

The Use of Internet2-based Videoconferencing in Teacher Education

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Abstract: Internet2 has a great potential for high quality videoconferencing. Although over 180 American universities collaborate with each other through Internet2, it is still a blurred concept for many teacher educators. In this study we have interviewed teacher educators who are using Internet2 in their teacher preparation courses, and asked them its pros and cons as well as their projections for K-12 schools.

In recent years one of the most popular terms in technological world is Internet2 even though many do not know what exactly it is and what it does or can do. "Internet2 is, basically, a collaboration of over 180 United States universities, teamed up with industry and government, to develop advanced Internet technology and applications for high-end academic experimenting and research" (CNet, 2001).

At the first sight, Internet2 looks very similar to the actual Internet: the data may be seen in a web browser and it is just a bigger pipeline to transfer data. However, Internet2 has some key qualities, which might have critical implications for instruction. It is *faster*, with data transfer rates in gigabits, and it is *more reliable*, because it has safeguards to make sure data packets are delivered. One important point we need to emphasize is that Internet2 uses Internet Protocol version 6 (IPv6) instead of current Internet Protocol (IPv4). The advantage of IPv6 is that it incorporates native multi-casting, high reliability and high capacity. It also allows applications requiring high bandwidth to coexist with each other simultaneously. These qualities also remind us requirements/needs of high quality Internet applications such as videoconferencing systems.

Although Internet2 is only available to a restrict number of institutions, it is expected that the technology will be available to everyone in the near future. This means that the use of Internet2 will expand to schools, community colleges, museums and libraries giving the chance of streaming videoconferencing and other applications. These also means that adapting these applications to the needs of K-12 institutions will require some work, not only in technical or financial terms but pedagogical too. The International Society for

Technology in Education (ISTE), the Consortium for School Networking, and Educause are a few of the groups involved in several educational projects for Internet2.

Although Internet2 is a high-speed network primarily reserved for research institutions, there is a big need about its use in educational settings. In this study we have videotaped teacher educators from Center for Technology in Learning and Teaching (CTLT) at Iowa State University to illustrate its use at university level. Since the CTLT is being the leader of advanced technologies and their use in teacher education we have found it as a great opportunity to apply our study. The selected teacher educators of CTLT are primarily using Internet2 for videoconferencing with other universities to collaborate in research projects as well as to put together students from different universities to share knowledge and to collaborate in various courses' activities. These teacher educators are also using the Internet2 videoconferencing capabilities to share their expertise with other institutions as well as bring experts from other universities to their classroom environment. Their opinions about advantages and disadvantages of this powerful technology and their projections for K12 schools are also discussed.

References

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