In this issue of International Review, we present Part II of a two-part topic, “Cultural Differences in Online Learning.” The three articles in Part I (51:3) and the two articles in the current issue (51:4) were subject to the peer review process by international scholars. The previous issue focused on cultural aspects of Taiwanese and Chinese online learners, whereas the current issue provides a look at two more general studies. The five articles together provide strong evidence of the proliferation of online courses that do not recognize cultural boundaries, as well as testimonial to the growing importance of the recognition of culture and how to integrate it in online courses.

Part I began with “Taiwanese Intercultural Phenomena and Issues in a United States–Taiwan Telecommunications Partnership” by Yu-Chih Doris Shih at Fu-Jen Catholic University in Taiwan and Lauren Cifuentes at Texas A&M University, and reported on Shih’s research, which examined an intercultural online connection between U.S. preservice teachers and Taiwanese ESL students. The second article in Part I was “A Cross-Cultural Study of the Effect of Student-Generated Visualization on Middle School...
East Africa Meets West Africa: Fostering an Online Community of Inquiry for Educators in Ghana and Uganda

by R.W. Burniske

How might one design and facilitate a hybrid course for educators in Africa to explore ways of integrating technology with the theme of sustainable development? How might such a course overcome technological constraints, linguistic barriers, and cultural differences to foster online discussions? How might participants create and sustain a telecollaborative learning community that enables relative novices to develop the skills necessary to participate in distributed, online learning activities?

These were the central questions for the lead instructors of the World Education for Development (WED) course, sponsored by World Links for Development (WorLD, 2003) and the Development Education Program (DEP, 2003) of the World Bank Institute. From December 2000 through February 2001, the program brought together 30 educators from the secondary and tertiary level, 15 from Ghana and 15 from Uganda, to collaborate in an 8-week study entitled “Integrating Sustainable Development and Technology into Your Classroom.”

Participants were selected from a pool of applicants who had completed at least the first two phases of the WorLD program, professional development workshops that introduced them to Internet technologies and the fundamentals of telecollaborative learning. Once selected, participants were required to submit a brief biography to the project mailing list to help establish an online community linking educators from East Africa and West Africa with their instructors in North America. Teachers from various disciplines, including biology, computer science, language arts, and social studies subsequently explored ways to integrate sustainable development concepts into their curriculum while employing educational technologies ranging from e-mail to videoconferencing and the World Wide Web (WWW) to develop learning units that would fulfill the mandates of national curricula while enriching the learning experiences of their students.

Course Structure and Logistics

The groundwork for the course began in October 2000, when two lead instructors were selected, one from the WorLD program (the author of this essay) and one from the DEP. Working in concert, the lead instructors selected site facilitators for the respective countries and a total of five discussion group facilitators. The site facilitators were responsible for coordinating logistical matters and instruction during the face-to-face and videoconferencing sessions at...
the beginning and end of the course. Discussion group facilitators were responsible for managing the online discussions of telecollaborative work groups over a 6-week time period between the face-to-face workshops. Finally, the lead instructors conducted weekly telephone conferences with the facilitators in the respective countries to share questions and concerns throughout the project.

The course began with a 3-day workshop that combined face-to-face sessions and 3-hour videoconferences at the Global Development Learning Network Distance Learning Center (GDLN-DLC) in the respective countries. By combining local, face-to-face sessions with videoconferencing, the lead instructors hoped to foster a strong sense of community and commitment. By setting good precedents and establishing healthy discursive practices, they hoped to engender the trust and confidence necessary for communication and collaboration among virtual strangers from Ghana and Uganda, most of whom had limited experience with online learning tools and methods.

The initial 3-day workshop and series of videoconferences culminated with the creation of five telecollaborative work groups, each comprising three teachers from Ghana and three from Uganda, plus one discussion group facilitator. In addition to electronic mailing lists, the project also established a Web-based Virtual Learning Environment (VLE), which served primarily as a digital archive, but also featured interactive discussion forums for those with reliable Web access. Upon completion of the initial workshop, participants returned to their schools with a common purpose: to engage in telecollaborative work groups for six weeks, collaborating with distant colleagues to produce integrated learning units. To assist these work groups, the lead instructors devised the following schedule to develop the respective sections of the learning units:

