

SECTIONS Analysis by Grant Murphy (#25164)									
	Email	List Servers	Course Management Systems & Learning Management Systems MOODLE	Computer-assisted instruction	Social software theory and developments Egg/Me2u.athabasca.ca	Web-based conferencing	Web 2.0	M-Learning	IP Videoconferencing
Description of Technology	The transmission of messages over communication networks. Most mainframes, minicomputers, and computer networks have an e-mail system. Some e-mail systems are confined to a single computer system or network, but most have gateways to other computer systems, enabling users to send electronic mail anywhere in the world.	An automatic mailing list server, where e-mail can be addressed to a list server mailing list and is broadcast to everyone on the list. It can be considered to be a newsgroup or forum. The messages are only transmitted as e-mail and made available only to individuals on the list.	A course management system (CMS) or learning management system (LMS) is software for delivering, tracking and managing training and education of learners. These systems can range from systems that manage training records to digital courses over the internet and offer features for online collaboration.	Computer-assisted instruction (CAI), is a form of education in which the student learns by executing training programs on a computer. A good example is training learners to use computer applications because the CAI program can be integrated with the application so that students can practice using the application as they learn. The CAI will provide step-by-step instruction on how to use the software application.	A social networking site enables users to create public profiles and form relationships with other users on a web site who access their profile. Social networking sites may provide a variety of ways for users to communicate with others in the space, such as instant messaging and chat rooms. The user can control their privacy by allowing its users to choose a public, private or limited viewing profile.	Web conferencing is used to conduct live meetings over the internet. In a web-conference, each participant sits at his or her own computer and is connected to other participants via the internet. Web conferencing may be fully interactive and synchronous or one way communication, instructor to learner, as in the case of a webinar.	Web 2.0 is the term given to describe a second generation of the World Wide Web that is focused on the ability for people to collaborate and share information online. Web 2.0 includes open communication with an emphasis on Web-based communities of users, and more open sharing of information. Blogs and wikis are considered to be components of Web 2.0.	In mobile learning students use a wireless device to access and participate in their learning. In M-learning, students are freed from having to be at a fixed location. The devices can include cellular phones, palm-sized organizers (Palm-tops) or PDAs (Personal Digital Assistants) and Smart phones. These devices have varying degrees of computer capability, which will determine the sophistication of the application to be used.	Videoconferencing includes two or more participants at different locations and are capable of transmitting audio and video data over internet connections. Video conferencing can occur between two individuals, sitting at their own personal computers.
STUDENTS	not completed for this analysis	not completed for this analysis	not completed for this analysis	not completed for this analysis	not completed for this analysis	not completed for this analysis	not completed for this analysis	not completed for this analysis	not completed for this analysis
EASE OF USE - Computer and information literacy	Learners will need to have basic keyboarding and PC literacy skills. Most students have a basic comfort level with e-mail.	Learners will need to have basic keyboarding and PC literacy skills. Most students have a basic comfort level with e-mail.	Learners will need to have basic keyboarding and PC literacy skills. Internet experience with the world wide web would be valuable.	Learners will need to have basic keyboarding and PC literacy skills.	Learners will need to have basic keyboarding and PC literacy skills. Internet experience with the world wide web would be valuable.	Learners will need to have basic keyboarding and PC literacy skills. Higher technology skill set required and internet experience required.	Learners will need to have basic keyboarding and PC literacy skills. Internet experience with the world wide web would be valuable.	Learners will need to have basic keyboarding and PC literacy skills. Internet experience with the world wide web would be valuable.	Learners will need to have basic keyboarding and PC literacy skills. Internet experience with the world wide web would be valuable.
EASE OF USE - Orientation	Most people accessing a distance education program will have the basic skills. A pre-test of basic skills could be applied.	Most people accessing a distance education program will have the basic skills to send e-mail.	Most learners will not have experienced a LMS or CMS. A tutorial session would be useful to ensure that the learner understands how to properly use it. Various areas, related to the discussion forums, assignment postings and grading, access to other parts of the Centre, may be confusing to the non-technology savvy learner.	With plug and play DVD's, there will be a need for clear set of instructions.	This is a newer experience for most learners, and they may require significant help in getting this started. Learners will need to be made aware of privacy and security issues.	Useful to have an orientation session with the technology. Pre-assessment would be useful.	This is a newer experience for most learners, but should not require a significant investment in effort to learn the technology.	This is a newer experience for most learners, may require significant help in getting this started.	For point to point IP video conferencing this may require limited orientation required.
