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Glossary
Robert Sullivan

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GLOSSARY

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1:1 technology: every student has a laptop or tablet; to individualize learning, increase independence, and extend academics outside the classroom

Achievement First: a charter school operator in the U.S., currently a network that includes 22 schools in four cities serving 7,000 students in Grades K–12

adaptive learning: software (usually) that automatically adapts instructional level, content, and pacing to the current abilities of the user; related to individualized learning, personalized learning

a la carte model (formerly self-blended learning): a form of blended learning where students take one or more courses entirely online with an online teacher of record, while continuing to have brick-and-mortar educational experiences

A Nation at Risk: The Imperative for Educational Reform: the 1983 report of American President Ronald Reagan's National Commission on Excellence in Education, which is considered a landmark event in modern American educational history, contributing to the ever-growing assertion that American schools were failing and touching off a wave of local, state, and federal reform efforts

app: short for application software; a term commonly used for software designed for specific purposes and generally used on mobile devices such as smart phones or tablet computers

Applied Minds: a company founded in 2000 by ex-Disney Imagineers Danny Hillis and Bran Ferren that provides technology, design, R&D, and consulting services to multiple firms, including General Motors, Intel, Northrop Grumman, Lockheed Martin, Herman Miller, Harris Corporation, Sony, and Sun MicroSystems

ARPANet: the Advanced Research Projects Agency Network, one of the world's first operational packet switching networks, the first network to implement TCP/IP (Transmission Control Protocol/Internet Protocol), and the progenitor of what was to become the global Internet

ASCD: formerly the Association for Supervision and Curriculum Development, a membership-based nonprofit organization with more than 175,000 members from over 100 countries, including superintendents, principals, teachers, professors of education, and other educators, initially founded with a focus on curriculum and supervision but now providing its members with professional development, educational leadership, and capacity building

assistive technology (AT): an umbrella term that includes assistive, adaptive, and rehabilitative devices for people with disabilities and also includes the process used in selecting, locating, and using them

asynchronous: interaction between teachers and students occurs intermittently online with time between responses; users do not have to be logged on simultaneously; examples are self-paced courses taken via the Internet or CD-ROM, Q&A mentoring, online discussion groups, and email

attention deficit hyperactivity disorder (ADHD): a psychiatric disorder of the neurodevelopmental disorder class in which there are significant problems of attention and/or hyperactivity and acting impulsively that are not appropriate for a person's age

Audacity: a free open source digital audio editor and recording computer software application, available for Windows, Mac OS X, Linux, and other operating systems

augmented reality (AR): live, direct or indirect, view of a physical, real-world environment whose elements are augmented by computer-generated sensory input such as sound, video, graphics, or GPS data

automatic system recovery (ASR): a device or process that detects a computer failure and attempts recovery

avatar: a graphical image that represents a person

big data: a collection of data sets so large and complex that it becomes difficult to process using on-hand database management tools or traditional data processing applications

blended learning: instructional context where students learn at school and also engage with content delivered online; models may be rotation, flex, self-blend, and enriched virtual; also called hybrid learning

blog: online journal, displaying most recent posting first

Breakthrough Center: an internal Maryland State Department of Education operation dedicated to coordinating, brokering, and delivering support to districts and schools across Maryland. It aims to maximize the state's comparative advantage by partnering with local school districts to determine needs and necessary supports; identify, target, and maximize resources in education, business, government, and research centers; and create cross-district and cross-sector access to people, programs, and resources

broadcast: simultaneously send the same message or online content to multiple recipients

BYOD (bring your own device or BYOT–bring your own technology): movement where districts or schools encourage students and teachers to bring and utilize the technology they already have

career academies: career-themed high school academies that incorporate small learning communities; deliver a college preparatory curriculum within specific career themes; and partner with business, post-secondary institutions, and the broader community to introduce students to the broader relevance of their career studies

Career and Technical Education (CTE): a program that prepares students for employment and/or postsecondary education in current or emerging professions; provides students with competency-based and applied learning opportunities that build academic knowledge, higher-order reasoning skills, problem-solving skills, work attitudes, general employability skills, technical skills, occupation-specific skills, and knowledge of all aspects of an industry

Career and Technical Student Organization (CTSO): one of several vocational organizations primarily based in high schools and career technology centers; often, on the state level, they are integrated into departments of education or incorporated as nonprofit organizations

Carl D. Perkins Career and Technical Education Improvement Act: the reauthorization of a 1984 act, signed into law in 2006, that aims to increase the quality of technical education within the U.S. in order to help the economy. The reauthorization contained three major areas of revision—using the term "career and technical education" instead of "vocational education," maintaining the Tech Prep program as a separate federal funding stream within the legislation, and maintaining state administrative funding at 5% of a state's allocation—while also including new requirements for "programs of study" that link academic and technical content across secondary and postsecondary education and strengthening local accountability provisions that will ensure continuous program improvement

change agent: a person from inside or outside the organization who helps an organization transform itself by focusing on such matters as organizational effectiveness, improvement, and development

change management: an approach to transitioning individuals, teams, and organizations to a desired future state

chat room: an Internet site allowing users to communicate in real time via transmission of text messages from sender to receiver