- **Weeks 2–3:** Part I—Content (curricula relevance, learning objectives, resources)
- **Weeks 4–5:** Part II—Pedagogy (methods, outcomes, student assessment)
- **Weeks 6–7:** Part III—Implementation (technology, implementation, project evaluation)
- **Week 8:** Final Revision, workshop/videoconference, and course evaluations

### Developing an Online Community of Inquiry

In order to sustain dialogues within this online learning environment, which presented a number of logistical challenges for participants from rural Ghana and Uganda, the lead instructors attempted to foster an online community of inquiry. Toward that end, they distributed a guideline for “Stimulating and Sustaining Online Dialogues” during the first week’s face-to-face sessions and videoconference. These guidelines focused on three primary concerns:

1. The creation and maintenance of accurate mailing lists.
2. The use of clear, descriptive subject lines for all e-mail postings.
3. The composition of careful and meaningful messages.

The creation and maintenance of accurate mailing lists would establish a public forum, and ensure that messages reached their intended audience. Meanwhile, the use of clear, descriptive subject lines for e-mail postings served three primary purposes: (a) helping readers promptly identify the contents of a message; (b) enabling readers to archive messages in an appropriate directory or mailbox; and (c) allowing readers to retrieve messages from their archives at a future date.

Because of the subject line’s importance, the lead instructors prescribed the following convention for messages submitted to the project mailing list:

[WED: Country/Last Name/Keywords or Topic]

For example, WED: USA/Burniske/Online Resources

Participants receiving an e-mail message with the subject line above would identify it as related to the [WED] course, submitted by a participant in the [USA] by the name of [Burniske] who wished to discuss [Online Resources].

Finally, and perhaps most importantly, the composition of careful and meaningful messages would help stimulate and sustain
dialogues, particularly if participants paid careful attention to the following concerns.

- **Salutations**—Addressing a particular participant or workgroup by name, personalizing the correspondence, and establishing a better sense of community and collaboration.

- **Quotations**—Using an excerpt from previous messages to help others follow the conversational thread, preferably in the form of a dialogue alternating between quotations from the original message and the response.

- **Questions**—Emphasizing a fundamental technique for the creation of a community of inquiry. Every message needed to include at least one question, which provided the critical link in a chain of dialogue.

- **Concision**—Limiting e-mail messages to 200 words or less, improving the chances that others would read the entire message and offer a reply. Participants were encouraged to think of e-mail messages as part of an informal, spoken discourse rather than a formal, written one.

- **Signatures**—Requiring authors to include their full name, school affiliation and country of residence at the bottom of each message, enabling members of the online community to make personal connections and prepare personal responses.

**Learning Unit Template**

Participants were required to post a minimum of two messages each week to their telecollaborative work groups. At least one of those postings had to take the form of a question or critique, encouraging further dialogue and collaboration among group members. To structure the discussions, and to give participants a guideline for both their online interactions and the form of their learning units, the lead instructors provided a template and dedicated two weeks for the development of its respective sections (Figure 1). Consequently, participants left the initial, face-to-face workshop with guidelines for the telecollaborative process required of their work groups as well as an understanding of the shape that their final product would take.

The WED course lead instructors monitored discussion group mailing lists and communicated via e-mail and weekly telephone conferences with discussion group facilitators (two in Ghana and three in Uganda). In the final week of the course, participants returned to the GDLN-DLC in their respective countries to present their learning units for critique, finalize their plans for implementation, and discuss ways to share their knowledge and experience with their communities.

**Findings**

For most of the teachers involved, the theme of sustainable development was a welcome addition to their curricula, because of its importance within African communities. Nevertheless, some participants had difficulty inventing ways to diffuse the theme through their particular subject area and curriculum. Even more troublesome, though, was the weekly requirement of online work. Participants confronted myriad challenges, including a cultural bias with respect to questions and criticism (two fundamental activities in the telecollaborative process), which predisposed them to consider...
such gestures “impolite” among strangers. Concerns such as these inform the following discussion of: (a) course preparations; (b) initial workshop and videoconferences; (c) online work groups; (d) concluding workshop and videoconferences; and (e) participant reflections and evaluations.

