Flipping the Latin Classroom: Balancing Educational Practice with the Theory of eLearning

by Bartolo Natoli

Abstract

Over the past half-decade, pedagogy on all instructional levels has seen a dramatic increase in the use of eLearning practices. Learning Management Systems (LMSs), mobile learning (mLearning), and Massive Open Online Courses (MOOCs) have been some of the most prevalent eLearning practices aimed at enhancing the learning experience. Due to the rapid rate of technological advance, educators have been in the constant pursuit of methods to incorporate technology into instruction and scholarship on eLearning has begun to focus solely on practical applications of eLearning, the strategies, social contexts, design and / or pedagogies, without grounding these practices in learning theory, despite work being done on learning theories more generally. As a result, two divergent strands of scholarship on eLearning have developed, one practical and one theoretical, neither of which engages with the other on a regular basis.

This paper aims to take a step in this direction, but with an eye to eLearning theory and practice in the Classics. In particular, it will examine as a case study the use of the recently popular eLearning model of the 'flipped classroom' in a small, introductory Latin class at the University of Texas at Austin. Although attempting to improve student learning experiences through the use of eLearning principles, the class showed negligible and even detrimental effects to student comprehension and motivation. It is suggested that the reason for this is that the eLearning approaches used were not employed effectively because they were not grounded in theory. Suggestions for future implementation of the flipped classroom in Classics that is grounded in theoretical principles are then offered.

Part 1

'In the land of American pedagogy, innovation is frequently confused with progress, and whatever is thought to be new is always embraced more readily than what is known to be true.' Ravitch (2010, p. 12)

The educator's task has always been one intertwined with innovation and progress. To keep content and learning from getting stale and outdated, educators must constantly seek out new and improved methods of engaging learners, either developing them from existing educational theory or using them as a means of discovering new educational ideas. Yet, regardless of the inductive or deductive nature of these methods, the most successful and effective ones are always closely linked to theory. Over the past decade, the development of educational methods has frequently gone hand in hand with technological innovation, as educators have striven to keep learning and content relevant to learners who have grown up in a time of technological innovation. These efforts have led to the development of a number of new pedagogical methods such as the flipped classroom, massive open online courses (MOOCS), blended learning, and distance learning, to name a few.

Although such new pedagogical models have the potential to drive Education as a field into new and exciting directions, oftentimes the development of these models moves too quickly for the theoretical evaluation of them.[i] As a result, educators, pressured by administrative expectations to incorporate technology into instruction, have begun to adopt these models only for the sake of using technology. This state of education is what the opening quote from Diane Ravitch references.

Ravitch, a current professor of Education at New York University and former Assistant Secretary of Education in the administration of President George H.W. Bush, made the quote in a 2010 article in which she discusses the disastrous movement in education towards the acquisition of '21st century skills', which must be touted by policymakers, thought leaders, and elected officials lest they appear old-fashioned or traditional. In place of

the progress made in educational theory during the 19th and 20th centuries have come innovative, technological models that emphasize new life skills necessary for functioning in the 21st century. Veteran educators must be silent in classrooms and allow learners the opportunity for 'independent learning', as they work to learn concepts on their own, often via technology. According to one State Board of Education, 'It is no longer important what bits of information a student learns, but only that students be able to locate information'.[ii]

To me, this type of statement smacks of an extreme adherence to some misguided notion of constructivism, one best understood as an imbalance between theory and practice: Either, on the one hand, adherents have greatly misunderstood constructivist theory, thinking that merely allowing learners to wander aimlessly through a lesson in an extreme Montessorian paradise magically results in improved learning and forgetting that constructivism thrives in lessons carefully crafted by veteran instructors, lessons based on the knowledge and experience of those instructors; or, on the other hand, adherents have misapplied constructivism in classroom practice, thinking that placing learners in groups and allowing them to learn 'actively' will instantly result in the construction of new, relevant knowledge. In other words, going through the motions doesn't cut it; one must understand the theory behind the practice in order to improve learning outcomes. Theory and practice are intimately tied and must act in unison, the one informing the other.