EASE OF USE - Interface design	Common, perhaps subtle difference between software applications (i.e. outlook versus groupwise).	Text interface	Moodle is a free and open source CMS or LMS software platform and is designed to help educators create online courses. Its open source license and modular design means that people can develop additional functionality. Critical that interface is neatly designed with little clutter, so that the learner can focus on the lesson at hand.	Critical that interface is neatly designed with little clutter, so that the learner can focus on the lesson at hand.	Most of the social networking software applications are complex environments to work in. The Egg/Me2u site was basic and easy to develop a user profile. There seemed poor connectivity to other learners within the MDE 610 course and a lack of participation from learners within the course.	Illuminate sessions are clear and have distinct areas of work for the learner, participants list, whiteboard, capable of uploading and sharing of files with and between students.	The focus for learners is on adding content to the web or blog, not having to worry so much about how to navigate around setting up these pages.	Most of the m-learning software applications is similar to PC based applications.	The learner will require some orientation, but once it is running, the functionality is simple.
EASE OF USE - Reliability	Most email systems are stable. This would be dependent upon the learner's internet service provider.	A brief introduction as to the content and how to navigate within the list server.	Easy to pick up, demonstration forum for practice, short illustrated user guide (as in this course)	The learner's PC needs to be properly equipped to handle the video and audio.	Social networking software is mostly stable. However concerns related to personal security remain high and attention needs to be paid by the learner in terms of what information should be available to the broader community.	Most systems are stable. This would be dependent upon the learner's internet service provider.	Social networking software is mostly stable. However concerns related to personal security remain high and attention needs to be paid to setting up proper firewall protection to eliminate spware deployed by others.	M-learning software is mostly stable. However concerns related to computer security remain high and attention needs to be paid to setting up proper firewall protection to eliminate spware deployed by others.	The concern will be when trying to link many users together, there is a higher probability of failure. As such may require significant help in getting this started. Also the learner may be limited by broadband access.
COST - Purchasing or licensing	per user	Some registration costs may apply, not typical though.	MOODLE is an open source program, as compared to other vendor supplied packages such as WebCT. As such the cost for the actual software is low. But operating funds would be required to support the house program versus paying for external vendor support. Moodle runs without modification on Unix, Linux, FreeBSD, Windows, Mac OS X, NetWare and any other systems that support PHP and a database, including most webhost providers.	Need to acquire a copies of the CAI and deliver this to the learners. This cost is variable based on the number of learners. This could be delivered as a DVD to the learner or potentially accessed and downloaded by the learner via internet.	None or very little cost, as a commercial social networking site could be utilized, or a site like a Google Group could be developed	Need to acquire licensed copy of the web-conferencing software application. License limited to the number of learners on each session.	None or very little cost, setting up a blog could be done utilizing a free account such as a Google account, or on an learning facilities website, where in the case of All the Moodle site has capability to allow for this.	The lower cost of m-learning hardware also contributes to its accessibility. Many mobile devices are cheaper than desktop computers.	Need to acquire licensed copy of the video conferencing software application. For multi-users the requirement for sophisticated hardware and software may put this out of reach for many learning institutions.
COST - Copyrights and permission	Learners should have a legal copy of the software application	Copyright issues need to be respected of the author of the documents posted.	None. Acknowledgment of the author of the source coding.	Requirement	None	Requirement	none	Requirement	Requirement
COST - Support	Vendor supplied, on-line help or tutorial is available. For example MS Outlook http://office.microsoft.com/training/Training.aspx?AssetID=RC100647451033&CTT=6&Origin=RC100647451033	None	Internal development resources are necessary to set up the content on the CMS/LMS	The CAI is self-explanatory.	Getting involved with social network would be up to the learner, but encouraged by the organization. Thought should be given to "social coordinator" to encourage certain events to get learners more involved.	Internal development resources are necessary to assist in the set-up of content on the web-based conferencing	none	Internal development resources are necessary to set up the content on the m-learning devices	Internal development resources are necessary to set up the video conferencing equipment. Not so much a problem for point to point situations and more related to multi-point situations.
COST - Instructors	Instructors will need to have basic keyboarding and PC literacy skills. Most instructors have a comfort level with basic e-mail.	Instructors will need to have basic keyboarding and PC literacy skills. Most instructors have a comfort level with basic list servers.	Internal development resources are necessary to set up the content on the CMS/LMS. The Moodle DVD was useful and described the approach to setup the workspace. But there were concerns raised around ensuring that instructors have appropriate level of programming know-how.	Internal development resources are necessary to set up the content on the web-based conferencing.	Instructors should be able to observe the social networking that is taking place at a high level. In other words the number of people getting involved in the social networks, the number of occurrences or the connections to others. This would be able to provide some insight into the effectiveness of the growth of the learner community.	Internal development resources are necessary to set up the content on the web-based conferencing.	Instructors will need to have basic keyboarding and PC literacy skills. The instructors should be comfortable to enter the blog sites and monitor the progress by engaging the learner with comments or questions	Internal development resources are necessary to set up the mobile application and system. Ensure that instructors have appropriate level of programming know-how as this is an emerging technology.	Internal development resources are necessary to set up the video conferencing equipment. Not so much a problem for point to point situations
TEACHING AND LEARNING - Content/Skills	Text-based presentation used mostly. This can be used to clarify course content/assignment expectations. Email could be used to discuss, reflect, synthesize, collaborate, on a problem presented in the course.	Links to experts (or not so), articles, resources, or other course literature.	The sharing of ideas can be facilitated between learners through the use of discussion forums. Links to texts, papers or libraries can be used to share information to learners to review.	CAI is not interactive and it's value in education is limited.	There would be an opportunity for learners to share ideas and build on concepts. This would support a constructivist approach to creating knowledge.	There would be an opportunity for learners to share ideas and build on concepts. This would support a constructivist approach to creating knowledge.	There would be an opportunity for learners to share ideas and build on concepts. This would support a constructivist approach to creating knowledge.	Behaviorist learning is based on feedback and reinforcement in response to a stimulus. Mobile device are capable of automatic rapid response or instant feedback. This could aid in "skill building, little by little".	There would be an opportunity for learners to share ideas and build on concepts. This would support a constructivist approach to creating knowledge.