Course Preparations
(October 2000 – January 1, 2001)

Selection Process: Facilitators and Participants

Despite initiating the applications four months in advance, this project suffered from the tardy selection of discussion group facilitators, which occurred just a few weeks prior to the initial workshop and videoconferences. Discussion group facilitators should have been selected at least six weeks before the course began, so that the lead instructors could initiate weekly telephone conferences and establish a mailing list prior to the first workshop. That way, the facilitators could have acquired the necessary skills before they began working with their discussion groups. It would also have given the lead instructors an opportunity to develop a stronger community of facilitators, identifying those who suffered problems with Internet access or weak communication skills. That information would inform the composition of discussion groups, assigning stronger facilitators to work with participants with limited experience or access. It could also serve as an audition of sorts, with the understanding that only those who met the requirement of weekly correspondence would be invited to continue as facilitators.

With respect to the selection of participants: A number of teachers in rural Ghana and Uganda simply could not gain regular access to their e-mail accounts or the WWW. Perhaps the organizers needed to be more emphatic about Internet access in the project application, or more selective of participants. However, applicants also needed to be more honest about the logistical constraints that they confronted, particularly from their schools and communities, which is where the majority of their online work took place (rather than in their nation’s capital, where the workshops were held and the infrastructures proved more reliable). In some instances, though, their desire to participate in an innovative program, coupled with a lack of understanding about its demands, prompted applications from teachers who were not ready, or able, to fulfill commitments to an online learning community.

Digital Divide: Use Appropriate Technology and Foster Dialogue

One of the primary concerns for the organizers of this project was bridging the gap between the "technological haves" of urban settings (namely, Kampala and Accra) and the technological have-nots of rural settings. For this reason, the lead instructors did not make the Web-based VLE a focal point of the project. In projects that attempt to bridge the digital divide, organizers should think of the VLE (or Web-based equivalents such as WebCT or Blackboard) as an archive rather than a communication center. For participants confronting technological constraints, electronic mailing lists often prove more convenient for telecommunication, enabling them to work offline to compose messages, while sending and receiving replies without need of the Web. This is not to say that submissions to the respective mailing lists should not be archived on the Web, but to caution against the design of online learning courses that rely primarily on Web-based tools and learning environments.

As the infrastructure improves within developing countries, providing faster, more reliable access, educators will be able to explore the potential of Web-based, virtual learning environments. At present, however, directing participants who reside in rural communities within African nations to Web-based discussion forums often causes difficulties because it not only exacerbates the divisions between the privileged minority and underprivileged majority, but it also runs the risk of dissipating the discursive energy. If we think of online learning environments as venues for discussion and collaboration, then the more “rooms” created within a project—that is, mailing lists,
Web-based forums, chat rooms, and so on—the greater the chance that one loses the critical mass necessary to foster a healthy, productive discourse. Research has demonstrated how important—and fragile—reciprocity remains in online discussions, particularly those arranged as “keypal” exchanges demanding one-to-one correspondence (Levin, Rogers, Waugh, & Smith, 1989). What’s more, reciprocal relationships cannot flourish unless participants frequent the same online venue. Thus, it proved wise in this case to think of electronic mailing lists as the primary discussion areas, and Web-based forums as a more exclusive meeting place, enabling conversations for those who enjoy privileged access.

Calendar Issues

Finally, the timing of this course presented problems because the final preparations had to be undertaken during a globally observed holiday season. This placed everyone under duress and complicated the coordination process at a critical time. Because one of the lead instructors was unavailable from December 20 to January 2, the other lead instructor had to shoulder an extraordinary burden. Meanwhile, some participants in Ghana and Uganda lacked access to computer facilities and the Internet because of school closings during the holiday season.

Initial Workshop and Videoconferences (January 2–6, 2001)

This was the most intense and challenging portion of the course for several reasons:

- Relatively limited interactions of course instructors, coordinators and facilitators.
- The need to develop an immediate sense of community within the respective national groups and the group as a whole.
- The participants’ lack of experience with videoconferencing equipment.
- The challenge of deciphering regional dialects of English.

The first week of such courses often feels overwhelming because of all that must be accomplished—from personal introductions to the creation of mailing lists and telecollaborative work groups; however, precourse preparations that include telephone conversations and audio transmissions would mitigate some of the stress.