Children's Internet Protection Act (CIPA): a U.S. federal law requiring that K–12 schools and libraries in the U.S. use Internet filters and implement other measures to protect children from harmful online content as a condition for the receipt of certain federal funding

Children's Online Privacy Protection Act of 1998 (COPPA): a U.S. federal law that applies to the online collection of personal information by persons or entities under U.S. jurisdiction from children under 13 years of age. It details what a website operator must include in a privacy policy, when and how to seek verifiable consent from a parent or guardian, and what responsibilities an operator has to protect children's privacy and safety online, including restrictions on the marketing to those under 13

ClassDojo: a free classroom tool, available on the Internet, designed to help teachers improve classroom behavior and to capture and generate data on behavior that teachers can share with parents and administrators

classroom chronotope: a shared conception of how a student moves through the spaces and times of a classroom

client-based: pertaining to an application that runs on a work station or personal computer in a network and is not available to others in the network (as opposed to cloud-based)

cloud-based: pertaining to an application where end users access the application through a web browser or a lightweight desktop or mobile app while the business software and user's data are stored on servers at a remote location

cloud computing: services and applications that host data, files, and information at remote servers around the country/globe to be accessed from any device; "in the cloud"

cognitive science: the interdisciplinary scientific study of the mind and its processes

collaborative asynchronous: characterizes work during which students provide input at various times, such as in discussion forums and social networking

collaborative synchronous: describes work where students engage in communications at the same time, such as in chat rooms, face-to-face meetings, or on the phone

Common Core State Standards (CCSS): an education initiative sponsored by the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO) that seeks to bring diverse state curricula into alignment with each other by following the principles of standards-based education reform

competency-based learning: students advance upon mastery of explicit, measurable, transferable learning objectives that empower students. Assessment is meaningful and students receive timely, differentiated support based on their individual needs. Learning outcomes include competencies in application and creation of knowledge along with the development of skills

computer game: an electronic game that is usually more complex than a video game, with an interface that can be more elaborate, controls that are more detailed, and movements that are more precise; aka digital games

computer simulation: a computer program, run on a single computer or a network of computers, that attempts to simulate an abstract model of a particular system; aka computer model or computational model

computer-supported collaborative learning (CSCL): a pedagogical approach wherein learning takes place via social interaction using a computer or through the Internet. This kind of learning is characterized by the sharing and construction of knowledge among participants using technology as their primary means of communication or as a common resource. It can be implemented in online and classroom learning environments and can take place synchronously or asynchronously

content acquisition podcast (CAP): short, multimedia-based instructional vignettes that use still images and occasional on-screen text and contain carefully constructed narration to deliver instruction for one vocabulary term/concept, fact/event, or other singular piece of information

context analysis: a strategy readers use to infer or predict a word from the context in which it appears

Council of Chief State School Officers (CCSSO): a nonpartisan, nonprofit organization of public officials who head departments of elementary and secondary education in the states, the District of Columbia, the Department of Defense Education Activity, and five U.S. territories

course management system (CMS): software applications that help with online course administration (e.g., enroll students, document and track progress, and provide reporting); may also assemble, personalize, and deliver learning content; aka learning management system (LMS)

Coursera: an educational technology company offering massive open online courses (MOOCs) and working with universities to make some of their courses available online, offering courses in engineering, humanities, medicine, biology, social sciences, mathematics, business, computer science, and other areas

Co-Writer: a word prediction program designed to help individuals who struggle with writing

crowdsourcing: outsourcing tasks to an undefined, distributed group of people (the public) rather than specific individuals; process can occur online and offline

cultural modeling: a mental framework based on shared ideas, attitudes, and modes of behavior that span a society

culture of innovation: an environment that supports creative thinking and advances efforts to extract economic and social value from knowledge, and, in doing so, generates new or improved products, services, or processes

curator/digital curator: generally, the process of establishing and developing repositories of digital assets for current and future reference; curators collect and manage those resources

dashboard/dashboard technologies: a user interface that organizes and presents information in an easy-to-recognize/read interface; likely to be interactive; goal is to automatically show a user useful data, info, and other objects

DECA: previously known as Delta Epsilon Chi and Distributive Education Clubs of America, an international association of high school and college students and teachers of marketing, management, and entrepreneurship in business, finance, hospitality, and marketing sales and service

dialogic book reading: a form of shared reading; more specifically, an interaction between an adult and a child in which they take turns in a conversation about a book

DIBELS (Dynamic Indicators of Basic Early Literacy Skills): a series of short tests that assess early childhood (K–6) literacy

differentiated learning: programs or tools that present learning materials that match each student's individual learning level; tools used depend on the student, however, learning goals are the same for everyone

digital badges: icons that represent academic achievements or skills; online record of knowledge or skill achievements

digital immigrant: someone who was born before the existence of digital technologies and adopted it to some extent later in life

digital native: generation of students that have grown up in the digital world using technology to communicate, educate, share, record, and learn about society; implies that students have an easier sense of how to use technology

digital object identifier (DOI): a character string used to uniquely identify an object such as an electronic document

digital tourist: an inexperienced searcher in the digital environment

discussion board: an online discussion site where people can hold conversations in the form of posted messages, differing from chat rooms in that messages are at least temporarily archived; aka Internet forum or message board

disruptive innovation: an innovation that helps create a new market and value network and eventually goes on to disrupt an existing market and value network, displacing an earlier technology

distance learning: any type of learning that takes place with the student and instructor geo-graphically distant from each other

download: to transfer (data or programs) from a server or host computer to one's own computer or device

e-books: completely digital books that are usually read on computers, tablets, or e-readers

