Collaborative Computing to Improve Work Process

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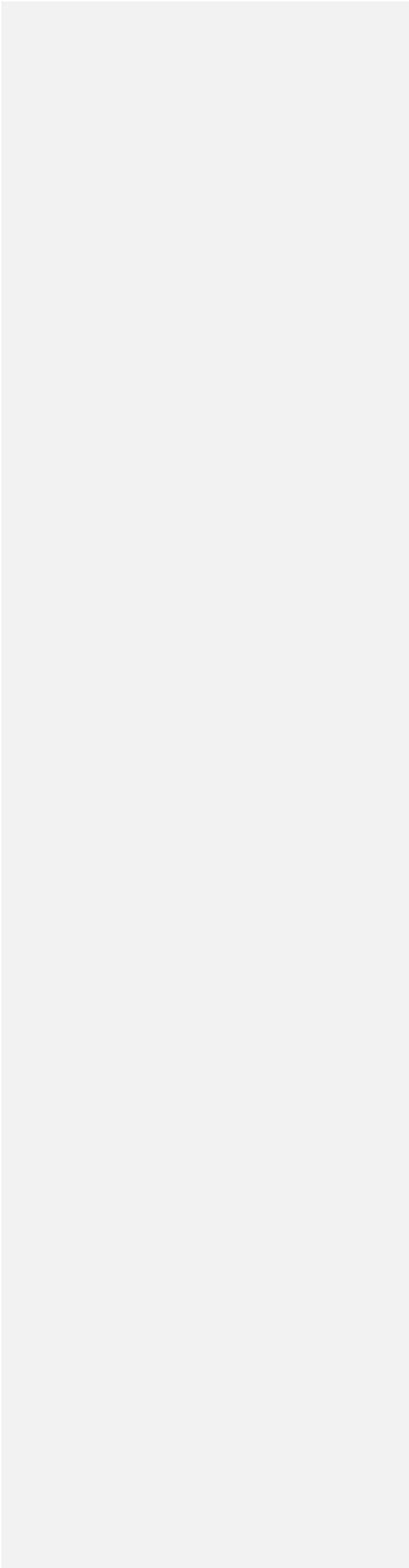
The Graduate School

University of Wisconsin-Stout

March, 2011

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Introduction

The need for better communication exists everywhere. In education the role of the staff is to find new ways to take action, and what better way than using technology to reach an overall goal with success. School districts today have the opportunity to incorporate technology that not only benefits the learning of students in the classroom, but bring the world of learning to them wherever they would be geographically located. A communication problem that exists is in regards to students who are on an Individual Educational Plan (IEP). There needs to be a resource, or tool that can bring the IEP team together, specifically case workers, parents, and teachers, to find working solutions and goals for these students. For intermediate school districts this brings on a larger concern, because they are working with a variety of students from more than one school district. The communication is not concentrated between one or a few locations anymore; a team may be spread out among more buildings and cities. A solution that would benefit both of these situations would be to incorporate a collaboration tool, which could be accessed whenever and wherever by any member of the team. This tool would not only benefit the student, but would strengthen and accommodate the team members, who would not need to travel to meetings. They would have more flexibility with their time and schedules, and they would be able to evolve as working team. For teachers this is a huge plus. They could take time within their schedule to communicate to the team about a particular student before a day begins or ends. Team members would be able to access what the teacher has documented pertaining to a student's learning, grades, their strengths, and weaknesses. Time is an issue for everyone today, if the appropriate collaboration tool is found that can be incorporated between schools and team members, it can produce a positive outcome for everyone involved.

Intermediate school districts usually specialize in technical programs that are not offered at a student's home school. Also, the schools offer college credit and certificates pertaining to the curriculum and skills that are obtained.

The home schools of the students have a relationship with an intermediate school district called a consortium. It is the number of students that are sent by the home schools that assist in determining the budget for an intermediate school. If only a certain number of students are allowed to attend the intermediate school, there can be a lack of awareness of what the intermediate school can offer that the home school can't. This can be a problem for the intermediates; they need to find new ways to spread the word about their offerings, not only to current students and the school, but to future students and parents. What better way to connect through videos, text, slide shows, and pictures through the use of a virtual collaboration tool that can be accessed by the students at the home school or their homes. There are many successes that take place inside intermediate school districts pertaining to college credit, taking the next step towards college, and finding a career goal. This information can be shared through the use of technology and collaborating with the students and schools.

Discussion of Possible Solutions

Budgets are going to be an issue, especially now in terms of the state of the economy and the issues our school districts are having financially. Any tool used would need to be approved by not only the district's administration but also by their individual Information and Telecommunications Technology (ITT) departments. The tools used would need to have compatibility with hardware and software already being used within the different school districts, where they would not have a costly impact on the current hardware, software, or the network configurations. For intermediate school districts, all of the schools associated with the consortium would need to approve any additional tools to be used on their network for collaboration. Any possible solution that would be identified to support these communication issues would need to support a variety of tools to satisfy and compliment the confidentiality of students and the other support team members involved, including parents. Tools that would be utilized would also need to support at a minimum; encryption of data and a secure access through the Internet. The collaboration tool would need to support the two problems that associated with team communication on students with IEPs, and the promotion and marketing of the intermediate school district to parent and future students.

If cost is an issue for the schools, or if schools are integrating a system for the first time to establish virtual collaboration, Google Apps for Education might be the solution. The cost is free to users. Google offers online training tutorials to assist users in learning how to effectively use the online tool. There may be a need to have a one-time physical group meeting or even an online training performed virtually to all team members.

> **Comment [U1]:** I might consider keeping the recommendations under the recommendations section. This area is to discuss possible solutions that best fit all the required needs.