Because this was a pilot program, the course instructors had to generate a lot of material just-in-time. Unfortunately, this led to an overwhelming load for the site facilitators, who received a series of “important” and “really important” messages via telephone and e-mail every day. Though they tried to meet high expectations, the flurry of documents and instructions may have done more harm than good. In the future, the course instructors should offer a list of priorities for each day (e.g., “If you can only accomplish three things today please be sure to do the following.”). Otherwise, the site facilitators may not understand the relative importance of one exercise versus another.

Perhaps the greatest priority, and one that should begin before the groups assemble for the first workshop, is the creation of a mailing list with two e-mail addresses for each participant (one primary account and one backup). The lead instructors should receive a complete and accurate list by the end of the first day. This would enable the lead instructors to test the full group mailing list, identify errors, and establish a functional mechanism for communication with the full group in the weeks ahead. Again, if the site facilitators had been involved in a similar communication process prior to the videoconference they would have had a much greater appreciation of the challenges ahead. Lead instructors should initiate the communication process from the very first day, so that they can address problems and concerns on the second and third day of the videoconference, before the groups disperse.

With respect to videoconferences, the studio group at the World Bank Institute initiated two relative novices to this medium without much difficulty. The DLC in Ghana did a very good job of creating a presentation space for as many as three people, but the DLC in Uganda never established a similar station. Although everyone had an opportunity to make a brief, personal introduction and initiate discussions, the lead instructors were not satisfied with the level of
interaction during this workshop. They had wanted to avoid the centralized discourse that results from authorities lecturing without providing participants an opportunity to ask questions and engage in thoughtful discussions with their counterparts. In some cases, though, the need to disseminate logistical information limited opportunities for dialogue. Nevertheless, one should allow time for group interactions, making a conscious effort to include them in the videoconferencing schedule, because they reinforce the importance of telecollaborative learning—which literally means “sharing the labors of learning at a distance” (Burniske & Monke, 2001, p. 11). Moreover, interaction compels participants to engage actively in the learning process rather than passively waiting to receive information.

Telecollaborative Work Groups (Weeks 2–7): January 8 – February 16, 2001

The structure of this portion of the course proved successful, though demanding. Participants were expected to submit at least two messages each week to their online work group, comprising three teachers from Ghana, three from Uganda, and one discussion group facilitator. However, two of the facilitators proved erratic, citing limited access to the Internet, personal health problems, and professional obligations as obstacles to the fulfillment of their duties. Once again, this underscores the importance of selecting facilitators who have reliable access and are prepared to make a strong commitment to the entire course.

The size and composition of the discussion groups is also critical to their success. Online discussion groups, particularly those made up of relative novices, should be limited to 10 people or fewer, because it becomes unwieldy for the facilitators to manage larger groups, especially when trying to reach reticent—or negligent—group members. If a project of this kind were to triple in size, embracing 100 educators in total, it would need an exceptionally strong group of facilitators, with a ratio of no more than 10:1 (participants to facilitators)—preferably with people who have much greater experience moderating online discussions than the lead instructors relied on in this project.

It should be noted that although technology was a component of this course it was not the central subject of most discussions. The course objectives required that lead instructors help participants understand the concept of sustainable development and brainstorm ways of integrating that theme into existing curricula while also teaching good discourse habits for online communication. In effect, this describes what Eisner (1985) called the explicit curriculum. However, there were also implicit and null curricula to consider, some often overlooked by the designers of online courses. For example, the lead instructors had to remind participants to provide proper bibliographical citations, and to demonstrate how to document online resources, on several occasions. This reveals the difficulty of trying to create materials that address every concern that might arise within an online learning community.

Although tempting, the one-size-fits-all approach seldom meets the needs of online learners in developing communities. While standardized practices provide the illusion of an efficient process for disseminating information, they often prove ineffective for a learning community representing diverse cultures and a wide range of linguistic abilities, educational backgrounds, and professional experience. It would be wiser to think of these courses as complex systems, which Syverson (1999) described as dynamic, adaptive and self-organizing. To illustrate these qualities, consider the variation within the five online work groups in this project: Three communicated regularly (each had facilitators who made regular, and frequent, contributions to group discussions); one group had sporadic interaction (and a facilitator who left the country, and neglected his group, for the final two weeks); and one group proved dysfunctional (the facilitator contracted malaria during Week 2 and abdicated his role in Week 4, delegating the responsibilities of facilitation to another group member, who tried, with limited success, to establish a telecollaborative process in the final weeks).