This paper, therefore, is an attempt to engage with educational theory and to apply it to classroom practice. To do so, I will share my experiences in implementing the flipped classroom model, a type of blended learning, in my undergraduate introductory Latin class at the University of Texas at Austin. In my adoption of the flipped model, I attempted to 'remain current' with educational technology or – better yet! – to be innovative; however, in my somewhat arrogant zeal to be innovative and to help improve learning outcomes, I lost sight of a key point: the relationship between theory and practice. As a result, learning outcomes were not what I had hoped and, I fear, learner comprehension suffered. Thus, I submit a cautionary tale - and what I learned from it - as a means of encouraging us to keep the balance of theory and practice in mind when attempting to implement educational technology in our classrooms.

Part 2

Before turning to the classroom practice of my particular Latin class, I want first to ground that discussion in theory; for although the flipped classroom is nearly six years old and has been mainstream educational practice for the past two, its connection to educational theory is rarely referenced in mainstream educational literature. In very basic terms, the flipped classroom is the inversion of the events that have traditionally taken place inside the classroom so that they take place outside the classroom and vice versa. The guiding principle behind this approach is that 'work typically done as homework is better undertaken in class with the guidance of the instructor' (Herreid and Schiller, 2013, p. 62). As such, "class becomes the place to work through problems, advance concepts, and engage in collaborative learning" (Tucker, 2012, p. 82). The direct instruction that previously was done in class, such as lectures, is now given as homework. The advantages of such a system are clear, but a nice listing of them is given by Kathleen Fulton (2012):

1. Students move at their own pace.

2. Doing 'homework' in class gives teachers better insight into student difficulties.

3. Teachers can more easily customize and update the curriculum and provide it to students 24/7.

4. Classroom time can be used more effectively and creatively.

5. Teachers using the method report seeing increased levels of student achievement, interest, and engagement.

However, this definition of the flipped classroom is actually too simplistic and ill-defined, as nearly all articles on the model limit it further (see Bibliography for a listing). Bishop and Verleger (2013) see more than a mere rearrangement of activities, identifying an expansion of the curriculum based on instructional models typically in flipped classrooms. In particular, they point to the use of group-based, interactive learning activities inside the classroom and the adoption of individual, asynchronous, computer-based activities outside of the classroom. Therefore, Bishop and Verleger suggest the most accurate definition of the flipped classroom:

'We define the flipped classroom as an educational technique that consists of two parts: interactive group learning activities inside the classroom, and direct computer-based individual instruction outside the classroom.' (Bishop and Verleger, 2013, p.5)

In theoretical terms, the flipped classroom is a counter-intuitive blend between social-constructivism, cognitive conflict, and behaviorism. By employing group activities in class, the model harkens back to Vygotsky's notion of social constructivism and Piaget's theory of cognitive conflict. Piaget's theory of cognitive conflict is basic constructivism: when one is presented with an unfamiliar experience, the individual either must assimilate that experience into a prior cognitive schema or most accommodate it by creating a new schema. Vygotsky's concept of social constructivism primarily revolves around the notion that social interaction is paramount to learning and that groups can achieve more than individuals; familiar concepts such as the Zone of Proximal Development and scaffolding come from Vygotsky. Thus, when we create a scaffolded, group learning activity in the flipped classroom, we are hoping to present a cognitive conflict that can be solved through social interaction and group effort. Likewise, by using asynchronous, individual, computer-based instruction, the model calls upon basic behaviorism, as it aims to present learners with information that will transform their behavior and with assessments that will reinforce that change.

Part 3

Having grounded ourselves in theory, we now turn to the practice of my Latin classroom. My class was taught

in 2012 and was a 15-week intensive Latin course in which we were to cover the entire language. Therefore, I felt it was appropriate to use the flipped model because I assumed a higher level of learner. I was basically correct, as the average, self-reported GPA of 3.394 attests. Yet, despite their general academic qualifications, the learners were fairly inexperienced in language learning and in university life, in general, as 19 of my 22 learners (86%) were underclassmen.

In setting up my flipped class, I followed the traditional 'flipped' model: I converted my old PowerPoint lectures into narrated videos and placed them on YouTube. Each video was no longer than the recommended length of 6 minutes.[iii] To accompany the videos, I created fillable .pdf homeworks that learners could either email to me or print and bring to class. In class, I followed a general pattern of warm-up, review discussion, and group activities for practice.

