

# **Integrating Technology into a Two Continent Consortium: Lessons Learned Teaching the TIRES Virtual Seminar**

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## **Abstract:**

This chapter discusses the challenges faced and overcome when a group of faculty needed to design and implement a “virtual seminar” that would be taught by professors at eight campuses on two continents. While the content of the course—international migration in comparative perspective between the U.S. and Europe—was important to teach, the designers were particularly concerned about building into the seminar opportunities for students to interact across campuses. The rationale was that through multiple types and times for interaction students and faculty would be exposed to an array of perspectives and their learning experience enhanced. The designers turned to several technological tools, namely, electronic bulletin boards, email “pen pals,” and moderated on-line chats, to promote interaction. The chapter details both the successes and stumbling blocks encountered in the development and implementation of this seminar.

## **Introduction**

It was the first week of August and around the table sat a dozen people—faculty, technology support technicians and administrative personnel. Their mission? Design and implement a course to be taught at

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eight campuses on two continents with up to ten-hour time differences and for students whose language dominance ranged from English to French, German, Dutch and Spanish. When would this course begin? In less than three weeks! Mission Impossible? Almost — if not for the innovative use of technology. This chapter discusses what this group of people accomplished in order to successfully teach a “virtual seminar” coordinated among all the campuses.

### **The Mission**

Florida International University (FIU) won a U.S. government grant from the Fund for the Improvement of Secondary Education (FIPSE) to serve as lead partner of a federally funded consortium linking four campuses in the U.S. with four campuses in Europe, the latter funded by a matching European Union grant. The consortium’s focus is studying immigration and xenophobia in comparative perspective on the two continents. Its acronym, TIRES, stands for “Transnationalism, International Migration, Race, Ethnicity and the State.” The easternmost member and lead partner for the European side is a German university on the Polish border and the westernmost partner is the University of Colorado in Boulder. The TIRES consortium, with some alternations in configuration, had functioned for some half-dozen years prior to receiving the funding and primarily facilitated undergraduate student exchanges. The grant support stipulated that the consortium partners would execute three elements: (1) undergraduate student exchanges aided by grants to help offset students’ added expenditures for travel and/or to acquire language proficiency; (2) creation of three-week residential summer institutes for graduate students; and (3) the development of a “Virtual Seminar,” a course that would be taught at each campus by TIRES faculty.

As conceptualized in the grant, the Virtual Seminar (VS) would combine a face-to-face course taught by local faculty at each campus and computer-mediated communication among students and faculty across the consortium, but particularly among those involved in VS courses taught during the same semester. Thus, the VS would not depend entirely upon an individual faculty member (or in some campuses multiple TIRES faculty members) to teach all the course material as in a standard

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course. Rather, the VS would capitalize on different TIRES faculty expertise. In other words, the course design would bring TIRES faculty with specific knowledge to “teach” this part of the seminar and the local faculty member would then teach only his/her own areas of expertise while the other TIRES faculty would fill in. For example, if a faculty member’s expertise were in theories of migration, she would handle this section of the course, and if another member’s expertise were in xenophobic reactions to immigrants, he would “teach” this section. The critical problem facing the VS planners sitting around the table in early August was *how* to operationalize this collaborative plan. Moreover, the VS part of the grant proposal emphasized that the VS would provide opportunities for interactions between students at the different campuses and particularly EU versus U.S. students, and interactions between students and faculty across the consortium. This promise accentuated the difficulty of the task facing the VS planners. What would they design?

### **Scholarly Precedents**

The challenges faced by the VS planners are both similar to and different from those faced by other educators pioneering computer-mediated learning environments. A key similarity is the desire to build student-student and student-faculty interactivity into on-line and web-assisted courses (Cafolla & Knee, 1999; Davidson-Shrivers, Tanner, & Muilenburg, 2000; Freiermuth, 2002; Irvine, 2000; Jeong, 1996; Schwier & Balbar, ; and Wang & Newlin, 2001). Roberson and Klotz (2001), for example, are concerned that:

often on-line courses are configured and delivered in a style more often associated with independent study or correspondence work, i.e., students working independently to complete posted assignments at their own pace. While this format may work in some instances, it leaves a ‘missing link’ in the learning curve for students since they lack the opportunity to benefit from the experience of structured dialogue and sense of community that can be created in a traditional on-site classroom environment (p.1).

