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# LTMOOC and Instreamia

*** * * On the Internet * * ***

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In my last Article in the *TESL-EJ* "On the Internet" column (Stevens, 2013), I wrote about why language teachers would do well to sign up for and experience MOOCs, and I predicted that the MOOC model would become more mainstream for both language learners and their teachers. Near the end of the article, I pointed out that though "there have been language-related precursors to MOOCs, this is indeed an avenue not particularly explored or developed as MOOC. However, Instreamia founders Ryan and Scott Rapp have just proposed a free course to be run on the MOOC model from April 15 to May 27, 2013 called Blended Teaching of World Languages <http://ltmooc.com/>."


**Figure 1. The LTMOOC banner and tabs menu**

The course had barely been announced when that article was published, and as this article is being written, LTMOOC is only just winding down to a close. Meanwhile, I've been following LTMOOC and I find both its premise and method unique enough to be worth developing as a logical sequel to my previous article.

## SpanishMOOC

The premise itself is unusual, and requires introducing the engaging facilitators of LTMOOC, Scott and Ryan Rapp. Both men traveled overseas and settled in Honduras and Japan, respectively, where they deepened their understanding of the languages there, Scott to the point where he started a SpanishMOOC in late 2012. One impetus for running a free MOOC for learners of Spanish was to trial Instreamia, the intelligent courseware platform that the Rapps had been developing (see press release: http://www.24-7pressrelease.com/press-release/instreamia-brings-moocs-and-adaptive-learning-together-at-last-313302.php).

If you visit the SpanishMOOC athttp://www.SpanishMOOC.com, you see that there is still a free starter course there, as well as advertisements on the front page for other courses costing US $99, with almost 4,000 paid participants. There is an explanation here,http://spanishmooc.com/announcement-affecting-future-offerings-of-spanishmooc/, of why it is necessary to charge for these courses. Scott was asked in a hangout during LTMOOC how he could give feedback to 4000 students of Spanish, and he replied that rather than engage in robo-grading as would an xMOOC (the Rapps consider their MOOCs to be connectivist ones), they had tapped into the cognitive surplus (Shirky, 2010; Stevens, 2011) of a coterie of native speakers who provide feedback for free, and now they want to pay them in future for such work, and hire help to develop the Instreamia platform on which these materials are based.This is all fair enough, people deserve to be compensated for adding value to an endeavor, but the Rapps also declare their intention to honor their commitment to "openness in

content creation" under Creative Commons licensing, as stated in the preceding URL. If you are wondering how a course can be open and cost money at the same time, this is where it gets interesting, and why Paul Glader, writing in Edudemic, says "The Rapp brothers are a team to watch in the ed tech space" (Glader, 2013).

It's hard to know where to begin in describing what the Rapps are doing. It helps to understand that Scott Rapp, according to Glader, is a data systems engineer who has a second startup company besides Instreamia that provides data systems services to corporations. So besides being language teachers passionate about teaching, and especially adept at teaching online, they also have programming skills, which have allowed them to develop their program Instreamia to support that work online.

## Instreamia

The idea of a MOOC based on a commercial product was bound to be misunderstood by some. Just as you might wonder how SpanishMOOC can charge for its courses, some in my personal network had expressed doubts about getting involved with a MOOC that purports on its homepage to encourage "language teachers of all levels to discuss and gain a deeper understanding of emerging trends in blended teaching and learning of world languages, including the methodology, best practices, and practical application of the blended and online classroom," yet seeks to do that, as becomes apparent as you explore the syllabus at[http://ltmooc.com/course-schedule/](http://ltmooc.com/course-schedule/), predominantly through reliance on the commercial software platform Instreamia.

The thought crossed my mind as well, but it turns out that if the Rapps are taking any advantage of their participants, it is mainly to get their feedback on the beta version of their software. But the relationship is symbiotic. For a language teacher, learning how to use a tool as intriguing as Instreamia has been worth the effort for its own sake.

As one views the tutorials linked from that syllabus, and particularly the hour-long EdLab seminar <[http://ltmooc.com/edlab-seminar/](http://ltmooc.com/edlab-seminar/)> at which the Rapps introduce themselves and their product, we learn that Instreamia uses systems based approaches to language learning software that tracks learner performance and integrates that data with dictionaries of various languages and a robust NLP (natural language processing) engine to produce a variety of adaptive language lessons.

Basically, Instreamia provides a data-driven back-end to youTube videos in order to put such resources in reach of language learners. It is adaptive to the learner (using a spaced repetition system (SRS), which "continuously reorders questions in order of predicted recall strength in the moment of review"–unlike other SRS systems that use time as the recall trigger; see [http://spanishmooc.com/instreamias-spaced-repetition-system/](http://spanishmooc.com/instreamias-spaced-repetition-system/).).