Variations in both the quantity and quality of work group interactions support the claim that
online learning communities are dynamic, adaptive, and self-organizing. For this reason, designers of such projects need to create flexible structures that encourage discussion groups to adapt the design to their situation, using it as a guideline that supports the type of collaborative work that needs to take place. Meanwhile, the importance of the group facilitators—as catalysts, cheerleaders, reporters, and moderators—cannot be overstated.

Concluding Workshop and Videoconferences (February 22–24, 2001)

During the final week of the course, which included a 2-day, face-to-face workshop featuring 3-hour videoconference sessions on each day, the respective work groups were asked to choose the best learning unit produced within their group, and prepare a telecollaborative presentation of it via videoconference. Greater familiarity with the videoconferencing technology led to improved interactivity, but perhaps more significant was the fact that participants were no longer strangers to one another. They did a remarkable job of sharing the labors of presentations during the videoconference sessions. In most cases, work group presenters from one country introduced Part I of their exemplary learning unit, then deferred to their colleagues in the other country for Part II, before sharing the presentation of the third section of the lesson plan and inviting questions from their colleagues.

Overall, participants seemed to have a good understanding of how to work with the technology so that they could help foster a genuine dialogue rather than a succession of declamations. This manifested itself through technical skills (switching off microphones when not in use, speaking directly into the microphones, etc.) but also through their interpersonal gestures—introducing themselves, indicating when they had finished speaking, and passing a “verbal baton” to their counterparts. Meanwhile, in response to critiques from the initial videoconferences, the DLC in Uganda made an effort to establish a presentation area, but poor lighting and obtrusive equipment obscured the faces of presenters. The DLC in Ghana continued to do a better job with this, but in the future the work groups would do well to rehearse at these stations while site facilitators considered ways to improve lighting, sound and other technical concerns.

Finally, participants needed more assistance, and support, for piloting their integrated learning units. Toward that end, the lead instructors recommended continued revision of the learning units, informal discussions via mailing lists, and implementation within six months’ time. To encourage these activities, hold participants accountable, and provide opportunities for personal and collective reflections, a 1-day workshop and culminating videoconference were scheduled for September 2001.

Participant Reflections and Evaluations

Participant reflections revealed a wide range of experiences during this 8-week project, but a rather consistent set of challenges. To their credit, many of the participants viewed problems as opportunities for learning in three primary areas:

1. Technical challenges and learning.
2. Personal challenges and growth.
3. Professional challenges and growth.

The following excerpts were selected from individual reflections posted to the full group mailing list on the final day of the course.

Technical Challenges and Learning

There were times that I almost got frustrated due to technology problems. As indicated in one of the mails I sent to members of this programme, telephone lines at Aburi, where I reside can get down for more than a week whereby no mail either comes in or goes out. More so the line is the analog type which easily gives way to the digital ones from the capital so times were that I had to stay awake up to 2.00 am just to get mails sent. —Social Studies Teacher (Aburi, Ghana)

At times, frustration set in where we had breakdown of servers and where interaction with colleagues cannot continue for sometime. All the same, with the sustainable development program, I can now share and get different technical skills and ideas through interaction and actually, it has helped a lot within this very short period. Since everything is scheduled according to specific time and days, I can now program myself well in my teaching and in all my doings. Thank you. —Social Studies Teacher (Kumasi, Ghana)
Personal Challenges and Personal Growth

If there is any thing that has really challenged me in the new millennium then it is about the WED program. Personally it stretched my imagination, creativity and the sense of time. At certain times I saw myself as a pupil and then a professional teacher who has the duty to effect real change in society. These roles was something I had to learn to achieve my goal of doing a good work. The whole work did task my energies, my good sleep because I had to work hard and do it well at least. In all I learnt that nothing is achievable with out planning monitoring and evaluation it had really transformed my life and had prepared me for future academic work and similar projects.