Courses delivered completely on-line are identified as those most in need of filling in the “missing link” of interactivity. Synchronous and asynchronous technologies have been introduced to meet this need such as email correspondence including listservs, electronic bulletin boards,

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video conferencing and chat rooms. Though the research on the effectiveness of these different technologies is still in its infancy, there is consistence evidence for a basic conclusion, viz., that interactivity improves student satisfaction particularly students' sense of a learning "community" which otherwise is largely absent (Orey, Koenecke, & Crozier, 2003; Roberson & Klotz, 2001; Schwier & Balbar, ). This may ameliorate the current high drop out rates of students in on-line courses (Hill, Han, & Raven, 2001). Additionally, computer-mediated communication (CMC) in courses facilitates higher participation rates by students overall, since the relative anonymity of the on-line environment helps shy students overcome their inhibitions to participate, inhibitions most evident in traditional face-to-face learning environments (Irvine, 2000). Research that compared different technologies for their promotion of learning suggests that listserv discussions and/or threaded electronic bulletin board discussions promote greater student reflection and quality of interaction (Davidson-Shrivers et al., 2000; Dietz-Uhler & Bishop-Clark, 2001; Irvine, 2000; Jeong, 1996; Roberson & Klotz, 2001). With the exception of Dietz-Uhler & Bishop-Clark (2001), the same studies typically found the chat format to be more dynamic but prone to student digression from the discussion topics.

The TIRES faculty planning the VS did not enjoy knowledge of the literature on CMC. Our mission to design the VS plunged us into this field and, in retrospect, we were able to achieve our goal of consortium-wide interactivity by employing different technologies, some in ways that other scholars in the field do not appear to have pursued. As described in detail below, we promoted student-student and student-faculty interaction via email (through pen pal assignments), threaded bulletin board discussions, taped lectures (not video conferencing but which at least introduced students to TIRES faculty), and, most importantly, *moderated* chats. Moreover, we integrated these technologies not into on-line courses, but into courses that were taught in brick and mortar classrooms. This makes the VS endeavor distinct from most of the literature on CMC which addresses issues specific to on-line teaching environments. After I discuss our experience in detail, I will return to the issue of moderating chat rooms, as anticipated immediately above.

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### **Background Continued: CMC Precursors to the VS**

In the spring semester of the year before the VS was to be implemented, faculty at two TIRES campuses (FIU for the U.S. and the University of Liege [Belgium] for the EU) attempted to provide interactive experiences for their students studying international migration. This experiment helped identify both possible modes for interaction during the VS and also some pitfalls to avoid. The FIU course was web-assisted through the software package WebCT (similar to Blackboard). FIU students would log into WebCT where they could access course material, bulletin boards and chat rooms. The bulletin boards in WebCT are threaded and thus can hold iterative discussions. They have an added advantage—they can be edited and manipulated by the instructor (“designer” in WebCT lingo). For example, students’ postings that are off-topic can be deleted and postings that are improperly placed (e.g. posted to the wrong discussion thread) can be moved. The chat tool in WebCT, however, is not sophisticated. It is just a chat room that anyone who has logged into the WebCT course can enter. That is, it is an unregulated or unmoderated room.

The WebCT format worked fine for the FIU students and their TIRES faculty instructor. However, it was problematic for interactions with the Liege students. Why? This has to do with the log-in security features of WebCT. At FIU and probably on most campuses, students must be registered in a course at the university in order to have access to the WebCT components of the course. At FIU, this is an automated process where students’ FIU email addresses become their WebCT log-in usernames and their student IDs become their initial passwords. This became a stumbling block for the Liege students who were registered for their own class in Belgium but not for the FIU course. The WebCT staff at FIU had to be contacted and each Liege student given a WebCT username and password in order to gain access to the bulletin board. Liege students then were asked to post their ideas to the same bulletin board within WebCT as the FIU students. This worked well once the log-in process was solved. However, the quality of the interaction was low because it was not in real time and students could not get to know one another since they could only respond to intellectual issues.

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### **The Virtual Seminar Course Model**

On that early August day when the emergency implementation team met, expectations for more satisfying levels of student-student and student-faculty interactions punctuated the discussion about how to design the VS course. Moreover, the course needed to maximize flexibility, permitting faculty to teach it according to their academic calendar (calendars for each campus varied widely) and their own interests and didactic approaches. The basic format that was sketched out by the planners and then implemented was the following:

- (1) The course would be taught in English, the common TIRES language
- (2) Professors would develop course modules that would
  - a. feature their own expertise and
  - b. complement each other so that there would be minimal overlap.