Edmodo: a social learning platform for teachers, students, and parents, commonly thought of as the Facebook of schools

educational data mining (EDM): a research field concerned with the application of data mining (the computational process of discovering patterns in large data sets) to information generated from educational settings (e.g., universities and intelligent tutoring systems)

effectiveness: improved student learning, including cognitive, social–emotional, and psychomo-tor skills and knowledge

efficient: evidence of a gain in student learning achieved by the innovation that is greater than that achieved by the standard practice over a similar or lesser amount of time

e-learning: the use of electronic media and information and communication technologies (ICT) in education, inclusive of and is broadly synonymous with multimedia learning, technology-enhanced learning (TEL), computer-based instruction (CBI), computer-based training (CBT), computer-assisted instruction or computer-aided instruction (CAI), Internet-based training (IBT), web-based training (WBT), online education, virtual education, and virtual learning environments (VLE)

Elementary and Secondary Education Act (ESEA): an act passed as part of President Lyndon B. Johnson's "War on Poverty" and the most far-reaching federal legislation affecting educa-tion ever passed by Congress. The act is an extensive statute that funds primary and secondary education, while explicitly forbidding the establishment of a national curriculum; it emphasizes equal access to education and establishes high standards and accountability; and it aims to reduce the achievement gaps between students by providing each child with fair and equal opportunities to achieve an exceptional education

emerging promising practice: a practice that seems likely to replace the standard by being more effective but lacks sufficient evidence to be called an innovation

enriched virtual model: a form of blended learning providing a whole-school experience, where students divide their time between attending a brick-and-mortar campus and learning remotely using online delivery of content and instruction, differing from the flipped classroom in that students seldom attend the brick-and-mortar campus every weekday, and differing from the a la carte model in that it is a whole-school experience, not a course-by-course model

Facebook: an online social networking service whose name stems from the colloquial name for the book given to students at the start of the academic year by some university administrations in the U.S. to help students get to know each other

Family, Career, and Community Leaders of America (FCCLA): formerly the Future Homemakers of America (FHA), a nonprofit U.S. career and technical student organization for young men and women in family and consumer science education in public and private schools through grade 12 across the U.S.

Family Educational Rights and Privacy Act of 1974 (FERPA): a U.S. federal law that gives students access to their education records, an opportunity to seek to have the records amended, and some control over the disclosure of information from the records. With several exceptions, schools must have a student's consent prior to the disclosure of education records after that student is 18 years old. The law only applies to educational agencies and institutions that receive funding under a program administered by the U.S. Department of Education

fan fiction: stories about characters or settings written by fans of the original work, rather than by the original creator

feature phone: a mobile phone intended for customers who want a moderately priced and multipurpose phone without the expense of a high-end smartphone, having additional functions over and above a basic mobile phone which is only capable of voice calling and text messaging

FFA (National FFA Organization): formerly the Future Farmers of America, an American youth organization, specifically a career and technical student organization based on middle and high school classes that promote and support agricultural education

flex model: a form of blended learning where face-to-face support is provided on a flexible and adaptive as-needed basis through activities such as small-group instruction, group projects, and individual tutoring, but where the backbone of student learning, even if it directs students to offline activities at times, is online learning

flipped classroom: term used to describe a reversed model where instruction is delivered at home through interactive, teacher-created videos or screencasts and teachers use class time for collaborative learning environments or more 1:1 time with students —as most notably exemplified by Khan Academy (see below)

forum: an online meeting or assembly for the open discussion

Funnix: an interactive computer CD program for parents and other educators to teach children reading or mathematics using Direct Instruction techniques

Future Business Leaders of America (FBLA): an American career and technical student nonprofit organization of high school, middle school, and college students, as well as professional members who primarily help students transition to the business world

game: structured playing, usually undertaken for enjoyment and sometimes used as an educational tool

game-based learning (GBL): a type of game play that has defined learning outcomes; generally, GBL is designed to balance subject matter with gameplay and to enhance the ability of the player to retain and apply said subject matter to the real world

gamification: using game design and mechanics to drive motivation and increase engagement in learning

Glogster: a social network that allows users to create free interactive posters, or Glogs, short for "graphics blogs," which are interactive multimedia images

Goalbook: a secure platform for schools to manage and collaborate around student individual learning plans (ILPs), designed to help educators collaborate more effectively, streamline communication, engage parents, and increase student agency through goal setting

Google: the most used search engine on the Internet (also used as a verb meaning to search on the Internet)