As the class went along, I began to notice that the upperclassmen and well-prepared underclassmen were doing well and that my other learners were beginning to struggle. However, weekly polls of the class showed that they liked the flipped model and felt that they were doing well, as 88% rated the class model as excellent. This was consistent with the research on the flipped model; so, I chalked the differences up to learner inexperience with the model and thought that their performance would improve as soon as the learning curve kicked in.

However, at the 7 week mark, the grade disparity reached a critical point. Of my 22 learners, 13 were 88% and above, 2 were between 80 and 87%, and 8 were below 73%. Something was not seeming to be getting across and, although my polls were consistent with the research, the learning outcomes were poor. So, I consulted the research again and found something shocking: of all the research done on the model by the time I taught my class – 24 studies – only one study (Day and Foley, 2006) actually examined learner performance over a semester. The rest only examined one aspect of edtech over a short period or catalogued instructor and learner perception of performance.

This realization made me re-evaluate my class instead of following the research. In particular, I looked back on the theory and its relationship to practice and I found two specific problems with my class:

1. The style of videos presupposed a level of cognitive familiarity that was not there. Due to their inexperience, learners lacked the study skills or linguistic aptitude to handle the language in a totally individual, asynchronous setting. What was missing was active, in-person modeling that is so crucial to an introductory language course. Learners simply did not have the tools to interpret not only the Latin grammar and syntax but also the way in which to approach the language itself.

2. Learners were not receiving enough support in their homework and they were not receiving it quickly enough. Not only could the problems they had in their homework not be addressed until the next class, but the class lecture / discussion also was not adequately answering their problems. By the time assessments caught the issues, many problems had already been internalized and grades had been affected.

So, at the 8 week mark, I hit the proverbial reset button. I scrapped the flipped model for a more traditional one, but left the videos up for reference. Learner comprehension and performance began to improve almost immediately. This was most likely due to 1) their cognitive comfort with the model and 2) learning theory began to match classroom practice.

Eventually, I was able to move the class back to the flipped model around week 12. By that time all the learners seemed to have experienced the language enough to build up the cognitive schemata necessary to interpret instructional videos successfully in an individual, asynchronous setting. This time, I kept the same basic setup as I originally had, but made a small change to the homework. As part of each night's worksheet, I included a question instructing learners to identify at least one thing they did not understand about the video. These were emailed to me and, before class began, I collected them into a list. Then, I made warm-ups using this list: learners would break into groups of 2-3 and would discuss the answers to these questions. After these discussions, we would engage in a full-class discussion of these questions. By means of such just-in-time instruction, I was able to address concerns specific to my learners and to do so in a social-constructivist setting, as the learners themselves worked through the material. By the end of the class the grade spread reflected the improved model: 13 As, 8 Bs, and 1 C.

In my haste to incorporate the new, I had lost sight of what I knew to be true and almost cost my class. In the end, the realization I came to was the vital importance of blending theory and practice. It is all-too-easy to get swept up in WHAT a new edtech breakthrough can help us DO, but what we should be thinking about is HOW it can ENHANCE what we ALREADY know about pedagogy.

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[i] Bulfin, Henderson, and Johnson (2013) provide a great overview of this problem and the current conceptions of the relationship between theory and practice among educators. Their survey 'highlighted a paucity of theoretical engagement (and perhaps theoretical ambition) among many respondents. It would appear that many respondents' notion of what constituted useful 'theory' often related to specific ideas, concepts and frameworks that would not be considered to be theoretically grounded or particularly theoretically sophisticated. Further thought and discussion need to take place regarding the apparent absence of *bona fide* 'theory' from the field' (p. 343).

[ii] Kansas State Board of Education, as quoted by Ravitch 2009.

[iii] Guo (2013): 'The optimal video length is 6 minutes or shorter -- students watched most of the way through these short videos. In fact, the average engagement time of any video maxes out at 6 minutes, regardless of its length. And engagement times decrease as videos lengthen: For instance, on average students spent around 3 minutes on videos that are longer than 12 minutes, which means that they engaged with less than a quarter of the content.'