and create an acceptable output. A round trip translation from English to another language to English will convince anyone of the unsuitability of this approach.

There is another challenge. Often the clients, subject matter experts and vendors are also geographically dispersed, so staffing up with experts in multiple languages and translators is neither cost effective nor a quality solution.

This paper discusses Adayana's experience with multi-lingual courseware development for multi-national clients. Adayana has developed courseware in English and Indian languages and translated English courseware into several languages, as different as, Russian, Spanish, Arabic and Hindi. We plan to expand this multi-lingual capability to cover forty plus languages.

Models for Global Courseware

There are, broadly, four models for multi-lingual courseware production. The issues of courseware creation are similar in all the four models.

1. **Model A:** Courseware developed in English is then translated into other languages.
2. **Model B:** Client content received in English is translated to create courseware in a different language(s).
3. **Model C:** Client content received in another language is translated into English to handle development work up to the point of scripting and then production-ready scripts (in English) are re-translated back into the original language for production.
4. **Model D:** Courseware is directly built in the language of final delivery.

Challenges in Translation and Localization

The challenges in translation relate primarily to linguistics. Each translation activity carries its own peculiar problem – translating abstract philosophy poses a very different challenge as compared to translating poetry. Further, translation is dependant on the context. For example, dubbing voice in films for foreign audiences poses the challenge of lip-sync in addition to that of translating dialogue and narration. This may lead to a compromise where the translation is less literal so that it syncs well. Translation in a training context is characterized by many additional problems that go beyond the mere act of translation:

The Challenge of Dialects

The target learning audience for the courseware may not use the *standard* dialect of that language. George Bernard Shaw said, "England and America are two countries separated by the same language." Today the large numbers of English-language speakers in India, USA, Canada and Australia have their own variant of English. Similar multiple dialects are prevalent for other languages such as Spanish, Arabic and French. Unless the proper dialect is used for the context, we risk losing the specific learners though they are all Anglophone. Sometimes while the original course may be in "standard" English, the learning audience in the other language may be better reached by a variant, for example, Common Arabic rather than Standard (Qu'ranic) Arabic.

The Challenge of Neologisms

Another key problem is the tendency to use neologisms when a course is translated from English into another language which has a limited technical vocabulary on that subject. For example, many Hindi translators invent vocabularies from the Sanskrit root words. Such forced translations of technical terminology result in courseware being replete with words that most learners in Hindi do not understand.

The Challenge of Media

Translation impacts not only audio and text but also the visuals, narratives and sequences. For example, what happens to an audio-synced animation when the sentence structure of the audio is altered during translation? Often visuals are as much in need of 'translation'.

The Challenge of Navigational Terms

From an English course, the word 'highlighted' in the instruction 'Click the highlighted points to learn more' could be translated as 'rekhankit' in Hindi, which when re-translated means 'underlined'. The translation, while accurate, renders the navigation inoperable. Page navigation prompts, media prompts, functionality labels, headings, synchronized audio, are some of the things that are highly context sensitive in courseware translation.

The Challenge of Validation

The validation of translation is a key issue. While sometimes there may be internal resources to translate and validate the translation, often we have to rely on external resources. External professional language experts and translators rarely have sufficient knowledge of the context of the subject-matter or the various constraints imposed by training programs.

The Challenge of Suitable Fonts

Related to translation is the issue of font suitability and ease of use. This is especially so in languages which use a script other than Roman and where the standardization of font is minimal. In these languages, various fonts are composed differently: some take a letter as a unit, some a syllable and some a fraction of a letter – thus making changes to a more suitable font quite difficult. Further various scripts have different suitable font sizes for legibility. This places constraints on the amount of text that can be carried on the screen.

The Challenge of Audio Talent

Due to text constraints and to make the courses more translatable, often an audio-intensive approach is adopted. This minimizes the risks associated with text display on the screen. However, this imposes the additional problem of finding the appropriate talent for recording the audio in the translated language(s), which can sometimes be more difficult than finding translators.

Developing Context-Sensitive Multi-Lingual Courseware

Apart from the myriad challenges of a technical nature, effective localization requires that multi-lingual courses be sensitive to several contexts, which are:

1. **Learning Context:** Localization must enable the end user to learn correctly from the courseware rather than hinder learning.
2. **E-Learning Context:** Localization should be suited to the course delivery technologies and courseware product design.
3. **Subject-Matter Context:** Localization should be sensitive to the language appropriate for dealing with the subject-matter.
4. **Audience Context:** Localization needs to match the learner profile.
5. **Media Context:** Localization needs to be tailored to the context in which language is used in the courseware media.

Methods for Multi-Lingual Production

Our experience has led us to evolve various methods for handling multi-lingual production. They are:

Creation in Target Language

Creation of courseware directly in target language has proven to be effective in reducing the costs of both translating content into English and re-translating production scripts into the target language. Direct production in multiple languages offers another advantage – the audio and text matter is context sensitive by default. This does away with the problems mentioned earlier.