Instreamia works in a number of languages and uses NLP to augment feedback. For example, using word frequency in corpus data to select vocabulary, it starts learners off on easy words and then gets to more difficult ones as it tracks progress in vocabulary and grammar; and also allows learners to indicate what they want to learn. According to Scott, the way the NLP engines parse videos creates, in the case of Spanish, a visualization of your "Spanish brain".

Onboard dictionaries and NLP engines not only enhance the adaptive and dynamic components, such as determining parts of speech, but the database works as a lookup as well, allowing extensive glossing of text as it accompanies the video streams. There are social features also, for example, a "Mingle" button that puts users in touch with others synchronously online, and the interface includes a forum with possibility for teacher feedback.

Using freely available YouTube videos and the closed caption or text transcripts generated from them, Instreamia allows developers to easily create language exercises that appeal to the learning styles of today's young learners. The Rapps have substantiated this using their system to analyze what learners are doing with it. According to their EdLab seminar, their data suggest that students like the data-driven approach, frequently demand more feedback, and the Rapps say they have trouble providing content to keep up with consumption. At this seminar, Scott claimed that Instreamia ellicits double the engagement level of a Coursera course.

Like other participants in LTMOOC, I started finding out about Instreamia by following the flipped classroom tutorials as set out in the LTMOOC syllabus (for example, this tutorial illustrates the three exercises types, live listening, flashcard, and subject recognition, and explains how they are evaluated: [http://about.instreamia.com/instreamia-tutorial-4/](http://about.instreamia.com/instreamia-tutorial-4/)). These teach you the interface, which is essentially a course management system for Instreamia content. You can see from the video how you can hear a song on YouTube (in Spanish) and see a transcript where the video stops and waits for you to supply a missing word (from 5 distractors at the bottom of the page). The Spanish script is in one column and a translated version is shown in another, like a Rosetta Stone (which, if you prefer, you can toggle on or off). This turns out to be rather compelling. It becomes a game to supply what might be an unfamiliar word from pronunciation or context clues quickly enough that the video doesn't stop, so the sound track plays without breaking.

The Rapp's courses start with a pretest (for example, someone introducing him or herself) and then an adaptive exercise to identify what you understood from the pretest, followed by grammar instruction directed at what you need to know to complete the exercise to come. The exercises are adaptive in that Instreamia tracks your profile. You are then given an assignment (to record or write something) and this is graded by an actual person. After taking a quiz on the material covered, you are then paired with a classmate and directed to a Hangout.

