

Glossary

3G: Stands for “third generation” mobile technologies, which offer users a wider range of more advanced services than earlier mobile devices while achieving greater network capacity through improved spectral efficiency.

ActionScript: A scripting language used by Adobe Flash. It has been improved from a script syntax to one that supports object-oriented programming, and has capability comparable to JavaScript.

ADSL (Asymmetric Digital Subscriber Line): The most widely deployed form of Digital Subscriber Line (DSL) technology.

Always-online: Solutions that give the user access to the Internet at all times.

Assimilation bias: The influence of prior knowledge or skills on the acquisition of new knowledge or skills.

Audiocast: Collection of audio files that is available for access via a cell phone.

Beaming: Transmitting data between one device and another using infra-red beam. To communicate via infra-red beam, devices must be in line-of-sight with each other.

Behaviourism: An approach to psychology that emphasises observable measurable behaviour.

Blended learning: The combination of multiple approaches to learning. Blended learning can be accomplished through the use of “blended” virtual and physical resources. A typical example of this would be a combination of technology-based delivery and face-to-face sessions used together to deliver instruction/training.

Blog: A reflective journal that is hosted online.

Bluetooth: Communication standard that allows devices to communicate with each other and transfer data using short-range wireless. Bluetooth devices do not need to be in line-of-sight of each other to communicate.

Chunking: The division of information into portions of varying sizes with the purpose of reducing cognitive load on a learner. The size of the “chunk” is dependent upon the characteristics of the information or skill to be learned as well as the cognitive capabilities of the learner.

Cognitive load: The amount of information that an individual must process in one segment of time.

Cohesion: A concept from software engineering that each unit should do one thing and only one thing. For a learning object this means that it should focus on only one topic or learning objective.

Collaborative learning: The grouping and pairing of students for the purposes of achieving an academic goal.

Compact Flash (CF): A type of removable memory card for digital cameras and other portable electronic devices. See also Secure Digital (SD).

Constructivism: The focus of this learning theory is on placing the learner at the centre and designing for learning rather than planning for teaching. The underlying philosophical framework is that humans construct meaning from current knowledge structures.

Constructivist: Pertaining to the learning theory of constructivism. The central tenet is that knowledge of the world is constructed by the individual. The person, through interacting with the world, constructs, tests and refines cognitive representations to make sense of the world. Learning rather than instruction becomes the focal issue.

Data transfer rate: The rate at which one can download content from the Web.

Decoupling (minimized coupling): A term from software engineering which means that the unit (software module/learning object) should have minimal bindings to other units. Thus the content of one learning object should not refer to and use material in another learning object in such a way as to create necessary dependencies.

Demographics: This refers to selected population characteristics as used in government, marketing or opinion research, or the demographic profiles used in such research. Commonly-used demographics include race, age, income, disabilities, mobility, educational attainment, home ownership, employment status, and even location.

Digital assets: Photos, video clips, audio clips or other media items that can be used in a learning activity.

E-book: Electronic version of a book, designed to be read on a computer.

E-news: News available in electronic form, e.g. on the Web, or specifically for mobile devices.

EKKO: Norwegian acronym for “electronic combined education” the first Learning Management System (LMS) developed at NKI.

Encoding: A process in which a learner associates new, incoming information with knowledge or skills already stored in memory. Well-encoded information, in theory, should be easier to retrieve from memory when needed.

Flash: A multimedia authoring program from Adobe Systems. Flash is popular for creating animation, video and adding rich interactivity to web pages, and is available in most common web browsers.

Flashlite: A lightweight version of Flash for mobile devices.

Formative Evaluation: This is a type of evaluation that has the purpose of improving programs. It may also be referred to as developmental evaluation or implementation evaluation. It is used in instructional design to assess ongoing projects during their construction to implement improvements. Formative evaluation can use any of the techniques which are used in other types of evaluation, including surveys, interviews, data collection and experiments (where these are used to examine the outcomes of pilot projects).

GPRS (General Packet Radio Service): A wireless data service used by mobile phones to access the Internet.

GPS (Global Positioning System): Uses microwave signals broadcast by satellites orbiting the Earth to identify the geographical location of the GPS receiver. GPS devices also record altitude, speed, direction and time.

HTML (HyperText Markup Language): A programming language used to create documents for display in web browsers.

Hypertag Magus Guide: A commercial system that was designed to deliver audio, video and graphics to museum visitors with handheld devices.

ICT: Information and Communication Technology

ICT for Development (or ICT4D): A multidisciplinary area for academic study and practitioner focus that explores how technologies are used to achieve development goals.

Informal learning: Learning that is not organized and structured by an institution. It may take place in environments that already have some connections with learning, e.g. museums and art galleries, or anywhere the learner chooses, including at work.

Infrared (IR): Electromagnetic radiation of wavelengths longer than visible light. IR is typically used to transmit data through the air, for short distances, in a straight line.

Interaction: In instructional contexts, interaction can be seen as communication of any sort, e.g., two or more people talking to each other or communication among groups and organizations. Interaction in teaching and learning is typically thought of as a sustained, two-way communication among two or more persons for purposes of explaining and challenging perspectives. If done in a formal, educational environment, then, interaction is usually between a student(s) and instructor, or among students.