Catalog of Terms

An effective practice is to catalog possible translatable objects for which 'literal translation' is likely to be problematic and educate translators and validators about them. A similar catalog of terms/phrases that can be translated in standard ways with their translations can also be used to complement this approach.

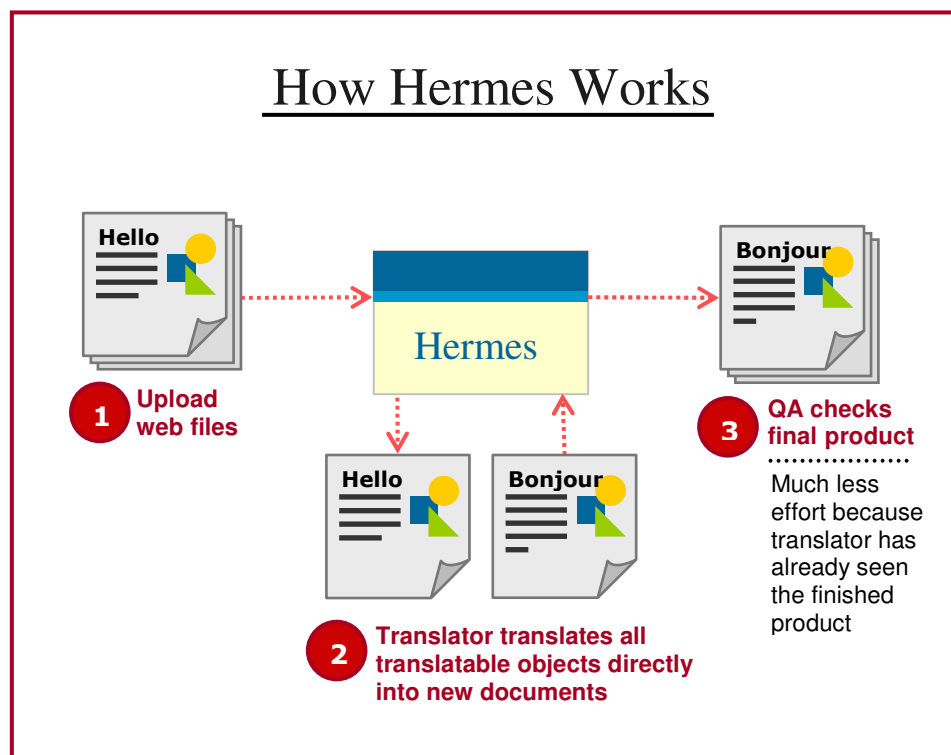
Use of Tools

While there are many tools for machine translating technical content available in the marketplace, we find them unsuitable in the learning context. In the learning context where the translation needs to be 100% accurate, relevant and context-sensitive, the best machine translation can guarantee is less than 90%. This seemingly small difference can completely mar the learning experience. Adayana's philosophy is therefore oriented toward the use of collaboration tools rather than translation tools.

Hermes: Collaboration Tool for Translation

Adayana has developed tools that focus on collaboration of people rather than automating translation to manage the issues surrounding the translation-validation cycle. Hermes, a collaboration tool for translating courseware, editing content and replacing media supports languages that use Roman, Arabic, Kanji and Devnagri scripts.

Hermes is web-based and can be accessed by geographical dispersed translators, editors or visual designers to collaborate on updating a course for another language. Hermes defines a translatable object as any text content or media file that requires a change in order to meet requirements of an intended audience. Its access control mechanisms ensure that translatable objects checked out by one collaborator for making changes are locked for editing. Because the translations are directly made to the course, the resulting translations are sensitive to the five contexts mentioned above – a decisive advantage.