Along with the no cost, the time needed for implementing a software program on a server to host it along with testing it has been eliminated. There is no need for installation and using up resources due to the fact this is an Internet program, overhead and cost falls with Google. Google Apps makes deployment easy for schools because it is designed around open industry standards, making it deployable to a variety of educational technology platforms ("Google Apps for," 2010). Integration with Blackboard, Moodle, Luminis and Banner, and myCampus has made Google Apps a viable option for educators to pursue ("Google Apps for," 2010). Within the apps, Google also offers 7GB of storage for gmail accounts, instant messaging, and voice and video chat.

Google Apps offers a variety of function for collaboration including; creating and sharing online documents using spreadsheets, presentations, forms, and word processing. Videos can be shared and can be commented on by team members through tagging and rating them. Groups can be created to create their own moderated forums and mailing lists. All of these important functions that are found in Google Apps can be accessed while mobile.

Security and encryption of data is important for schools. The security that is provided to Google Apps customers is the same security that they rely on to protect www.google.com. In addition, we run our company on Google Apps ("Google Apps for," 2010).

> **Comment [U2]:** I would get rid of the hyperlink since your specifying the name, and it doesn't point to any information regarding this specific Google product.

Google Apps does have some drawbacks due to formatting issues when importing documents. There also tends to be a size limit on documents. If a spreadsheet is larger than 1MB, you can't convert it into Google docs format, so there is no editing possible, you can just upload and other team members will need to download it to edit it (Goldy Tips, 2010).

Adobe Connect for education software makes it easy for educators to teach and collaborate virtually with anyone ("Adobe Connect for," 2011). Adobe's software seems to focus towards the user, simplifying the user interface with features for better organization for meetings and using hot keys to access functions. Adobe Connect was also developed for creating online learning, connecting with students anywhere. One of the key aspects of Adobe Connect is the access it provides for its users. Professionals working on multiple projects with global teams need to be able to track down key people, instantly collaborate, and respond quickly to meet deadlines ("Adobe Connect 8," 2011). Team members can schedule meetings with their Microsoft Outlook contacts through an add-in. With the desktop client members can invite other group members for a meeting from the desktop of their computer. Collaboration takes place with public or private chats, question and answer pods, and a whiteboard where shapes and text can be used to illustrate ideas and share information pertaining to a student or the school. This would be ideal for sharing the progress of students and recommendations towards making their education a success. Adobe Connect also offers a webcast option that would be ideal for creating videos and streaming them to parents, staff, and future students at the home schools teaching them about the benefits of an intermediate school district. Building those relationships is important for everyone involved in a student's education. On the security side of Adobe, the software offers Secure Socket Layer (SSL) encryption, which is an encrypted channel that protects private data and communication traveling through the public Internet. This would definitely be a plus for communicating and sharing information about students through the use of virtual meetings.

Microsoft's collaboration software is SharePoint. Most of today's computers and networks run on a Microsoft product, so adding SharePoint as means of communication should not have negative effects on current software being used. SharePoint integrates with Microsoft Office. Through the use of Microsoft's Live@edu, email accounts can be established, video chats, and sharing documents and calendars with a group of people or team members. Microsoft uses unified communications (UC) to help increase security. UC solutions use encryption technologies to help make sure Instant Messaging (IM), e-mail, and Voice over Internet Protocol (V0IP) messages remain secure and provide compliance across all communications ("Office SharePoint 2007").

SharePoint 2010 comes in only 64-bit, meaning hardware may need to be upgraded in order to install and run it. Because of the functionality, server running Microsoft server software will need to be upgraded to support SharePoint. SharePoint is not cloud-ready, meaning that the competition that is cloud-ready is getting the attention and most of the market.

Recommendation:

Table 1

Collaboration Software	Cost	Security/Encryption	Compatibility/Integration
Google Apps	Free	Protection of data and encryption of message formats	No upgrading needed, Microsoft documents can't be too large and compatibility can be an issue
Adobe Connect	Volume licensing only	Protection of data and encryption of message formats	Current server/pc hardware and software should be compatible
Microsoft SharePoint	Cost for server/pc software licensing	Protection of data and encryption of message formats	Only supports 64-bit, compatible with Microsoft products, may need to upgrade server hardware/software

Cost, integration, security and encryption are major concerns for schools when looking at adding software or technology to their network. If cost were the sole issue, Google Apps for education would be the best collaboration tool to provide a solution to these problems. Google Apps is a program that can be tested as a free trial before making a final decision to use it.   Google Apps provides proof that it is a trusted communication tool and is viable through customer case studies in written and video format for all levels of education. A step-by-step process to follow is available for successful deployment. Even though it is free for education purposes, it does not mean that it can be implemented without training or testing.

All three technologies provide ample information pertaining to integration and compatibility. Even the Google Apps is free, there seems to be flaws with compatibility issues and size of documents used. This would need to be important for team members to access and edit while meeting virtually.

Security seems to be the same across all three environments. All three companies are concerned with the transfer of data and communication through the Internet.

To find a solution to the two identified problems, virtual meetings concerning students on IEPs and the marketing and promotion of the intermediate school districts, everyone involved in a transition and the addition of software program would have to agree. Microsoft SharePoint would be an obvious solution because the majority of schools run on Microsoft products already. Grants can be written to support the cost of the collaboration software and licenses need for the amount of users that need to use it. Because there is an agreement/contract between school districts, the cost, rollout, and training can be shared among the school districts involved. Guest accounts can be set up by the IT administration to allow parents of students or future students into SharePoint which would benefit the

intermediate school districts in showing the community what they have to offer in education.

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