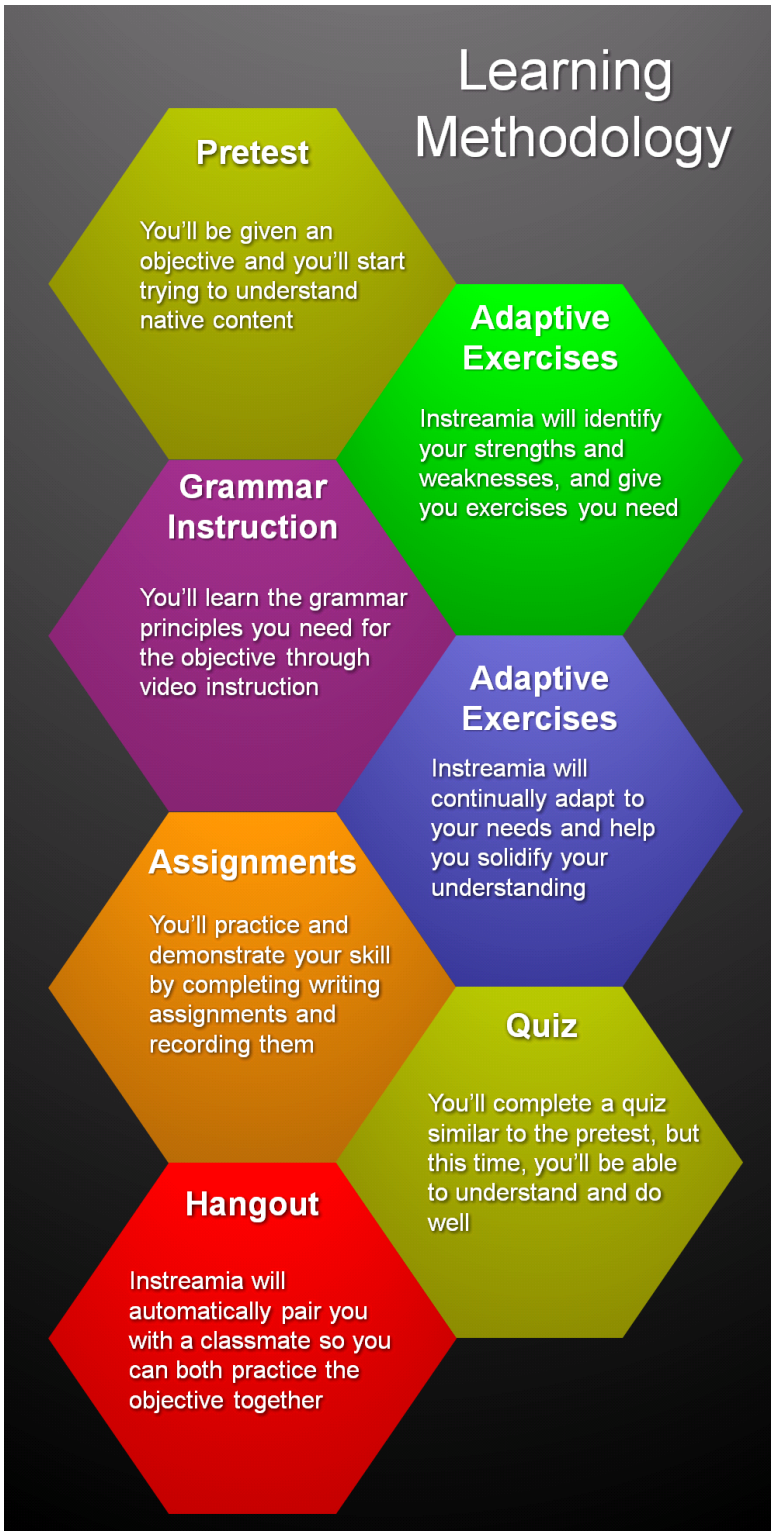


**Figure 2. The Instreamia learner methodology, from:** http://spanishmooc.com/instreamia-learner-methodology/

## LTMOOC

LTMOOC taught participants how to set up courses in Instreamia. The program requires logon to access courses others have set up for you (free) or to create or edit your own courses. You need permission to do the latter, but participants in LTMOOC are given the credentials to

create materials there free of charge for a year and have access to them indefinitely, which means participants can set up courses, create video language lessons, and though they might later lose the ability to alter the courses, have access to the lessons themselves in perpetuity. Each lesson has a URL, and anyone who clicks on the URL is prompted to create an account, which the Rapps say is necessary in order that their system can track statistics and analytics. But the lessons created are in fact OER, open education resources, available to anyone with the link or access to the course.

Using Instreamia, I have been able to create materials that my students have enjoyed. For example, when the Canadian astronaut Chris Hadfield uploaded his cover of the Elton John song Space Oddity (Rocket man) just before returning to earth from his 5 months on the International Space Station, I was able to create an Instreamia lesson the day after he posted it on YouTube, while he was still in orbit, singing and playing his guitar while floating in the zero gravity of space. Instreamia allowed me to sync the song with its lyrics so that as the song is played, the students see the text display on the screen as the song is sung, except that a word is missing that the students have to supply from choices at the bottom of the screen. When the language is not your own, this can be challenging but also very doable even when the language is at a higher level than a student would normally attempt. Some words will be easily understood, but others might be unfamiliar or raise questions as to why that word should appear in that blank, thus raising consciousness of the grammar of the language when used authentically (Rutherford & Sharwood Smith,1985).

Although the learning curve was not insignificant, the video tutorials enabled me to master the skill, and by the time I made the Space Oddity video I was able to create the exercise in about half an hour. The process entails supplying the URL of the video, which causes it to load into Instreamia in such a way that any accompanying transcript materials will appear line by line in an editor. The software then lets you edit what is there (in case of errors in the transcript) and also set the timing as you listen to the video and press the spacebar at the point in the soundtrack where you want each line to appear. In the case of Space Oddity there was no lyrics transcript at time of upload so I found one online for the Elton John song and Instreamia accepted that. But Hadfield had changed the lyrics to adapt to his launch via Soyuz; again easily corrected in the Instreamia editor. One of the lessons created can be accessed here:[http://www.instreamia.com/videos/367729/learn/Live-Listening/](http://www.instreamia.com/videos/367729/learn/Live-Listening/)(as explained earlier, you'll have to register with Instreamia to see it, but my students have had no trouble doing this).

