

HACKING THE ESL STUDENT WORKBOOK

By John Allan, Jaqueline McMaster and Keith Hackett

In our Technical Trades Program (TCP), we were challenged with designing and creating student books and interactive Learning Objects (LOs) for our foundation students. The foundation program trains English as a Foreign Language (EFL) students in trade-specific terminology and provides hands-on workshops. It is essentially a bridging program designed to prepare trainees for their programs, which consist of Process Operations, Mechanical Technician Program, Electrical Technician Program, and Instrumentation, all including a common Safety component. The majority of our students are male Qatari nationals whose first language is Arabic.

The Challenge

The first challenge was to find materials that motivated our students and that were at our students' language level, which was CEFR (Common European Framework of Reference for Languages) A1 Breakthrough or beginner. It was also a challenge to match course outcomes with level-appropriate material and activities. Additionally, their ambitious schedule and focused career targets pushed us to integrate industrial concepts, scenarios, and vocabulary into our curriculum.

Another arduous consideration is our institution's movement towards Bring Your Own Technology (BYOT). We had to design digital materials presented on laptops and hand-held devices such as PowerPoint slideshows.

With these considerations, we used a backwards design method to design an educational practice through establishing learning experience goals before creating instructional materials.

This allowed us to reimagine our student book design from the learners' perspective, and always being aware of the BYOT model, we integrated blended learning techniques to address areas of weakness in our current materials.

From a branding point of view, another important factor for us was to maintain a common template, mirroring an important project simultaneously taking place in our engineering department. English as a Foreign Language department staff were involved in assisting with the assembly of student workbooks, development of vocabulary lists, review of assessments

and provision of andragogical advice in relation to foreign language teaching and learning. This experience shaped many aspects of our project including workbook template design, vocabulary treatment, QR code linking to external resources, and image sourcing.

Development Team

Our development team consisted of experienced educators. Two of them functioned as curriculum developers and in class instructors. They worked in tandem to generate material for classroom and workshop use, and produced student manuals using Microsoft Word, which were later converted into [InDesign](#) documents by developers. The developers, who were certified language instructors as well, collaborated to produce learning objects, source images, generate QR codes, and move all curriculum and materials into new manuals, created with InDesign with interactive learning objects embedded. They developed a template for InDesign documents and established target vocabulary for glossaries. As well, they developed templates for [Captivate](#) and [Hot Potato](#) activities and reconstructed technical drawings and illustrations.

QR Code Readers: [Android](#) & [IPhone](#)

QR code generators: [goQR](#); [QR Code Generator](#), & [QR Stuff](#)

In addition to the developers and curriculum writers, our team also included an on-call technical advisor who provided on-going support and guidance on several issues, and a departmental audio technologist who recorded all audio sound clips required for our interactive learning objects. As this project targeted entry-level English language learners, we also required an Arabic translator who translated all target and technical vocabulary. The translated vocabulary items were also included in [Quizlet](#) vocabulary activities for student reference.

Development Resources

It has taken our team a great deal of research, trial, and error as well as negotiation to decide upon our development tools. The tools listed here may change as we are always looking for more efficient means of developing learning objects. The following paragraphs provide a summary of the features of each of the tools we have used in this project.

Adobe Captivate is a tool that excels in creating interactive simulations and assessments. Our team used Captivate for learning events that required simulation and drag and drop assessments. Captivate generates HTML 5 learning objects that work well on our server.

Adobe InDesign is a digital publishing application used to create high standard documents such as books, magazines and newspapers. InDesign also publishes materials for tablets and mobile phones by publishing in e-book format. Our institution uses a learning

management system (LMS) to house learning materials. InDesign documents are easily uploaded into LMS courses.

As education and materials are continuously evolving, ease of editing is crucial. InDesign documents ensure that all media and text elements are modular and easy to update. It is easy to edit material, change layout and styles, add color and adjust master pages. Materials generated in InDesign not only have a more professional look than MS Word documents, but are also more practical and efficient from a developing and editing standpoint.

[Kahoot](#) is a free, online application for making interactive multi-choice activities. Students use their phones and the teacher projects the questions and results at the front of the class. It is simple to set up and use for instructors. Students experience a competitive game-show style activity, which injects fun into learning.