Headsprout: an online reading program that takes a nonreader to mid-2nd grade level in 80 lessons. The program, acquired by DYMO/Mimio ITT in 2011, is used in thousands of classrooms, learning labs, and homes in the U.S. and 87 other countries. The patented adaptive software adjusts to each learner's needs, facilitating success in phonemic awareness, phonics, fluency, vocabulary, and comprehension

high-functioning autism (HFA): a term applied to people with autism who are deemed to be cognitively "higher functioning" (IQ>70) than other people with autism, exhibit deficits in areas of communication, emotion recognition and expression, and social interaction; aka Asperger syndrome

High Schools That Work (HSTW): the nation's largest school improvement initiative for high school leaders and teachers, with more than 1,200 HSTW sites in 30 states and the District of Columbia currently using the framework of HSTW Goals and Key Practices to raise student achievement and graduation rates

hip hop: a music genre consisting of a stylized rhythmic music that commonly accompanies rapping, a rhythmic and rhyming speech that is chanted

HOSA-Future Health Professionals: formerly known as Health Occupations Students of America, a national student organization endorsed by the U.S. Department of Education and the Health Science Education Division of the Association for Career & Technical Education, with the two-fold mission of promoting career opportunities in the health care industry and enhancing the delivery of quality health care to all people

hybrid course: a blend of face-to-face interaction such as in-class discussions, active group work, and live lectures, with typically web-based educational technologies such as online information and assignments, discussion boards, and other web-assisted learning tools

hyperlink: a reference to data that the computer user can directly follow or that is followed automatically

HyperStudio: a multimedia authoring tool software program distributed by Software MacKiev, that provides relatively simple methods for combining varied media

hypertext: text displayed on a computer display or other electronic device with references (hyperlinks) to other text which the computer user can immediately access, or text that can be revealed progressively at multiple levels of detail

HyperText Markup Language (HTML): the main markup language for creating webpages and other information that can be displayed in a web browser

HyperText Transfer Protocol (HTTP): an application protocol for distributed, collaborative, hypermedia information systems

HyperText Transfer Protocol Secure (HTTPS): a communications protocol for secure communication over a computer network, with especially wide deployment on the Internet. Technically, it is not a protocol in and of itself, but rather the result of simply layering the Hypertext Transfer Protocol (HTTP) on top of the SSL/TLS protocol, thus adding the security capabilities of SSL/TLS to standard HTTP communications

implementation science: the study of the process of implementing evidence-based programs and practices

indicator of effective practice: a concrete, behavioral expression of a professional practice that research demonstrates contributes to student learning

Indistar®: a web-based system implemented by a state education agency, district, or charter school organization for use with district and/or school improvement teams to inform, coach, sustain, track, and report improvement activities

individual rotation model: a form of rotation model in which, within a given course or subject, students rotate on an individually customized, fixed schedule among learning modalities, at least one of which is online learning

Individuals with Disabilities Education Act (IDEA): a U.S. federal law that governs how states and public agencies provide early intervention, special education, and related services to children with disabilities

Information Age: a period in human history characterized by the shift from traditional industry that the Industrial Revolution brought through industrialization to an economy based on information computerization

information and communication technology (ICT): extended synonym for information technology (IT); emphasizes the role of unified communications, integration of telecommunications, computers, software, storage, and audiovisual systems; enables users to access, store, transmit, and manipulate information

innovation: may be a change in methods, change in technology, or both; it replaces the standard (best) practice with a more effective or efficient one, thus creating a new standard

innovation fatigue: what happens when a group of people is subjected to vague innovation talk and badly explicated innovation projects to the point where the very reference to "innovation" triggers feelings of boredom and meaninglessness

Institute of Education Sciences (IES): the primary research arm of the U.S. Department of Education, created as part of the Education Sciences Reform Act of 2002

instructional core: the teacher and the student in the presence of content—the relationship between the teacher, the student, and the content, and not the qualities of any one of them by themselves, determining the nature of instructional practice

instructional productivity: indicated by the ratio of effectiveness to resource allocation

interactive media: digital and analog materials, including software programs, applications (apps), broadcast and streaming media, some children's television programming, e-books, the Internet, and other forms of content designed to facilitate active and creative use by young children and to encourage social engagement with other children and adults

interactive multimedia: technology that allows users to work with any combination of video, audio, animation, text, and graphics

interactive whiteboard: a large interactive display that connects to a computer, with a projector projecting the computer's desktop onto the board's surface, where users control the computer using a pen, finger, stylus, or other device

Internet: a global system of interconnected computer networks that use the standard Internet protocol suite (TCP/IP) to serve several billion users worldwide. It is a network of networks that consists of millions of private, public, academic, business, and government networks, of local to global scope, that are linked by a broad array of electronic, wireless, and optical networking technologies. The Internet carries an extensive range of information resources and services, such as the interlinked hypertext documents of the World Wide Web (WWW) and the infrastructure to support e-mail

Internet protocol suite: the networking model and a set of communications protocols used for the Internet and similar networks. Commonly known as TCP/IP, because its most important protocols, the Transmission Control Protocol (TCP) and the Internet Protocol (IP), were the first networking protocols defined in this standard

intranet: a computer network that uses Internet Protocol technology to share information, operational systems, or computing services within an organization