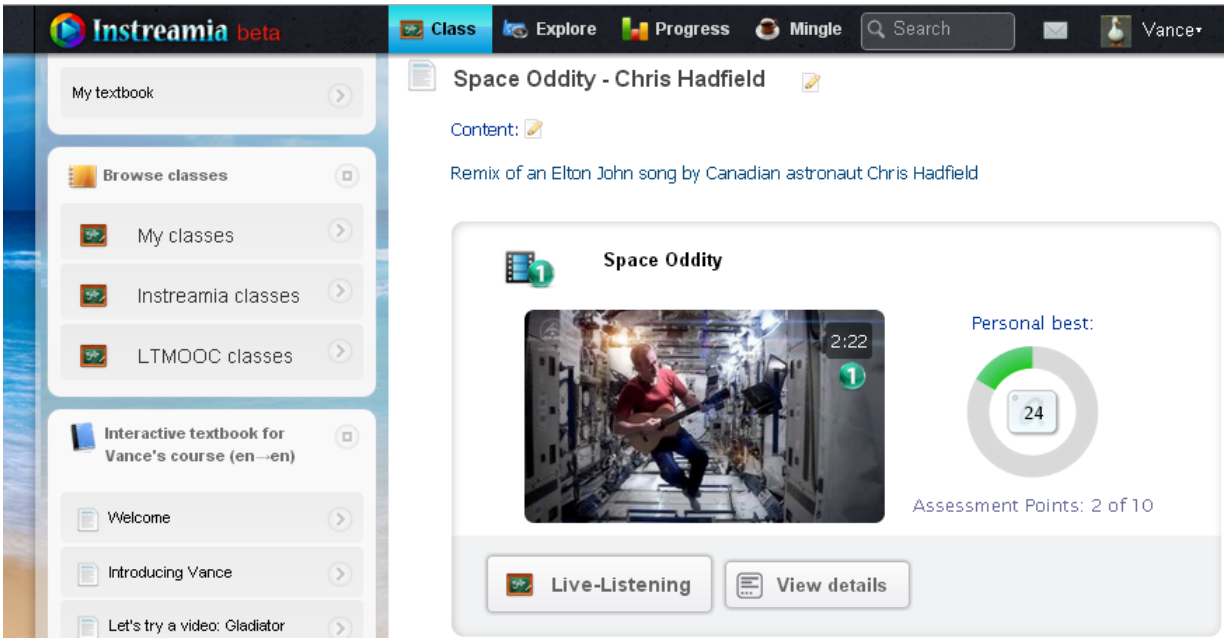


**Figure 3. Chris Hadfield's cover of Space Oddity as an Instreamia exercise**

From the screenshot above it can be seen how courses appear in Instreamia and how the lesson just described might appear as a part of that course.

## Conclusion

LTMOOC bills itself as a course in blended teaching of world languages. The Rapps give the following reasons why language teachers should take this course (from[http://ltmooc.com/](http://ltmooc.com/)):

1. Gain practical knowledge to improve your skills as a language teacher
2. Become aware of and familiar with technological tools for language instruction
3. Help frame the future of language teaching

4. Meet other language teaching professionals and expand your network
5. Become knowledgeable about trends and new methodologies for language teaching

LTMOOC successfully modeled the methodology the Rapps use in their language courses, which Instreamia facilitates. Participants could glean tips to apply in their own online or blended courses from experiencing the Rapps' tutorial-based approach to effectively teaching the software to participants in LTMOOC.

As with any connectivist MOOC, one of its greatest assets is meaningful interaction with a network of teachers. The network in LTMOOC tended toward foreign language teachers, with ESOL included but by no means dominant. Interaction among these practitioners occurred occasionally in Hangouts, whose times were negotiated by the participants themselves (the Rapps tried to be there at the times the participants scheduled them). Topics discussed included:

1. Content-based learning
2. Successes and challenges in language learning
3. Social involvement and engagement
4. Effective Assessments and ePortfolio
5. The role of translation in language learning
6. Flipped classrooms
7. How to deal with varying ages and levels in one class?

In addition there has been discussion on role of translation (which sometimes features in Instreamia exercises, but can be turned off). The flipped classroom technique was modeled well by the MOOC organizers, where video tutorials were provided to help participants through almost every aspect of the course. For example, I once complained about not being able to move between my courses, and Scott replied with a screencast explaining how this was done by activating a pull-down that I had not spotted.

The flipped classroom concept is carried over to the Hangouts, which essentially form the "classrooms" for the course. Hangouts tend to be spontaneously organized, most often by the participants themselves. They are announced in our Google+ calendars but keeping track of them is confusing, and to find recordings of past hangouts, one must search for LTMOOC in YouTube. However, thanks to the excellent tutorials, when the hangouts do occur, they tend to discuss issues since the participants already have access to explanations of how to do things, so the flip classroom concept is appropriately modeled for a blended learning environment.

In summary, I thought many aspects of the course were interesting. The course introduced a useful and well thought-through application of technology to a problem of abundance of video resources vsthe scarcity of time teachers have to help learners exploit those resources. The course modeled techniques in preparing tutorials to help participants learn how to use the tool, and also allows teachers to see what their materials might look like to their learners as they explore the work of others in preparing lessons to teach languages, since the teachers can view as learners of those languages. And finally, as with any MOOC, the course introduced participants to like-minded colleagues and made it possible for those participants to create interesting lessons for their own students.

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