TEACHING AND LEARNING - Student Assessment	Learner could submit an assignment as an attachment with the email and the instructor responding to the learner with the assignment grading.	Not applicable	Learners can submit assignments on the CMS/LMS and the instructor can track the status of the work, including the grading of the students.	An internal assessment or quiz is available where the learner completes a self assessment. The learner can then return to the beginning and retrace areas of misunderstanding. The instructor would require the learner to submit some tangible presentation of knowledge transfer and application for grading.	None. This environment would be used to build a "learner community".	Learner could submit an assignment as an attachment with the email and the instructor responding to the learner with the assignment grading.	Constructivist learning, where students actively "construct" new knowledge through various social and cognitive interactions that build on previous knowledge. The text messaging capabilities of cell phones can be used for the learner to formulate new ideas and this could be a form of assessment by the instructor.	Constructivist learning, where students actively "construct" new knowledge through various social and cognitive interactions that build on previous knowledge. The text messaging capabilities of cell phones can be used for the learner to formulate new ideas and this could be a form of assessment by the instructor.	An internal assessment or quiz is available where the learner completes a self assessment. The learner can then return to the beginning and retrace areas of misunderstanding. The instructor would require the learner to submit some tangible presentation of knowledge transfer and application for grading.
INTERACTIVITY	learner to learner (collaboration) instructor to learner (didactic conversation)	learner to reference system [research tool] learner to learner (collaboration) instructor to learner (didactic conversation)	learner to learner (collaboration) (didactic conversation) It will support the asynchronous sharing of information and ideas to build a learner community through the use of discussion forums	Low, as it is really only one way, PC to learner	Highly variable. Live chats can take place (synchronous) or postings to your "wall" (asynchronous). Learners involvement will depend on the relevance they see to their educational experience.	learner to learner (collaboration) instructor to learner (didactic conversation) It will support the asynchronous sharing of information.	learner to learner (collaboration) It will also support the asynchronous sharing of information	learner to learner (collaboration) instructor to learner (didactic conversation) It will support the asynchronous sharing of information and ideas to build a learner community through the use of discussion forums	learner to learner (collaboration) instructor to learner (didactic conversation) It will support the asynchronous sharing of information and ideas to build a learner community through the use of discussion forums
ORGANIZATIONAL ISSUES	Using the learner's email system would be sufficient and as such trouble shooting would have to be completed by learner. No organizational support should normally be required.	Identifying resources and list servers	The institution would need to acquire the CMS application, train staff in the use of it, ensure that adequate information technology resources are available to support the application	The CD would have to be issued to the learner. A limited amount of support is needed. The learner may require other support in order to clarify some of the concepts being delivered thru the CAI	Social networking software is mostly stable. However concerns related to personal security remain high and attention needs to be paid by the learner in terms of what information should be available to the broader community.	learner to learner (collaboration) instructor to learner (didactic conversation) It will support the asynchronous sharing of information and ideas to build a learner community through the use of discussion forums	None	Keeping up to and understanding the emerging technology is a significant challenge.	Keeping up to and understanding the emerging technology is a significant challenge.
NOVELTY	Low, as it has been around for a while.	Low, as it has been around for a while.	High - for most of the learners and staff this would be a novel system, as most of the experience has been associated with face to face learning experiences.	Medium - As this is a very similar technology as video cassettes which the learner would likely be familiar with.	Very new in its application to the educational sector.	The Centre would require to acquire the CMS application, train staff in the use of it, ensure that adequate information technology resources are available to support the application	High - for most of the learners and staff this would be a novel system, as most of the experience has been associated with face to face learning experiences.	Newer generations of mobile devices promise to overcome technical problems.	Medium - Some learners may not have had much experience with the face to face component of internet learning, though it is becoming more prevalent.
SPEED	Stable technology and easy to upgrade.	Stable technology and easy to upgrade.	Stable technology. Upgrades may be challenging due to high variability of the source codign. There is no standard version and as such upgrading the system would require significant internal resources.	Stable technology.	Stable technology.	Stable technology and easy to upgrade.	Stable technology and easy to upgrade.	Fast changing technology.	Changing technology.