The modules would be self-standing, meaning that they could be taught independently of each other and thus utilized in any order. Faculty could utilize several or all of them as building blocks for their own VS course versions. Finally, faculty teaching the VS would retain full control of the course content and the grading protocol because they would have to issue grades. In sum, the VS format was designed to be exceedingly flexible for teaching and grading purposes but with a common content and shared vision for technology-aided interactions.

### **Individual Modules**

Planners decided that each module would include several standard elements. These included a (1) mini syllabus, (2) videotaped lecture, and (3) interactive components. The mini syllabus included a description of the module, a list of required readings, an outline of the lecture, and a list of discussion questions students would be expected to address in the interactive component section. The readings were made available either in hard copy (sent to the lead university on each continent and then distributed) or scanned and made available in PDF format on line. Lectures were videotaped in most cases at FIU when the TIRES faculty attended the summer institute for graduate students. They were made

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available to consortium members in the format they desired: DVD, CD, VHS or PAL. Each module author could also suggest some assignments that students could do, including interactive assignments. These module elements were assembled into a specific module webpage accessible from the TIRES VS homepage, as shown in Figure 20.1. Technical support staff at FIU designed an applet log-in function that would pop up whenever anyone clicked the “VS” icon on the main TIRES webpage. Once through the log-in process, students would have access to all the VS modules. Only enrolled students would be given the correct log-in information to help keep the VS protected from uninvited visitors.

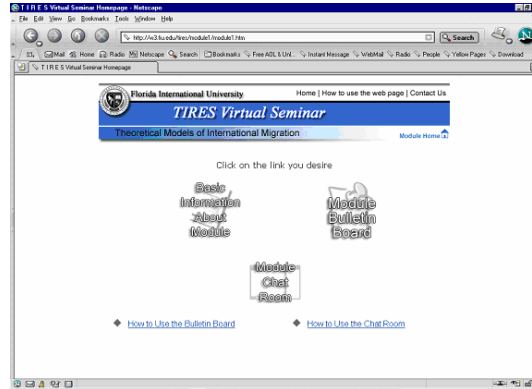
Thus, when students’ local VS syllabus called for them to use a certain module, they were directed to the VS webpage and told to select the appropriate module. By clicking on the module icon, they would come to its webpage where they would find icons for the mini syllabus, a bulletin board and a chat tool as illustrated in Figure 20.2. Students would do the required readings and address the discussion questions posed on the mini syllabus, unless otherwise directed by their own VS course instructor. Additionally, students would watch the videotaped lecture for that module. The latter helped students make a personal connection to the module author and prepare them for interactions through the bulletin board and chat tool on the module webpage. Given

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Figure 20.1. Screenshot of TIRES Home Page



Figure 20.2. Screenshot of TIRES Virtual Seminar start page



that these lectures were taped, they could be viewed again and on demand. Additionally, though this was not implemented, they could be made available digitally so that students could access them through the VS webpage or through WebCT.



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### **Use of Technology: Interactive Components of Modules**

Though the VS employed technology through the webpages already mentioned, its design called for more sophisticated uses that I will discuss now. Building on the previous FIU-Liege experience of the bulletin board interactions, each VS module incorporated a bulletin board that could be used by all classes using that module. Moreover, the planners heard about the advantages of *moderated* chat rooms from a couple of colleagues at FIU. They discussed this at the August meeting and then decided to implement the use of a moderated chat tool for real-time student-faculty interactions—chats on the content of each module that would link the module author to the students studying it. I will now turn to the conceptualization, operationalization and real experience we had with each of the interactive technologies.

### **Module Bulletin Boards**

As indicated above, each module author developed a series of discussion questions and included them in his or her mini syllabus. The expectation was that these would become the basis for bulletin board threaded discussions. Since the VS was taught on different campuses and according to different school calendars, these discussions were expected to be asynchronous but still focused. That is, one set of students studying a particular module would always be the first. They would encounter the discussion questions posed by the module author inside the otherwise empty bulletin board for that module and begin posting their responses. At some later, usually unknown, time another class would use the module. This second class would encounter the responses already posted and be able to react not only to the discussion questions posed but also to the responses by the previous set of students. Over time, more and more VS classes would encounter the bulletin board and would presumably benefit from the expected variation in viewpoints given students' high diversity of national backgrounds and local circumstances. At FIU alone, most students are either themselves immigrants—primarily from Latin America and the Caribbean—or the children of immigrants.