[EdPuzzle](#) is a free, online resource that allows students to retain more from online videos. EdPuzzle projects allow instructors to insert questions, comments, prompts, and closed captioning to any online video. Students can engage with the video at their own pace, reviewing segments of the video as required. Instructors simply have to share the link and students can start the activity.

Quizlet is a vocabulary learning resource. Each Quizlet study set (vocabulary list) offers a menu of seven separate activities. Quizlet allows instructors to create or borrow flashcards, tests, and study games that can improve learning engagement and allow students to access materials at school, at home, or anywhere on their mobile devices. Quizlet learning opportunities are easily embedded into web pages or learning management system (LMS) courses. [Quizlet Live](#) is a competitive and collaborative game included in the Quizlet suite.

Hot Potatoes is a quiz-generating software application used to create activities suitable for language learning. Recently, Hot Potatoes has had a facelift. This facelift ensures that learning activities are responsive. This means that the display is automatically transformed to suit laptop, tablet, and mobile phone displays.

Microsoft PowerPoint is a presentation tool commonly used by educators globally. Slideshows can be exported as PDFs or web pages to be shared online or via other digital mediums.

Templates

Our development team created templates for InDesign, Hot Potatoes, and Adobe Captivate. Templates were created to provide common design elements such as layout, color, text characteristics component styles and publishing attributes of a learning object. Templates add value as they can be the foundation for future projects within our department. Templates also ensure document consistency and accelerate the design process for future books, manuals, and learning objects. We have carefully documented our templates and have developed workshops and “How to” guides to introduce them to future developers.

Innovations

Innovations that have been realized from this project are listed below. These were both intentional and serendipitous.

English–Arabic audio/visual glossary

At our institution, Quizlet is a standard vocabulary teaching and learning tool. As this project matured, we realized that lower-level EFL students require L1 support so we included a simple English to Arabic glossary and created a corresponding Quizlet study set for student consideration. Audio is included to aid in pronunciation.

Customized low-stakes quizzing

Beyond an online vocabulary learning object, we were looking for a custom quiz building solution. After investigating a variety of products, we decided on the “Facelifted” Hot Potatoes software as our primary quiz development tool. Hot Potatoes provides utilities to quickly generate online crossword puzzles, multiple-choice, drag-and-drop, cloze, and sequencing activities. Another advantage, in addition to its being responsive and suitable for all devices, is the ability to embed online video, images, readings, and audio files. Hot Potatoes also has a printing format feature that allows us to use activities as worksheets on the fly.

Activities created with Hot Potatoes and Captivate function as self-checks for the students to determine if they comprehend concepts. Therefore, they are treated as low-stakes learning events.

Rapid design and reusability granularity

Creating and adhering to templates, agreement on a finite set of development tools, and defining learning object-treatment norms will speed up development for future projects. As well, revising existing materials will be more efficient due to standards and the granularity of learning objects. Granularity is the creation of learning objects into small, functional modules. For example, all images, text files and other digital media are stored in a common manner, permitting rapid location and retrieval. Our InDesign template is available to be used in any development of student books in the future. The granularity of elements in this template make alterations for another project easy to perform. For example, on the cover of the book, the titling and image can quickly be swapped out to provide a “brand” for the new courses. We are hoping to present our books to other departments within our college to provide them with options for materials development.

Seamless linking with QR Codes

One key model that we are using is placing QR codes throughout our InDesign student workbooks so students can have instant access to web resources. These include low-stake quizzing activities, EdPuzzle interactive videos, PowerPoint presentations, text-activity

prompts, and YouTube videos that correspond with classroom activities. QR codes have a color-coded border representing the type of learning linked object. For example, Quizlets are outlined in blue and Hot Potatoes are represented in red.

Integrating publisher content or Third-Party resources

The use of third-party content for the technician program was also required for the technical, but not the linguistic, elements of development. The main reason for this was essentially the time required to create technical content for blended learning from scratch. Even with the use of the aforementioned rapid development tools that require very little technological specialization, technical development usually requires the expertise of a Subject Matter Expert (SME). A quick cost analysis confirmed that, in our situation, it was far more efficient to license existing learning objects created specifically for the oil and gas industry than it was to create our own. This meant integrating hundreds of Shareable Content Object Reference Model (SCORM) objects into our LMS and tagging them carefully for future use in a Learning Object Repository (LOR). While the reusable learning objects were SCORM compliant, the information contained within them was supplemental in nature and, as such, was not assessed.