—Teacher, Accra Academy (Accra, Ghana)

Initially when the challenge was extended to me to be involved in this programme, I was going to ignore it because of the already existing pressure on my time. However, I decided to give it a try and I bet you, I have never regretted it. The fact however is that more pressure has mounted on my time but I think it is worth the effort. Sometimes, it was practically impossible for me even to have lunch because I might have to be in the computer laboratory when there were no students having lessons and by the time I finished it might be time for me to be teaching in a class. I also had to give up a lot of the activities that I do to bring in extra income especially taxi-driving around town after school. I sometimes had to deprive my family of the time I had to spend together with them. [...] I wish to state that I count myself so lucky to be involved in this programme and will be more than ready to participate in similar future programmes. Thank you and let your impact be felt wherever you are. —Teacher, Armed Forces Secondary Technical School (Kumasi, Ghana)

Professional Challenges and Growth

The level of difficulties we experienced during the first videoconference surprised me. It is true we were able to have fairly clear and continuous connectivity, but the complications that arose from the three time zones, regional accents and levels of exposure and preparation, was, to say the least, astonishing. I always went back home completely drained! My previous experience with digital telecollaboration in the field of Remote Sensing and GIS had made me take it for granted that you can always achieve the ultimate. I now know different — that one needs more than meticulous preparation to achieve this near miracle.

—Instructor, Institute of Teacher Education (Kyambogo, Uganda)

Conclusion

Clearly, this was an ambitious project. Not only did it introduce a new concept and ask teachers to invent ways to integrate that concept within existing curricula, but it also required that they engage in weekly online discussions for an extended period of time. A healthy and productive online discourse requires an extraordinary commitment from everyone involved. As this study demonstrates, even with highly motivated educators selected from a pool of applicants, there are no guarantees for success when working with unreliable infrastructures and inexperienced participants. Despite repeated messages concerning course expectations, and the need for telecollaboration, several participants failed to engage in online discussions on a regular basis. Limited access to the Internet explains this to some extent, but even in cases where access was reliable the online discourse was undermined by poor communication skills or a lack of commitment to the online community and telecollaborative process. This shortcoming underscores the need for facilitators of online discussions, particularly international and multicultural discussions, to establish what Burbules (1993) has described as the rules of (a) participation; (b) commitment; and (c) reciprocity.

Following establishment of these expectations, project facilitators need to model healthy discursive habits, such as descriptive subject lines, personal salutations, quotes from previous messages, and personal signatures. In addition, lead instructors need to initiate online discussions as soon as possible so that they can discover problems, address concerns, and establish desirable precedents. Beyond this, however, it is difficult to generalize about what will transpire because every telecollaborative community develops its own unique identity and culture. Syverson (1999) has observed that online communities evolve from an “ecology of writing” that engenders a system of complex systems. Because they consist of interrelated and interdependent agents these complex systems remain (a) dynamic, (b) adaptive, and (c) self-organizing. Thus, online course designs must remain flexible enough to accommodate a globally distributed learning community that will evolve in ways that one can never fully predict.

For this reason, the lead instructors of the
WED course embraced a dialogical approach to the design, coordination, and collaboration of global, telecollaborative learning activities (Burniske, 2001). Dialogue and inquiry may prove difficult, however, for participants conditioned by hierarchical social systems reinforced through prescribed curricula and administrative hegemony. Nevertheless, a global, telecollaborative learning activity requires a departure from centralized discursive habits to a more democratic, decentralized discourse in which every participant has a voice in the discussion and an impact on the project’s design, coordination, and collaboration. In this particular project, the instability of political systems, coupled with cultural respect for authority, had conditioned some participants to wait for an explicit invitation rather than make the impolite gesture of raising a question or criticizing someone else’s work. Exacerbating matters was the fact that participants came from cultures steeped in oral traditions that did not embrace written communication until a relatively short time ago (Henige, 1974; White et al., 2001).

Human concerns such as these, which manifested themselves within a dynamic, adaptive and self-organizing web of complex systems, inspired this study’s methodology. Quantitative measures would fail to capture the dynamic qualities and tremendous complexities of this project. If we look exclusively at the numbers, we find that 30 educators in two developing nations on opposite sides of the African continent collaborated over an 8-week period to devise learning units that integrated computer technology and the theme of sustainable development with existing curricula. However, such findings fail to describe the manner in which participants accomplished this goal, a manner best revealed through qualitative research methods. In this instance, the project and subsequent study have demonstrated the importance of fostering an online community of inquiry for educators in developing countries. Rather than waiting for national ministries to issue prescribed curricula or technology standards, this group of educators from Ghana and Uganda established an online community brave enough to ask questions, secure enough to critique nascent ideas, and free enough to engage in the social construction of innovative methods for teaching and learning.

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References