The modules' bulletin boards proved to have advantages and disadvantages. One of the advantages is anticipated in the discussion

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immediately above, namely, that students' posting would accumulate within bulletin boards over time and thus enrich the discussion. Even students who studied the module early could return at any time and revisit the discussion if so desired. Second, the bulletin board postings have the advantage of creating a permanent record of students' performance, facilitating the grading of this performance.

However, we also found that the bulletin boards suffered from several disadvantages, most of which are attributable to the bulletin board software. First of all, the bulletin board tool that FIU technical staff copied onto each module was very basic. Unlike the bulletin boards in WebCT, instructors could not modify it given its location on webpages that could not be modified by instructors. While this restriction made sense given the fact that no one VS class faculty instructor "owned" the bulletin board, it did mean that discussions proceeded unedited and thus on occasion became off topic. Secondly and related, any problems or issues arising from the bulletin boards had to be solved by technical staff who required payment for their efforts. The grant provided some funding for this assistance, but it was largely depleted by paying for the design of the VS and the development of individual web pages. Third, instructions for how to use the bulletin board (and also the chat room) were written by FIU TIRES faculty to save money and were limited. The instructions as well as the VS homepage included links to "technical assistance" but these links did not lead to real-time help and the requests were only forwarded to a TIRES administrative aid at FIU who then had to seek further assistance. This meant that much time could elapse before users could get the help they needed, particularly if they accessed the module during non-business hours in Miami—very likely given the geographical distribution of the consortium.

Additionally and critically, the bulletin board suffered from the fact that student postings recorded their name but not university affiliation. This hampered the efforts of other students to look at what, for example, the German students thought on an issue versus the Belgians, French or Americans. This particular problem could have been avoided easily if students were instructed to log in not only by name but also by institutional affiliation. Finally, the bulletin boards proved less useful than anticipated because of the lack of TIRES faculty coordination. That is, no one faculty member was assigned the task of

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ensuring that each module's bulletin board was loaded with the correct discussion questions. Instead, either the instructor checked to make sure that they were in place prior to assigning the module or, in the worst case scenario, assumed they were in place and only found out to the contrary if students reported them missing.

### **Moderated Chat Room**

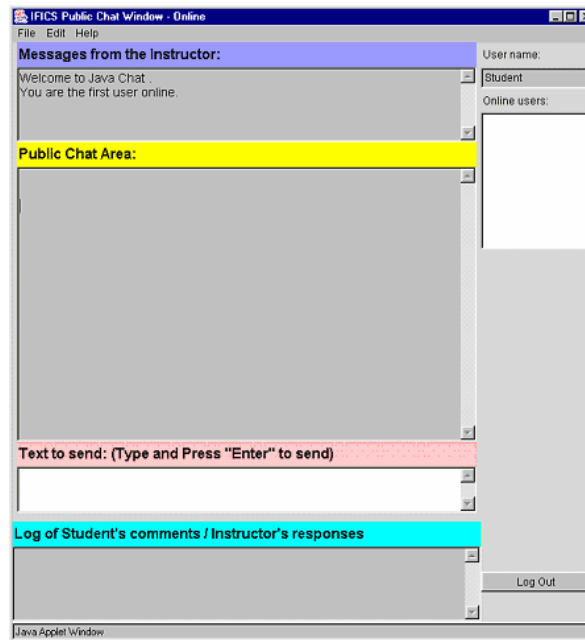
The most successful—but also the most difficult—technology integrated into the VS was a moderated chat room. When the VS planners met in August, the TIRES faculty were unaware that there are commercially available moderated chat tools. We were told about one in development by two FIU faculty members, however, and immediately saw the possibilities of incorporating this type of technology into the VS. A moderated chat room is one in which someone—presumably an instructor or, in non-academic circumstances, an overseer—keeps watch over the chatting activity and keeps it either on track or away from prohibited topics. In the VS case, faculty were concerned that in past experiences with students in chat rooms they would often begin on topic but drift away quickly and that there was no way in an unmoderated chat environment to limit or avoid such tangents. In the chat room technology designed and developed by two FIU faculty members<sup>1</sup>, students could log into a chat room and find a public chat area. The student chat room view is shown in Figure 20.3.