Leveraging cloud technology (Office 365)

Another necessity of development was integrating production with emerging workflows and technologies, specifically the institution's use of Microsoft's cloud-based Office 365 and OneDrive. Unlike previous faculty collaboration and production tools, such as Sharepoint, the cloud-based versions of files, similar to Google's Drive/G-Suite with respect to accessibility, are easily shared with students via links or embed codes in the LMS. Properly harnessed and supported, Office 365 and OneDrive suddenly become powerful authoring and collaboration tools for both instructors and students alike.

Learning objects created in Office 365, [Sway](#) or PowerPoint for instance, become centrally stored and are immediately reusable and editable. This essentially makes developers out of anyone, including students, willing to apply existing office knowledge to the newer world of cloud-based interactivity. [Planner](#), another new productivity tool found in Office 365, becomes an effective agile board for tracking development and communication within the development team.

Unexpected, but welcome, outcomes

In addition to the five student books and five corresponding teachers' learning resource guides, each module has several corresponding responsive and interactive learning objects. Above and beyond reaching our targets, were some unanticipated consequences from our project.

Introducing new methods or tools should always be complemented by teacher training. In our case a ["How To" Hot Potatoes manual](#) was generated to ensure that instructors

could create their own learning objects. In addition, four face-to-face workshops covering planning, creating, publishing and sharing Hot Potatoes activities were delivered to faculty. Other sessions were created and delivered to ensure that teachers could use or at least be aware of the technologies used in this project.

This series of sessions included [Quizlet StudySet building](#), [creating and using QR codes](#), digital image editing, creating engaging lessons with EdPuzzle and enhancing instruction through video manipulation. Links to these materials are available in the resources section at the end of this article.

Beyond professional development, a raised awareness of copyright resulted from this materials development project. Images were acquired from a Shutterstock account, a professional photographer, or open licenses such as [Wikimedia Commons](#) or [Creative Commons](#). The remainder were generated by an in-house graphic artist.

Best practices of media and document treatment for sharing and archiving were adopted by the project team. This included tagging files, common naming conventions, and sharing common server spaces. This will make reusability of learning objects, no matter how small, easier for future augmentation or development in our department.

The use of common templates with InDesign, Captivate, and Hot Potatoes ensured that the final products were of similar look and feel. Since our workbooks were based on the engineering department's manuals, students will be able to experience a continuity of learning resources throughout their time at our college. Our templates are now under consideration to be used in our core academic English program and English for technical certificate program.

As a result of this project, a capacity-building plan is in consideration. Capacity in terms of instructor development skills. A pilot training scheme for Adobe products such as Acrobat Professional, InDesign, and Photoshop are under consideration. The idea is to increase the capacity of the department to develop and produce learning materials at a professional standard. This includes uniform practices and styles.

Conclusion

As a result of a small materials development project, with innovation and diligence, we have potentially transformed our teaching methods by integrating BYOT and ensuring consistent materials standards across our programs. Elements include linking to interactive learning objects through QR codes, granular treatment of learning objects, adding relevant interactive learning events throughout courses, and building training to support BYOT itself. Our team hopes that we can build on these successes as we go forward into future academic years and learn from the end users' experience with these materials.

Author Bios

Jacqueline McMaster is a teacher and teacher trainer with 16+ years' experience including Australia, Canada, Vietnam, Singapore, Japan and Qatar. She has had experience teaching in almost every kind of classroom setting. She is currently working in Qatar as an EFL instructor.

John Allan is a teacher, teacher trainer, author, blogger and an instructional developer with 25+ years of experience in the U.S., Canada, the U.A.E and Qatar. His focus on applications of education technologies has resulted a wide variety of training materials and in class learning opportunities.

Keith Hackett has a strong interest in digital-publishing and web-development. He has worked in instructor-training and continues to develop digital materials for various disciplines. He maintains a strong interest in agile project management and recently used InDesign as both a designer and developer for a college level Technical Certificate Program in Qatar.