Investing in Innovation (I3): the flagship innovation grant program from the U.S. Department of Education. The program, managed by the Office of Innovation and Improvement, is available

to Local Educational Agencies (school districts) in partnership with nonprofit organizations. There are three funding categories for I3 grants: Development, Validation, and Scale-up

iOS: a mobile operating system developed and distributed by Apple, Inc. that supports Apple's iPhone, iPod Touch, iPad, and second-generation Apple TV; previously iPhone OS

iPad: a line of tablet computers designed and marketed by Apple, Inc., which runs Apple's iOS

iPod: a line of portable media players designed and marketed by Apple, Inc.

just-in-time learning: the acquisition of knowledge or skills at the time they are needed rather than in advance. Rather than sitting through hours of traditional classroom training, users can tap into Web-based tutorials, interactive CD-ROMs, and other tools to zero in on just the information they need to solve problems, perform specific tasks, or update their skills

K12, Inc.: a for-profit education company that sells online schooling and curriculum to state and local governments

keyword mnemonic instruction: the linking of new information to keywords that are already encoded to memory

Khan Academy: a nonprofit educational website created in 2006 by educator Salman Khan that supplies a free online collection of more than 4,300 micro lectures via video tutorials stored on YouTube, teaching mathematics, history, healthcare, medicine, finance, physics, chemistry, biology, astronomy, economics, cosmology, organic chemistry, American civics, art history, macroeconomics, microeconomics, and computer science

Kid Pix: a bitmap drawing program aimed at children, first released for the Macintosh in 1989 and subsequently published in 1991 by Brøderbund

Knowledge Is Power Program (KIPP): a nationwide network of free, open-enrollment, college-preparatory schools in under-resourced communities throughout the United States. KIPP schools are usually established under state charter school laws, KIPP being America's largest network of charter schools

Kurzweil 3000: an assistive technology which provides a reading, writing, and study platform aimed at people with learning disabilities or other disabilities that make reading or writing difficult

lab-rotation model: a form of rotation model in which, within a given course or subject, students rotate on a fixed schedule or at the teacher's discretion among locations on the brick-and-mortar campus, at least one of which is a learning lab for predominantly online learning, differing from the station location in that they are not confined to a single classroom

learning analytics (LA): the measurement, collection, analysis, and reporting of data about learners and their contexts for purposes of understanding and optimizing learning and the environments in which it occurs

Learning Forward: formerly the National Staff Development Council, an association devoted exclusively to advancing professional learning for student success

learning management system (LMS): software applications that help with online course administration (e.g., enroll students, document and track progress, and provide reporting); may also assemble, personalize, and deliver learning content; aka course management system (CMS)

lexical abilities: abilities relating to words or the vocabulary of a language as distinguished from its grammar and construction

Linked Learning: an improvement approach for California high schools that connects strong academics with real-world experience in a wide range of fields, such as engineering, arts and media, and biomedical and health sciences, helping students gain an advantage in high school, college, and career

low evidence: based on expert opinion derived from strong findings or theories in related areas and/or expert opinion buttressed by direct evidence that does not rise to moderate or strong level

massively multiplayer online role-playing game (MMORPG): a genre of role-playing video games or web-browser-based games in which a very large number of players interact with one another within a virtual game world

metacognitive skills: "cognition about cognition," or "knowing about knowing"; the individual's own awareness and consideration of thinking/learning processes and strategies

microblogging: a type of short message blogging, often made via mobile device (e.g., using Twitter)

microformats: a web-based approach to semantic markup which seeks to reuse existing HTML/XHTML tags to convey metadata and other attributes in webpages and other contexts that support (X)HTML

MimioReading: a state-of-the-art instructional program that provides broad and effective lessons for schools that want to improve their reading comprehension performance in Grades 3–8

MimioSprout: a program for Grades preK–2 that incorporates hundreds of instructional routines that automatically adapt to the specific needs and learning pace of each student

Minecraft: a computer game that allows players to build constructions out of textured cubes in a 3D procedurally generated world and to participate in exploration, gathering resources, crafting, and combat

m-learning (mobile learning): any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies

mobile operating system: the operating system that operates a smartphone, tablet, PDA, or other digital mobile device; aka mobile OS

moderate evidence: requires (1) studies that support strong causal conclusions but where generalization is uncertain, or (2) studies that support the generality of a relationship but where the causality is uncertain

MOOC (massive open online course): a recent development in distance education, a MOOC is an online course aimed at large-scale interactive participation and open access via the World Wide Web. In addition to traditional course materials such as videos, readings, and problem sets, MOOCs provide interactive user forums that help build a community for the students, professors, and teaching assistants. Also SMOOC, for smaller, or synchronized, massive open online course

morpheme: the smallest grammatical unit in a language

morphemic analysis: a strategy in which the meanings of words can be determined or inferred by examining their meaningful parts (i.e., prefixes, suffixes, roots, etc.)