The difference between a moderated and an unmoderated chat room is the fact that the moderator receives each message and decides if it should be permitted into the public chat area. In the case of TIRES, the same faculty member who wrote the module that the students were studying typically also moderated the chat room environment. The author/moderator would receive each student's posting, almost invariably a response to a specific discussion question from the mini syllabus or from the author posting a different question to the public chat room, and decide if it were pertinent to the public chat room's ongoing discussion. The moderator would receive all postings in a special inbox viewable only by the moderator, as seen in Figure 20.4. S/he would click on a posting that would then jump from the large white "inbox" on the moderator's panel into the "Pending Chat Text" window. She then would

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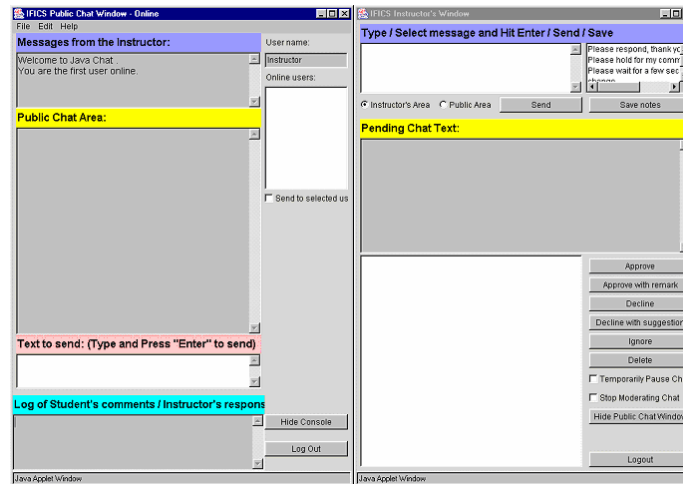
click on one of the boxes to the right of the white inbox for how to handle the posting: (1) accept it which would send it to the public chat area, (2) reject it with a note to the student as to why it was rejected which would send the note only to the student, (3) ignore it which would send it to the bottom of the list of postings in the “inbox,” or (4) delete it without letting the student know why. The designers of the moderated chat software included in the tool a group of pre-determined moderator responses that the moderator could send back to students to explain their posting’s rejection, such as “stay on topic,” “rephrase more clearly,” and so on. These options can be seen in the top right area of the moderator’s panel as shown in Figure 4. The moderator’s screen includes both the student’s view (or public) panel and the moderator’s panel.

**Figure 20.33.** The student view in the ‘Instructor Facilitated Instructional Communication System (IFICS)



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Figure 20.4. Moderator's window in IFICS.



If the moderator sends a message to an individual student, s/he would receive this message in his or her view, just below the window holding the public chat room as seen in Figure 20.3. Because the moderated chat tool only permits accepted postings into the public chat domain, students send messages and do not know why they do not show up in that public area unless they receive a response from the moderator. The moderator, thus, not only controls the quality of the content inside the public chat area, but can also provide feedback to students.

The TIRES experience with this moderated chat tool proved three things. First students and faculty really enjoyed the chats and they found them to be much more stimulating than the threaded bulletin board discussions. Second, in order to use this technology one had better make sure that it will not fail at the wrong moment. Indeed, we had several failures during chats that plagued the TIRES experience. These were due to equipment error. In one case, the server running the chat tool crashed making the tool mysteriously unavailable, and on several other occasions the software failed during the chat, apparently reaching its maximum load factor when more than a dozen participants were logged in. In the

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latter case, some TIRES faculty knew how to restart the tool but this was too technical to teach all the faculty.

Third, moderated chats are highly dependent upon the typing, concentration and language skills of the moderator. A look back at the moderator's special chat tool panel in Figure 20.4 helps reveal the extra load given to moderators. Moderators would receive into their "inbox" (large white area to right side) the students' postings, often many at a time. Each posting requires reading it, deciding what to do with it and implementing that decision. Furthermore, moderators have to keep track of the general discussion going on in the public chat area in order to know what to decide to do about each student's posting. These decisions are cognitively stressful, particularly if the moderator's first language is not English. Moreover, moderators need to be good typists in order to referee the discussion, keeping it on topic and switching topics. The structure of the moderator's panel illustrates that the instructor must shift his/her hands from operating the keyboard to using the mouse. This back and forth activity is constant.