Interactive Voice Response (IVR): IVR is a phone technology that allows a computer to detect voice and touch tones using a normal phone call.

Interface: The components of the computer program that allow the user to interact with the information.

IP (Internet Protocol) telephony: a technology that supports voice, data and video transmission via IP-based computer network.

iPAQ: A family of Pocket PC models from HP-Compaq.

JAVA: A programming language that provides a system for developing and deploying cross-platform applications.

Language technologies or Human Language Technologies (HLT): Enables computer-based systems to understand what humans are saying, and underpins automatic machine translation.

Learning object: A self-contained learning resource that focuses on a single topic.

Learning partner: NKI has developed different kinds of social software solutions within the LMS. As such, all students are urged to present themselves in ways that invite social interaction for learning purposes. Software solutions for inviting and accepting learning partners and for establishing connections have been developed in parallel to the research on mobile learning.

LMS (Learning Management System): An online system that manages the learning process and allows students to interact with the course, other students, and the instructor.

Location-based content: Text, images, audio files and video files that relate to the place where the user is at the time, for example within a museum or heritage site. The user needs a GPS-enabled mobile device in order to access the location-based service.

Macromedia Flash: A program to create multimedia for the Web.

Mediation: The reconciliation of various processes to produce a new, harmonious entity. In terms of mobile learning and the FRAME model, the interaction of social processes, cognitive processes, and technology result in a constantly transforming method of learning.

Microsoft Reader: A program from Microsoft to read their e-book format.

M-learning: Mobile learning, using a mobile device to access and study learning materials and for communicating with the institution, tutors and fellow students.

mLMS (Mobile Learning Management System): A learning management system for mobile devices.

Mobile device: A device that can be used to access information and learning materials from anywhere and at anytime. The device consists of an input mechanism, processing capability, a storage medium, and a display mechanism.

Moblog: Blog that can be updated by posting entries directly from a PDA, phone, cameraphone or other portable device. Mobloggers are those who post to their blogs in this way.

MP3: A digital audio encoding format. Its more accurate name is MPEG-1 Audio Layer 3. MP3 uses a compression algorithm to reduce the size of audio data. It is a popular audio format on many mobile devices.

MSN (Microsoft Network): An Internet chat service that allows text communication between people who have nominated each other as 'friends'.

M-teaching: Teaching with the support of mobile, handheld devices.

Multimedia messaging service (MMS): A standard for telephony messaging systems that allows sending messages that include multimedia objects (images, audio, video, rich text).

Multimedia: A combination of two or more media to present information to users.

News feed: Also known as web feed and RSS feed. The feed is a data format that delivers frequently updated content to computer or mobile devices.

Nursing Practice Education: The planned educational credit time when nursing students have the opportunity to apply their knowledge and skills to nursing practice with real clients (individuals, families, groups, communities and populations) in a variety of settings (e.g. hospitals, community agencies or patient's homes).

Online Learning Environment (OLE): An Internet based learning environment accessible to a group of students, who can use a range of services to support their learning.

Open source: Any program whose source code is made available for use or modification as users or other developers see fit.

PBX: Telephone Private Box Exchange.

PDA (Personal Digital Assistant): A handheld device that runs cut down or "pocket" versions of most office software including word-processing, spreadsheet management. Email and web browsing are enabled through wireless or GPRS connectivity. It often includes a camera and may have a pull-out mini-keyboard as well as an onscreen keyboard.

Pedagogy: The art or science of being a teacher. The term generally refers to strategies of instruction, or a style of instruction.

Personal Development Plan (PDP): A structured and supported process undertaken by an individual to reflect on their own learning, performance and/or achievement and to plan for their personal, educational and career development.

Pervasive image capture: Spontaneous or prolific activity involving taking photographs in various locations on the move, typically with the intention of sharing them immediately with others.

Plucker: Free e-book reader for mobile devices.

PNG (Portable Network Graphic): A bitmap image format that uses data compression to make file sizes smaller.

Pocket PC: A generic term for a handheld-sized computer that runs a specific version of the Windows CE operating system.

Podcast: Video or audio podcast files designed to be syndicated through feeds via the Internet and played back on mobile devices. New content is delivered automatically when it is available.

Portable keyboard: A keyboard that is possible to put in a coat pocket, by folding it or by other means to make it smaller.

Production bias: The influence of the need for task completion on the activity level of an individual. Normally, the primary concern of an individual is to complete a specific task; other information or superfluous skills may be deliberately neglected during the learning process.

RFID (Radio-frequency Identification): Use wireless technology to identify and manage people or objects. Data stored on a small, rugged tag is transmitted to a reader via electrical or electromagnetic waves.

RLO (Reusable Learning Object): A learning object that is constructed to be reusable, i.e. it is not dependent on other objects and it is standalone. See also “Learning Object.”

SADC (Southern African Development Community): A community that currently comprises fourteen member States with a vision “of a common future, a future in a regional community that will ensure economic well-being, improvement of the standards of living and quality of life, freedom and social justice and peace and security for the peoples of Southern Africa.”

