

Online Teaching and Classroom Change: The Trans-Classroom Teacher in the Age of the Internet

by Susan Lowes

Online and face-to-face courses are often seen, and studied, as two separate worlds. In the past, most of these studies have been comparative—Is an online course in such-and-such subject more or less effective than a face-to-face course in the same subject?—although increasingly the focus is on evaluating each on its own terms (Sener [2004](#); Lockee, Burton, and Cross 1999). This is progress, but it still considers the two environments separately. Yet, although face-to-face and online courses do indeed take place in separate environments, the social field of the teacher who teaches them increasingly includes both.

And as a teacher moves, either simultaneously or serially, from one environment to the other, the course being taught will also be transformed as it is shaped and reshaped to fit first one context and then the other. Much like immigrants who leave the cultural comfort of their home societies and move to places with very different cultures and social practices, those who teach online leave the familiarity of the face-to-face classroom for the uncharted terrain of the online environment, whose constraints and affordances often lead to very different practices. The [trans-classroom teacher](#) who moves between the two environments, transferring ideas, strategies, and practices from one to the other, is a mental migrant. The transformations—of the teacher and of the course—that occur in these migrations and the two-way interactions between face-to-face and online teaching are the focus of this study.

The Teachers

The research on which this article is based looked at the full migration path for 215 Virtual High School ([VHS](#)) teachers who responded to a survey that focused on the changes in their teaching practices as a course (and teacher) moved from face-to-face to online environments and back again ([Exhibit 1](#)). VHS was chosen as the setting not only because of its long history of offering highly rated online courses in many subject areas to students in schools across the United States, but for two additional important reasons: First, most VHS teachers also teach face-to-face courses in their own schools at the same time that they are teaching online, and second, VHS requires that all its teachers prepare for teaching online by taking a demanding professional development course—delivered online—on the pedagogy of online teaching (Pape, Adams, and Ribeiro 2005).

As part of their professional development, new VHS teachers either create new courses or, with increasing frequency as the catalogue is built, take ownership of existing courses by adapting them to fit their own knowledge base and teaching styles. VHS courses are asynchronous, but students follow a weekly schedule and are expected to communicate with each other in the discussion forums. VHS courses are developed using the principles of [backward design](#), an approach to curriculum development that is more familiar to elementary than to middle- or high-school teachers. In terms of online pedagogy, VHS professional development emphasizes student-centered teaching; collaborative, problem-based learning; small-group work; and authentic, performance-based assessment. About two-thirds of those who responded to the survey reported that they were already familiar with these concepts and practices, but only a third were familiar with the principles of backward design.

Creating the Online Course

VHS does not allow a teacher to simply import a face-to-face course wholesale into the online environment. As teachers adapt their courses for the online environment, they are forced to reexamine the course design, reconsider curriculum strategies, and make many decisions about what to take out and what to keep, what to add and what to substitute. Whether the teachers are already using the kinds of pedagogies advocated by VHS or have learned them in the professional development course, their finished courses are the result of intensive reflection and look very different from the courses they have been teaching face-to-face. As one VHS teacher described it, "By developing my course, I have had the opportunity to introspectively analyze what I am teaching, why I teach the way I do, and how I can change and improve my communication with students" (quoted in Pape, Adams, and Ribeiro 2005, 125).

The survey asked the teachers about the changes they had made in adapting to the online classroom. Some were the kinds of changes that might be expected in the move to an online venue: For instance, almost everyone added online (Internet-based) readings and took out or replaced textbook readings, quizzes, and worksheets. Other changes were in line with the constructivist approach that VHS encourages, including adding whole-class discussions, group projects or assignments, debates, and peer reviews. All the survey respondents required their students to use the discussion forums, and almost all reported that their courses included multiweek projects (98%), collaborative group work (95%), and peer reviews (84%), while 69% reported that they had their students complete multimedia assignments.