To give a concrete example, imagine there are 15 postings sitting in the moderator's inbox. She scans them quickly and decides which one is most appropriate to continue the discussion in the public chat area. She clicks on this posting and selects the "accept" button with her mouse. It then heads to the public area. She then clicks on several other postings, one at a time, that are not well phrased and clicks the "delete" button. She then decides that she should send several other responses back to students with comments; each time she does so, she clicks on a posting from her inbox and then selects "reject with comment" and then types a comment in the box labeled "Text to Send" and hits return. While she is doing this, numerous other messages arrive in the inbox. She ignores them for the time being, more concerned about shifting the discussion to another topic. She types this topic into the Instructor's "Type/Select Message" area box and hits "return" so that it appears in the public area. She then turns to dealing with the postings that have accumulated. The constant pressure to process postings is exhausting. I have moderated several chats lasting over an hour and up to two hours. The time flew by but I was completely incapable of doing anything afterward! Fortunately, I am a fast typist and very knowledgeable about the chat tool itself, having helped to implement a series of improvements after participating

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in a few chats with a beta version of the chat tool. Imagine how much more difficult it was for colleagues for whom English is their second language and whose keyboards are not optimally configured for typing in English.

### **Advantages & Disadvantages**

Aside from these major lessons learned, there are a host of other advantages and disadvantages we experienced with the moderated chat tool. I will begin on the positive side. Among the greatest rewards was student response that was overwhelmingly enthusiastic. The only complaints we heard were that sometimes there would be little activity in the public area—presumably when the moderator was busy handling the postings—and some students complained that their postings never made it to the public area. Another plus to the chat tool was the opening up of opportunities for real-time interactions. Students could “meet” their module instructors via the web in addition to via videotaped lectures. Of course, given the major time differences, chats had to be scheduled carefully and often could not occur during class time. The latter was particularly true in Europe where the universities in the consortium by and large did not enjoy computer labs that could be scheduled for classes and in which there were sufficient computers available so that all students could log on simultaneously. This hurdle was overcome in some cases by the fact that students could log into the chat room via the VS homepage from any computer with Internet access. Indeed, faculty also found themselves moderating chats from home given that they might have to handle the chats in the evenings (the European case) or early mornings (the U.S. case). Students on the U.S. side enjoyed more ready access to computers in general than the Europeans. The most affected campus was the German that has fewer than 10 computers with Internet access available for student use and no computer labs.

Certainly the chat room is a cost-effective interactive tool, much less expensive than a satellite hookup. Another advantage of the chat room over the bulletin board in the TIRES case was that students were instructed to log into the chat room using their real names. When they clicked on the chat room button from the module webpage they would have to log in and they did so with their own names. The chat log could

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be saved before exiting out of the program and through the log VS instructors could revisit the chat and also examine the quality of each student's postings. The log also served as a "product" that was important to provide to the funding agency to show how their grant moneys were being put to use. Finally, to reiterate points made above, the tool proved invaluable for focusing the interactive discussions, to keep them from straying away from the module's content.

Arguably the worst problem we experienced was the fact that the chat tool software failed several times—and given the difficulty of scheduling the chats they could not be made up. After the first failure, FIU TIRES faculty worked hard with technicians to provide a more stable server environment and to make sure that a technician was on call in case of a failure. The housing of the tool on an FIU server meant, however, that all chats, even those not involving FIU faculty, needed to be coordinated with FIU so that the technicians were on watch. This added strain on the U.S. lead partner but it was the only campus with readily accessible technical support staff familiar with the TIRES program and technology. An alternative for anyone interested in moderated chat rooms is to find a commercial one offering 24/7 support. This comment leads to another, albeit inevitable, drawback, namely, the fact that the complexity of the moderated chat tool requires moderators to be adequately trained prior to its implementation. In the TIRES case, a CD with instructions was prepared and sent to faculty and then they practiced moderating the tool before using it with students. This did not prove sufficient in every case.