National Early Literacy Panel (NELP): panel convened in 2002 to conduct a synthesis of the scientific research on the development of early literacy skills in children ages zero to five

National Reading Panel: a U.S. government body formed in 1997 at the request of Congress with the stated aim of assessing the effectiveness of different approaches used to teach children to read

National Technology Student Association: a nonprofit national student organization devoted to teaching technology education to young people

netiquette: social etiquette rules when communicating over computer networks

networked book: an open book (such as Wikipedia) designed to be written, edited, and read in a networked environment; also a platform for social exchange, potentially linked to other books and other discussions

networked learning: a process of developing and maintaining connections with people and information and communicating in such a way so as to support one another's learning

new and emerging technologies: reflects current advances and innovation in various fields and disciplines

No Child Left Behind Act of 2001 (NCLB): a United States Act of Congress that is a reauthorization of the Elementary and Secondary Education Act; supports standards-based education reform based on the premise that setting high standards and establishing measurable goals can improve individual outcomes in education

Number Munchers: one of the two original games in the Munchers series of edutainment computer games produced by the Minnesota Educational Computing Consortium (MECC) for several operating systems, which were popular among American schoolchildren in the 1980s and 1990s, the other being Word Munchers

online assessment: the process used to measure certain aspects of information for a set purpose where the assessment, usually some type of educational test, is delivered via a computer connected to a network. Different types of online assessments contain elements of one or more of the following components, depending on the assessment's purpose: formative, diagnostic, or summative. Instant and detailed feedback, as well as flexibility of location and time, are two benefits associated with online assessments, and there are many resources available that provide online assessments, some free of charge and others that charge fees or require a membership

open educational resource (OER): digital information/materials available for reuse and repurposing in teaching, researching, and learning; open licenses allow use through means not normally permitted under copyright

Oregon Trail: a computer game originally produced by the Minnesota Educational Computing Consortium (MECC) in 1974, designed to teach school children about the realities of 19th century pioneer life on the Oregon Trail

personal digital assistant (PDA): a mobile device that functions as a personal information manager; aka palmtop computer or personal data assistant

personalization of learning: the tailoring for each student of the pace, content, and goals of learning, with the learner exercising significant choice and direction in the learning process; personalization ensues from the relationships among teachers and learners and the teacher's orchestration of multiple means for enhancing every aspect of each student's learning and development

phonemic awareness: the ability to notice, think about, and work with the individual sounds in words

phonological sensitivity: an individual's sensitivity to the phonological structure, or sound structure, of spoken words

PLATO (Programmed Logic for Automatic Teaching Operations): the first generalized computer-assisted instruction system that, by the late 1970s, comprised several thousand terminals worldwide on nearly a dozen different networked mainframe computers

podcast: a type of digital media consisting of an episodic series of audio radio, video, PDF, or ePub files subscribed to and downloaded through web syndication or streamed online to a computer or mobile device, the word being a neologism derived from "broadcast" and "pod" from the success of the iPod, as audio podcasts are often listened to on portable media players

Prezi: a U.S. software company, producing a cloud-based presentation software and storytelling tool for presenting ideas on a virtual canvas

private social network (PSN): a closed network of online users, such as EveryMe or Yammer, designed in part to increase privacy and confidentiality

productive innovation: an innovation that achieves the same learning outcomes as the standard practice but at less cost (time, money, and other resources) or better learning outcomes than the standard practice at the same or lesser cost

pull technology: when people use software such as a web browser to locate and "pull down" (get) information for themselves

push technology: when information is sent directly to a user's computer without them having to go get it

Quest Atlantis: a 3D, multiuser, computer graphics learning environment that utilizes a narrative programming toolkit to immerse children ages 9–15 in meaningful inquiry tasks

Race to the Top: a U.S. Department of Education contest created to spur innovation and reforms in state and local district K–12 education

Reader Rabbit: an edutainment software franchise created in 1986 by The Learning Company with games for infancy through second grade featuring Reader Rabbit

Reading First Program: a federal education program mandated under the No Child Left Behind Act and administered by the U.S. Department of Education requiring that schools funded by Reading First use "scientifically based" reading instruction

real-time communication: when information is received (nearly) at the instant it's sent; characteristic of instant messaging; synchronous learning

relational suasion: the teacher's ability to influence a student's learning, motivation to learn, metacognitive competencies, and social and emotional competencies by virtue of the teacher's personal knowledge of and interaction with the student and the student's family

Response to Intervention (RtI): a system of service delivery that uses student data to evaluate and repair core instruction and to provide increasingly intensive intervention supplements to students who need it to meet expected learning outcomes

rotation model: a form of blended learning where students rotate between in-class and homework activities (such as small-group or full-class instruction, group projects, individual tutoring, and pencil-and-paper assignments) and online learning

RSS (really simple syndication): a method by which web content can be easily and quickly distributed when it is changed or newly entered into a web site or blog; most blogs automatically include an RSS feed. This feed automatically sends out formatted releases of new posts that are received by those who use RSS news readers and subscribe to that particular feed

rti4success.org (National Center on Response to Intervention): a center housed at the American Institutes for Research, working in conjunction with researchers from Vanderbilt University and the University of Kansas and funded by the U.S. Department of Education's Office of Special Education Programs (OSEP), with the mission of providing technical assistance to states and districts and building the capacity of states to assist districts in implementing proven models for Response to Intervention (RTI)

scalability: the degree to which a program, process, tool, or application can increase in number of users served, locations, etc., and continue to function properly (little or no degradation in function).