Scaffolding: Supporting the learner’s development and providing support structures to get to the next stage or level.

Scientific Technological Park (STP): A local institution devoted to the building up and the enhancing growth of technology based companies. The goal is reached thanks to the creation of a network of contacts with universities, research centers, public bureaus and entrepreneurial associations. A STP offers a system of technology facilities and infrastructures realized to host companies whose marketing strategies include research activities, production, sale and aftermarket services.

Secure Digital (SD): A type of removable memory card for digital cameras and other portable electronic devices. See also Compact Flash (CF).

SESAM (Scalable Educational System for Administration and Management): An LMS developed at NKI distance Education.

Short Message Service (SMS): A communications protocol allowing the interchange of short text messages between mobile telephony devices.

Situated learning: Learning that draws on an understanding of the relevance of the learner's context, in the way the learning activities and resources are designed.

Skype: Skype is a widely used software program created by the Swedish and Danish entrepreneurs Niklas Zennström and Janus Friis. Skype allows users to engage in audio and video conferencing users over the Internet to other Skype users free of charge or to make telephone calls to landlines and cell phones for a fee.

Smart phone: A mobile phone with some advanced features, such as a web browser.

SMS (Short Messaging Service): Allows text messages to be sent between mobile phones, also known as "texting."

Social computing: Social computing has to do with supporting any sort of social behaviour in or through the use of computers and computer software. It is based on creating or recreating social conventions and social contexts otherwise only possible in face-to-face interaction. Blogs, email, instant messaging, social network services, wikis, and social bookmarking are common examples of social software.

Social Software: The programs allow users to interact and share data with other users.

Speech synthesis: Computer-generated simulation of human speech.

Streaming: Starting the video or sound before it has downloaded to the client.

Subscriber Identity Module (SIM): Part of a removable smart card ICC (Integrated Circuit Card), also known as SIM Cards, for mobile cellular telephony devices such as mobile computers and mobile phones.

SWF (ShockWave Flash): A compiled and uneditable vector graphics format used by Flash applications. SWF files can be viewed on common web browsers (if they have the Flash Player installed) and some mobile devices.

Syncing: A method used to synchronize the data held on PDAs and mobile phones or smartphones with the data held on a computer. ActiveSync is the application used to sync Windows Mobile and Pocket PC mobile devices. Allows the user to keep things like calendar and contacts lists the same on both a desktop computer and a mobile device.

Text-to-speech (TTS): A type of speech synthesis application that is used to create a spoken sound version of text.

Transparency: The amount of time a user must focus on device usage compared with the amount of time that a user can focus on learning. A high degree of transparency suggests that a device is easy to use and that the user can concentrate on cognitive tasks rather than device manipulation.

Tutor Marked Assignments (TMAs): TMAs are assignments periodically submitted by the distance learning students, which are marked by tutors.

Ubiquitous computing: Computing technology that is invisible to the user because of wireless connectivity and transparent user interface.

Ubiquitous: Existing or being everywhere at the same time, constantly encountered or widespread.

Universal accessibility: Available to anyone independent of physical handicaps.

URL: Uniform Resource Locator, an Internet World Wide Web address.

Usability: Ease and efficiency in the use of a mobile device. In a learning situation, the device should not get in the way of the learning task. The design of the user interface is very important but contextual factors also have an impact on user experience.

User: An individual who interacts with a computer system to complete a task, learn specific knowledge or skills, or access information.

User Interface: The “bridge” through which a human interacts with a device. In mobile learning, it refers to the software and navigational features that permit a learner to complete learning tasks.

Virgin mobile: Brand used by several mobile service providers, associated with mobile entertainment such as quizzes and comedy clips.

VLE (Virtual Learning Environment): A site that hosts online resources and activities to support students’ learning.

VOIP (Voice Over Internet Protocol): A new form of telephony that allows voice to be transmitted over the Internet.

Wearable Computing Devices: Devices that are attached to the human body so that the hands are free to complete other tasks.

WebCT: WebCT, or Web Course Tools, is an online or virtual learning management system (LMS) used to deliver courses over the Internet.

Weblog: An online journal or diary organized by date, with most recent posts at the top, and made publicly available via the Web.

WiFi (Wireless Fidelity): A set of standards for facilitating wireless networks in a local area, enabling WiFi devices to connect to the Internet when in range of an access point.

Wiki: Allows users to collaborate in forming the content of a web site. With a wiki, any user can edit the site content, including other users' contributions, using a standard web browser.

Wikipedia: A free, open content online encyclopedia created through the collaborative effort of a community of users.

Wireless Application Protocol (WAP): An open international standard for applications that use wireless communication. Its principal application is to enable access to the Internet from a mobile phone or PDA.

Wireless Markup Language (WML): WML, based on XML, is a content format for devices that implement the Wireless Application Protocol (WAP) specification.

XML (Extensible Markup Language): Allows users to define their own elements. Its primary purpose is to facilitate the sharing of structured data across different information systems, particularly via the Internet.

XHTML (Extensible HyperText Markup Language): A markup language that has the same depth of expression as HTML, but also conforms to XML syntax.