Teaching the Online Course

While creating an online course is challenging, it is the teaching of the course that leads teachers to reexamine some of the fundamental differences between the two classroom cultures. As teachers migrate to the online environment, they find that a whole host of issues—including teacher-student and student-student communication, the extent and nature of reflection, student accountability, and assessment—must be approached differently than they are in the face-to-face classroom. Teaching the online course led these teachers to develop ways to communicate with students they could not see, to find ways to know if they were meeting their students' needs, and to assess whether, and what, students had learned.

The responses to an open-ended survey question about the major challenges of teaching online fell into six categories, phrased here as the questions that the teachers asked themselves:

- *How do teachers teach without personal communication?* In the online environment, teachers struggled to work out ways to reach and evaluate students when they could not interact with them face to face on a daily basis ([Exhibit 2](#)).
- *How do teachers provide instructions that are clear enough?* Online teachers also contended with a slightly different issue in terms of teacher-student communication: how to provide instructions that were sufficiently explicit that students could follow them. This was a particular concern for those teachers whose face-to-face courses had a hands-on aspect ([Exhibit 3](#)).
- *How do teachers know when their students are confused?* In face-to-face classrooms, teachers know if their students are confused by their questions or by the looks on their faces, but in online courses this type of just-in-time assessment has to be done through text, which presented some challenges ([Exhibit 4](#)).
- *How do teachers get all students to participate?* These teachers were concerned about making sure that all students participated in the discussions and that student-student communications, particularly in the discussion forums, were meaningful learning experiences ([Exhibit 5](#)).
- *How do teachers manage pacing and scaffolding?* Some of the respondents were concerned with the loss of flexibility in course organization that was the result of planning an entire course ahead of time (a VHS requirement) so that they could not adapt on a just-in-time basis to the student population. This concern surfaced in their descriptions of their struggles with how to pace the course, how to break it into manageable pieces, how to provide scaffolding, and how to organize groups ([Exhibit 6](#)).
- *How do teachers know if students are learning?* Many teachers were concerned about how to assess

whether their online students had learned what the teachers wanted them to learn ([Exhibit 7](#)).

Teaching Face-to-Face After Teaching Online

About 75% of those who had taught online took the final step in the migrant journey and returned to teach in the face-to-face classroom subsequent to their online teaching experiences. The combination of the VHS professional development course with what they had learned from the constraints and opportunities afforded by the online environment led many of these teachers to transform their face-to-face courses in terms of both content and pedagogy.

What Changed and Who Changed?

Although we had a general idea, from anecdotal reports and interviews, that teachers did make changes when they went back to the face-to-face classroom, and although about 75% of the 158 responding teachers who taught both online and face-to-face reported that teaching online had a positive impact on their face-to-face teaching, we wanted to learn more about exactly what had changed ([Exhibit 8](#)).

The most frequent changes (defined as those made by 60% or more the respondents) involved course design or redesign, including eliminating lessons that now seemed poorly designed, designing or redesigning lessons using backward design principles, and adding lessons or units from the online course. In addition, those who made the most changes also reported that they had added peer reviews to their face-to-face courses and that they were now providing more detailed instructions.

The second most frequent set of changes (those made by between 40% and 60% of respondents) involved the transfer of a range of strategies learned from teaching online to the face-to-face classroom, most of which revolved around fostering better communication. These strategies included changing how groups were organized, requiring class contributions from all students, providing more timely feedback, providing more written instructions, using class time more efficiently, and providing additional ways to communicate with students. The changes made by less than 40% of the respondents tended to be in the area of adding multimedia; these kinds of changes were less common presumably because it can be difficult for teachers to access the resources necessary to make these changes.

Those who reported making the most changes taught math, science, social science, and foreign languages, while those teaching computer science or programming reported making the fewest changes. English language arts, art, and art history teachers were in the middle of the ranks of changers ([Exhibit 9](#)). It seems possible that the teachers in the first four disciplines made the most changes either because these are particularly difficult subjects to adapt to the online environment and so require a lot of rethinking (math, science, foreign language) or because the online environment opens up the range of resources available (i.e., social science, which was primarily history). Computer science teachers, on the other hand, struggled to adapt their courses to a more constructivist format but found it very difficult to do so and tended to make fewer changes as a result.