Lastly, as discussed above, the moderator has a heavy cognitive load with this technology, particularly when the number of students participating rises above 10. As a consequence, he cannot be expected to keep track of the fact that certain students' comments are permitted into the public area more than others or that some students' postings are never accepted. A possible remedy for this situation would be to assign the students' regular instructor, not the module author, to track the discussion and to send a message to the moderator about any students who do not seem to be participating, at least as revealed in the public area window. In the TIRES case, the regular instructor can only do this while logged in to the chat room just like the students, but her message to



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the moderator could be written in a particular way, such as in capital letters, to communicate quickly to the moderator her concerns.

### **Other Technology-Assisted Interactions in the VS**

When I taught the VS with my colleague, Associate Provost A. Douglas Kincaid, we employed a few additional technologies than those already described above. I will now briefly describe them and their usefulness. We taught the VS as a web-assisted course using WebCT and we took advantage of its more sophisticated bulletin boards to facilitate student exchanges around the course's topics. We did this in several ways through the bulletin boards. On many occasions, we had students post individual responses through the boards as described earlier. This produced threaded discussions. Students were informed that they would be graded for their performance in these discussions using a grading calculus as follows. We gave them separate evaluations for (1) the number of individual entries each student made into the discussion; (2) the number of separate times they logged into the discussion to participate (this information is readily available given that each posting has a time and date); and (3) the quality of their interventions. These evaluations were averaged to provide a grade for each discussion assignment. Secondly, we assigned students into discussion groups and had them focus on a topic from the perspective of a country. For example, we would be studying xenophobic reactions to immigrants in different countries and were looking for country-to-country comparisons. We thus formed groups (WebCT has a randomizing function to create groups) and assigned each group a nation to research. Through WebCT we created also created a special bulletin board for each national group. Students were assigned the task of communicating their research and findings through this bulletin board on WebCT. Thus, the work could be inspected by each group member and also by other students and as well as we, the faculty. We then developed a grading protocol for these assignments as well.

Additionally, we required students to access the Internet to do much—but by no means all—of their research and encouraged them to be in touch with TIRES faculty and students in other countries to aid them when they had to find information on Europe. They also had to

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subscribe to listservs sending information on the course topics and to post important articles and information to topical discussion bulletin boards. We encouraged students to present their group projects using technology, primarily PowerPoint. This was aided by the fact that our class met in a specially designed classroom equipped with direct Internet access, a large broadcast screen, WiFi technology, and more audiovisual aids.

A final use of technology in this particular class involved an interactive assignment linking our FIU students to students in Liege. We obtained a class roll from Liege and assigned each of our students to a Liege student to become interactive Internet “pen pals.” Twice during the course of the semester we required these pairs to conduct a discussion on a particular set of questions related to a module that each class was studying. The “pen pal” idea was good but it ultimately failed for a couple of reasons. First and foremost, it was implemented during and not prior to commencement of the semester. In the FIU case, we structured this assignment into the students’ grading scheme while this did not happen on the Liege side. Consequently, the Liege students were not as consistent participants as the FIU students, the latter complaining when their emails would not receive responses. Second, differences in academic calendars were not anticipated adequately and proved problematic. During the second pen pal assignment, for example, the FIU deadline fell, unbeknownst to us, during spring break at Liege. FIU students panicked due to nonresponses and the assignment had to be extended. These problems are easily remedied with greater coordination and, indeed, the following year the pen pal assignments went well. We do suggest, however, that anyone who wishes to implement such a “pen pal” idea *not* designate it with this label. Students told us later that “pen pal” evoked a very elementary school image and was not compatible with the seriousness of the assignment at the university level.

### **Overall Lessons Learned**

The TIRES Virtual Seminar would have failed without integrating technologies into it. We chose technologies well and have, on the whole, been quite satisfied with the pathways we took. This does not mean that there is not much room for improvement. In our case, however, the

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improvement falls less on the side of which technologies to integrate and more on the side of adequate planning and preparation. We were very lucky, indeed, that in the space of only a few weeks we were able to put together the VS sufficiently to have it run on several campuses during the fall semester. It ran better, not surprisingly, during the spring semester. The fact that we waited so long to design and implement the VS is due to several factors, not the least of which was the necessity to bring together most of the TIRES faculty involved to ensure that whatever was designed would be amenable to them and thus implemented. We sought a democratic design process, one guided by technical expertise, and we could only accomplish this during the graduate students' summer institute that brought together the TIRES faculty. At that time one European junior TIRES faculty member was designated VS coordinator, but his location in Europe while the web pages and servers were located at FIU in Miami provide a hindrance to his ability to coordinate the VS, particularly the development of the website and the scheduling of on-line chats.