schema theory: the theory that people make sense of new experiences and the world by activating the mental representations or schemata stored in their memory. New experiences and

information are interpreted according to how they fit into their schemata. Information that does not fit may be misunderstood or not comprehended

School Improvement Grant (SIG): a grant awarded by the U.S. Department of Education to state education agencies (SEAs) under Section 1003(g) of the Elementary and Secondary Education Act of 1965 (aka ESEA, reauthorized by the No Child Left Behind Act [NCLB] in 2002). The SEAs, in turn, award subgrants to local educational agencies (LEAs, also known as school districts) for the purpose of supporting focused school improvement efforts

School Improvement Plan (SIP): strategies and steps that a school will utilize to raise student achievement which may involve new programs, more assistance for students, new curricula, and/or teacher training

Schoolwide Positive Behavior Support (SWPBS): a proactive approach based on a three-tiered model of prevention and intervention aimed at creating safe and effective schools

screen capturing: a computer user's taking of an image to record the visible items displayed on the monitor, television, or another visual output device; aka screen shot or screen grab

screencast: digital recording (movie) of interactions of a computer screen (often with audio), to be viewed by others remotely or at a later date (also known as video screen capture)

search engine: a software system that is designed to search for information on the Internet

self-paced asynchronous: refers to learning where the student is allowed the autonomy and freedom to complete work at his/her own speed, through such means as online self-tutorials and archived podcasts

serious game: a game designed for a primary purpose other than pure entertainment; aka applied game

student information management system (SIMS): software to securely manage individual student data, including demographics and learning information, usually at the state, district, or school level

SimCity: an open-ended city-building computer and console video game series

simulation: interactive applications in which learners role play in or model a scenario; allows practice in a risk-free environment

simulation game: an electronic game that represents or simulates an environment accurately, representing the interactions between the playable characters and the environment realistically

simulation software: a program that allows the user to observe an operation through simulation without actually performing that operation

SkillsUSA: a U.S. career and technical student organization serving more than 320,000 high school and college students and professional members enrolled in training programs in technical, skilled, and service occupations, including health occupations

smartpen: a high-tech writing tool that records spoken words and synchronizes them with notes users write on special paper

smartphone: a mobile phone built on a mobile operating system with more advanced computing capability and connectivity than a feature phone

Smith-Hughes National Vocational Education Act of 1917: an act of the U.S. Congress that promoted vocational agriculture to train people "who have entered upon or who are preparing to enter upon the work of the farm" and provided federal funds for this purpose

Software & Information Industry Association (SIIA): a software trade association that lobbies U.S. policymakers as well as conducting surveys and research and many conferences and webcasts

SSL/TSL: Secure Sockets Layer (SSL) and its successor, Transport Layer Security (TLS), are cryptographic protocols that provide communication security over the Internet

station-rotation model: a form of rotation model in which, within a given course or subject, students rotate on a fixed schedule or at the teacher's discretion among classroom-based learning modalities, including at least one station for online learning

student response system (SRS): using a web-based software (or PowerPoint), teachers ask questions and students use a device (clicker or, increasingly, smartphones and tablets) to respond to that question, providing real-time results for the teacher

standard practice: the best known practice prior to the replacement by an innovation

strong evidence: requires (1) studies whose designs can support causal conclusions (internal validity), and (2) studies that in total include enough of the range of participants and settings on which the recommendation is focused to support the conclusion that the results can be generalized to those participants and settings (external validity)

subnotebook: a class of laptop computers that are smaller and lighter than a typical notebook; aka ultraportable or mini notebook

synchronous: interactions that occur at the same time (in real time)

synchronous communication: communications in which the message occurs in real time, so when you speak or write, someone could immediately respond to your message

tablet computer: a one-piece mobile computer, typically having a touchscreen, with finger or stylus gestures replacing the conventional computer mouse

TeachMeet: an unconference; an informal gathering of educators that encourages sharing of ideas and lessons used in their classrooms

technology: the use and knowledge of tools, techniques, systems, or methods in order to solve a problem or serve some purpose; can significantly affect the ability to control and adapt to the environment

TED lectures: a series of video talks freely available online, originally concerning the fields of technology, entertainment, and design (TED), but later expanded to include science, philosophy, music, philanthropy, and many other fields

Trends in International Mathematics and Science Study (TIMSS): an international assessment of the mathematics and science knowledge of 4th and 8th graders around the world, developed by the International Association for the Evaluation of Educational Achievement (IEA) to allow participating nations to compare students' educational achievement across borders

turnaround: a dramatic and comprehensive intervention in a low-performing school designed to produce significant gains in achievement and to ready the school for the longer process of transformation into a high-performance organization

Twitter: an online social networking service and microblogging service that enables its users to send and read text-based messages of up to 140 characters, known as "tweets"

Ultrabook: a specification and brand developed by Intel for a class of high-end subnotebooks which are designed to feature reduced bulk without compromising performance and battery life

Universal Design for Learning (UDL): framework for the design of online learning and environments ensuring accessibility for all users; framework for designing flexible curriculum and learning environments for all students

upload: to transfer (data or programs), usually from a peripheral computer or device to a central, often remote computer