In a series of open-ended questions, teachers were asked to expand on four areas where the constraints and affordances of the online environment are particularly salient and thus seem likely to affect subsequent classroom practice. Although these were described as optional questions (and were at the end of a very long survey), between 80% and 85% of those who had taught face-to-face after teaching online responded. The four areas were class participation, independent learning, questioning techniques, and metacognition/reflection.

Class Participation

In online classes, full participation in discussions can be mandated by requiring a certain number of posts each week or by requiring that students respond to one another's posts. The teacher can easily monitor the quantity and quality of the participation, including who is participating, when, and how often. This is more difficult in a face-to-face classroom and is a particularly knotty issue when it comes to group work and collaborative projects. For many of these teachers, teaching online had raised their awareness of the issue of participation and led them to devise ways of encouraging it in their face-to-face classrooms ([Exhibit 10](#)).

Independent Learning

To be successful in online courses, students need to be self-motivated, well-organized, independent learners; at the same time, taking online courses can help students develop these characteristics. In addition, students cannot rely on their charm or parental intervention to help them negotiate over late assignments or poor work. For these teachers, teaching online led to a subtle but potentially far-reaching shift in their attitudes toward their face-to-face students, as teaching online made them realize that they could require more independent work. This realization was accompanied by a shift to a more learner-centered pedagogy in the face-to-face classroom ([Exhibit 11](#)).

Questioning Techniques

To work well, online discussion forums need thoughtful facilitation, including careful attention to how questions are asked. Teachers wrote about how they imported what they had learned about asking questions into their face-to-face classrooms. They also wrote that they were now more confident using open-ended questions with their students and were less likely to provide answers. Others linked this shift to larger changes in pedagogical approach, including a reduction in the amount of time spent lecturing and a shift to a facilitator role ([Exhibit 12](#)).

Metacognition/Reflection

Another affordance of the online environment is the time for thought or reflection allowed by the asynchronous nature of the discussion forum. Although posts can certainly be composed off the cuff, in general the fact that they are written and often graded forces students to think before they write. In addition, well-constructed questions can lead to reflective answers. Most of the teachers who reported changes in this area wrote about how they were now building more time for reflection into assignments in their face-to-face classrooms—not only in writing assignments, but in oral discussions as well ([Exhibit 13](#)).

Conclusion

While there is now a considerable literature on the characteristics of successful online courses and on how to bring good pedagogy into the online learning environment, there is as yet little research on the effect of teaching online on teachers and even less on how teaching online can shape teaching in the face-to-face classroom. This study, although preliminary and confined to one setting, suggests that the trans-classroom teacher's migratory journey to and from the online classroom can transform that teacher's face-to-face classroom practice in subtle and important ways.

At the same time, this work raises a number of questions, some for future research and some with practical implications. One question is central to a better understanding of what an online classroom is and how it works: How much of the change that these teachers reported can be attributed to the general constraints and affordances of the online environment—particularly distance and asynchronicity—and how much to other factors, such as the specifics of the VHS model of virtual schooling, the VHS approach to professional

development, or even the self-selected nature of this group of teachers? It seems likely that the professional development experience was particularly important, but more research is needed to see if these findings hold true for other online teachers.

Finally, there are practical questions that are worth considering as the field of online teaching grows. Can we, and should we, find ways to develop more trans-classroom teachers or to make nascent trans-classroom teachers more so, by encouraging more teachers to teach in both venues and by encouraging online teachers to reflect on the changes they make when teaching online? Can we, and should we, deliberately find ways to encourage the transfer of successful aspects of online pedagogy back to the face-to-face classroom, capitalizing on what these trans-classroom teachers have learned by treating them as resources for their face-to-face classroom counterparts? This research, exploratory though it is, suggests that giving more teachers the opportunity to teach online, as well as deliberately encouraging those who do teach online to share what they have learned with their fellow classroom teachers, provides an opportunity to strengthen teaching in both environments.

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