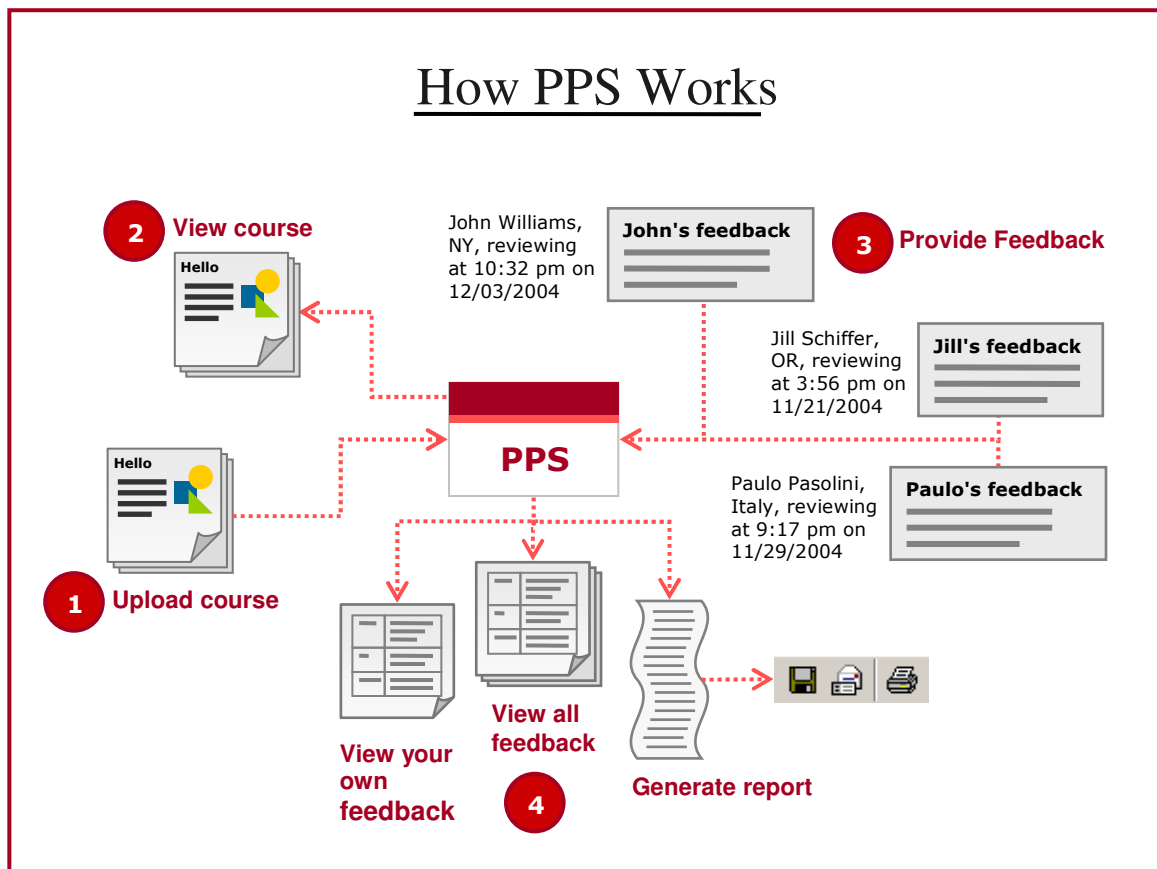
An administrator may assign specific translatable objects to translators or editors for updating. Different translatable objects of the same learning product can be assigned to different translators, based on their subject-matter expertise to ensure greater accuracy in translation. Further, the administrator or validator can track changes back to the specific individuals in order to monitor translator performance.

Product Presentation System: Collaboration Tool for Customization and Updates

Like Hermes, the Product Presentation System (PPS) streamlines the processes for translation, validation and editing. It is used for ongoing maintenance of courseware; specific customization for clients and media updates based on client and user feedback.

PPS gathers feedback and tracks change requests. It does away with ad-hoc formats and allows globally dispersed clients or users to key-in their suggestions as they review a learning product (courseware). The suggestions are tracked by identification tags from feedback to closure. PPS also generates appropriate metrics.

How PPS Works



Many of Adayana's clients have used these tools and reaped substantial benefits in terms of streamlining collaboration and dramatically reducing costs. These tools remove the inefficiencies in the collaboration processes, streamline workflows, and effectively deal with geographically distributed subject-matter experts, translators, validators, editors, clients, and designers.

Case Study: Benefits Derived by NATO from Workflow Collaboration Tools

Joint Forces Command (JFCOM) based in Norfolk, VA is an entity working with North Atlantic Treaty Organization (NATO) in the United State, which is mandated to design and deliver training to NATO troops and to the troops of NATO countries. As a part of this mandate, JFCOM builds and distributes technologies to NATO agencies and to similar groups like Partnership for Peace (PfP), and Regional Security Co-operation Network (RSCN). JFCOM deployed a customized version of Adayana's Hermes Translation platform to operate in conjunction with its Learning (Content) Management Systems – PfP LMS and Ilias. The initial version of Hermes was enabled to be interoperable in five languages including English, French, German and Spanish using Latin script; and Russian using Cyrillic script. Subsequently, the system was upgraded to add three more languages – Arabic, Turkish and Portuguese. Initial reports indicate a productivity gain of over 70% and additional costs savings due to the use of translators/experts in their home country.

About Adayana

Adayana (www.adayana.com) is a performance-solutions company focused on providing learning programs to increase human performance within the agriculture and food, defense, automotive, financial services and knowledge processing industries. Adayana specializes in distance and e-learning solutions as well as blended training, assessment and content development. Adayana is a global leader in technology and processes to develop distance-ready learning solutions in large volume and with great efficiency. The author can be reached at rtandon@adayana.com.