The most fundamental lesson we learned was the crucial role of preparation. We recommend advance preparation, allowing sufficient time to test the technologies and to train users of these technologies. We did not enjoy this timeframe and as a result operated largely with design leading to direct implementation—AKA “crisis mode.” Even non-technological matters such as coordinating academic calendars could have been better anticipated to avoid problems experienced down the line.

We learned lessons about the value and limitations of technical support as well. FIU brought to the planning table several such individuals from its Center for On-line Training (COT). They helped steer us in the right direction but did not, themselves, know the technology as well as other programmers and systems analysts we had to consult later on when we needed to use the chat room tool. Only then did we find out, for example, that commercial products with much better support are available and might have been better for our own needs. But the COT staff members were very helpful at least in part because they could see that our TIRES VS needs was pushing the frontiers of technologically aided learning experience. As such and given their overall mission, they participated without expense to the TIRES project.

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However, the same was not as true for the other FIU technical staff. At FIU as I imagine is true in most other campuses, much technological support must be purchased. A word to the wise, then, is that those seeking to integrate technology into their courses also seek to find funds to pay for it, unless, of course, faculty possess the necessary skills and knowledge.

As a final note, I wish to lift up the fact that in the TIRES experience, technology helped to unify an otherwise loosely knit consortium. In our case, such a loose configuration served well to fulfill the other TIRES grant promises, namely, undergraduate exchanges and the graduate student summer institute. For the Virtual Seminar, however, greater coordination and cooperation was needed and we found it, aided in no small part by technology. Moreover and importantly, the technology we chose proved quite popular—particularly the on-line chats—among both students and faculty. We could really see the intellectual merit of these interactions and also enjoyed them. The proof is in the pudding: One faculty member who was very skeptical about the chats during the planning meeting in August changed her attitude 180 degrees some months later right after finishing moderating her first chat. “I’m a believer!” she wrote in an email to all the TIRES faculty.

## **Conclusion**

Research on integrating interactive technologies into on-line instruction environments shows that “students learn better via computer-based communication than face-to-face instruction...[because] students must take more responsibility for, and be more active in, the learning process” (Irvine, 2000: 354). Our experience with the TIRES VS goes a step further to mark how Computer-Mediated Communication (CMC) can enhance traditional classroom experiences as well. Though we did not incorporate a study of student experiences or learning into our design of the VS nor did we explicitly have them evaluate the CMC components of their course, anecdotal evidence is powerful that these interactions promoted both student learning and enjoyment.

We ventured into two areas not well developed in the CMC literature that merit consideration at this final juncture: moderating and evaluating interactions. Though some publications to date mention

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the role of moderating electronic interactions (Irvine, 2000; Madjidi, Hughes, Johnson, & Cary, 1999; Roberson & Klotz, 2001), the possible value of moderating chat room discussions does not seem to be discussed to a great extent in the scholarly literature. Surprisingly, even in a study that identified a multitude of problems plaguing chats, the issue of moderation did not merit a listing (Sapone & Sing, 2001). Our TIRES experience involved moderated (VS) and non-moderated (precursor to VS) chats. Transcripts of these chats clearly reveal that the moderated chats stayed more on topic. Moderation may invoke more traditional instructor-led learning and thus detract from the greater discussion flexibility and fluidity of chat rooms (Roberson & Klotz, 2001), but our goal was predominantly to keep students focused and moderating the chat room helped us achieve that goal. In terms of evaluating student performance, TIRES faculty invented what seemed reasonable methods without assistance from the literature that is overwhelmingly silent on this issue. Some articles refer to the higher quality of student writing and thoughtfulness in threaded bulletin board discussions versus chats (e.g., Davidson-Shrivers et al., 2000; Dietz-Uhler & Bishop-Clark, 2001; Eastman & Swift, 2002; Irvine, 2000; and Roberson & Klotz, 2001), but these authors did not provide insight into specific grading rubrics for these types of interactions. After some discussion, my colleague and I at FIU developed a rubric for the electronic bulletin boards and pen pal assignments that combined frequency of interaction and quality of input.

### **Notes**

<sup>1</sup> The chat tool is entitled "Instructor Facilitated Instructional Communication System or IFICS.

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