URI (uniform resource identifier): a string of characters used to identify a name or a web resource

URL (uniform resource locator): address of a specific web page, technically a type of URI

UI/UX: user interface/user experience; user interface being the system by which people (users) interact with a machine, and user experience involving a person's emotions about using a particular product, system, or service

video capturing: converting an analog video signal, such as that produced by a video camera or DVD player, to digital video

video game: an electronic game that involves human interaction with a user interface to generate visual feedback on a video device, the term usually referring to the earliest simpler video games such as Atari and Pong

video game console: an interactive computer that produces a video display signal which can be used with a display device (a television, monitor, etc.) to display a video game; the term is used to distinguish a machine designed for people to buy and use primarily for playing video games on a television, monitor, etc., in contrast to arcade machines, handheld game consoles, or home computers

virtual desktop: a user's desktop environment (icons, folders, toolbars, wallpaper, windows, etc.) is stored remotely on a server, not on the local device (desktop virtualization software separates the desktop operating systems, applications, and data from the hardware client, storing this virtual desktop on a remote server)

virtual learning: any learning that occurs where either the instructor or student is present for an educational event in a digital (virtual) rather than physical form

virtual private network (VPN): the extension of a private network across a public network, such as the Internet, enabling a computer to send and receive data across shared or public networks as if it were directly connected to the private network, while benefitting from the functionality, security, and management policies of the private network. This is done by establishing a virtual point-to-point connection through the use of dedicated connections, encryption, or a combination of the two

virtual reality (VR): artificial, computer-generated environment experienced via sensory input; special equipment allows users to interact with the environment

virtual university: a university that provides higher education programs through electronic media, typically the Internet, some being brick-and-mortar institutions that provide online learning as part of their extended university courses, while others solely offer online courses

Walt Disney Imagineering: the design and development arm of The Walt Disney Company, responsible for the creation and construction of Disney theme parks worldwide; aka WDI or Imagineering

Web 2.0: World Wide Web current age; used for interacting with web apps, collaboration, and sharing with others

Web 3.0: World Wide Web future age; a term coined by John Markoff of *The New York Times* to refer to a supposed third generation of Internet-based services that collectively comprise what might be called "the intelligent Web"—such as those using semantic web, microformats, natural language search, data-mining, machine learning, recommendation agents, and artificial intelligence technologies—which emphasize machine-facilitated understanding of information in order to provide a more productive and intuitive user experience

web accessibility: the inclusive practice of making websites usable by people of all abilities and disabilities

Web Accessibility Evaluation Tool: an online tool to evaluate web accessibility, made available as a free community service by WebAIM, a nonprofit organization within the Center for Persons with Disabilities at Utah State University

Web Accessibility Initiative (WAI): the World Wide Web Consortium (W3C)'s effort to improve the accessibility of the World Wide Web for people with disabilities

web browser: a software application (such as Google and Internet Explorer) for retrieving, presenting, and traversing information resources (each identified by its Uniform Resource Identifier, usually a URL) on the World Wide Web

webcast: a media presentation distributed over the Internet using streaming media technology to distribute a single content source to many simultaneous listeners/viewers

Web Content Accessibility Guidelines 2.0 (WCAG 2.0): the current version of the Web Content Accessibility Guidelines (part of a series of Web accessibility guidelines published by the W3C's Web Accessibility Initiative) consisting of a set of guidelines for making content accessible, primarily for disabled users

webpage: a web document that is suitable for the World Wide Web and the web browser

What Works Clearinghouse (WWC): an initiative of the Institute for Education Sciences (IES) at the U.S. Department of Education, administered by the National Center for Education Evaluation within IES, with the goal of being a resource for informed education decision making

Wi-Fi: a popular technology that allows an electronic device to exchange data or connect to the Internet wirelessly using radio waves

Wii: a home video game console released by Nintendo

wiki: web application developed collaboratively that allows anyone visiting a website to edit content on it

Wikipedia: a collaboratively edited, multilingual, free Internet encyclopedia supported by the nonprofit Wikimedia Foundation

wireless network: any type of computer network that utilizes some form of wireless network connection

WordAssist: a word prediction program designed to help individuals who struggle with writing

Wordle: a toy for generating "word clouds" from text provided by the user, giving greater prominence to words that appear more frequently in the source text

WordQ: assistive technology software developed by Quillsoft Ltd. and Holland Bloorview Kids Rehabilitation Hospital, designed to help individuals who struggle with writing

World of Warcraft (WoW): a massively multiplayer online role-playing game (MMORPG) by Blizzard Entertainment

World Wide Web: a system of interlinked hypertext documents accessed via the Internet. With a web browser, one can view webpages that may contain text, images, videos, and other multimedia, and navigate between them via hyperlinks

World Wide Web Consortium (W3C): the main international standards organization for the World Wide Web

Xbox 360: the second video game console developed by and produced for Microsoft, and the successor to the Xbox

Xtranormal: a digital entertainment company that produces do-it-yourself animation software for the World Wide Web and desktop; turns words from a script into an animated movie using text-to-speech and animation technologies

YouTube: a video-sharing website created by three former PayPal employees in February 2005 and owned by Google since late 2006, on which users can upload, view, and share videos