



CallDysc Concepts

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Disclaimer

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A METHODOLOGICAL FRAMEWORK FOR CREATING COLLABORATIVE LANGUAGE TEACHING E-LEARNING FOR DYSLEXIC STUDENTS

We have to bring together different fields, theories and practices when defining the scope of the development of our language teaching material for specific needs.

- Modern teaching methodology especially with respect to language teaching
- Modern technology supported learning (m-learning, web2.0) especially with respect to language teaching (CALL)
- Special dyslexia needs: pedagogical and assistive

LEARNING THEORIES

In psychology and education, **learning theories** are attempts to describe how people learn, thereby helping us understand the inherently complex process of learning. There are basically three main perspectives in learning theories, Behaviorism, Cognitivism, and Constructivism.

Behaviorism says that a behavior may result either in reinforcement, which increases the likelihood of that behavior occurring again; or punishment, which decreases the likelihood of the same behavior recurring in the future.

Cognitive psychology is not a wholesale refutation of behaviorism, but rather an expansion that accepts that mental states are appropriate to analyze and subject to examination. For example, Noam Chomsky argued that language could not be acquired purely through conditioning, and must be at least partly explained by the existence of internal mental states, and that these states can be described and analyzed.

Cognitive constructivism views learning as a process in which the learner actively constructs or builds new ideas or concepts based upon current and past knowledge. In other words, "learning involves constructing one's own knowledge from one's own experiences. The teacher acts as a facilitator who encourages students to discover principles for themselves and to construct knowledge by working to solve realistic problems. Constructivism emphasizes the importance of the learner being actively involved in the learning process, unlike previous educational viewpoints where the responsibility rested with the instructor to teach and where the learner played a passive, receptive role. Learners do not simply mirror and reflect what they read, but construct their own understanding, look for meaning and will try to find regularity and order in the events of the world even in the absence of full or complete information.

Social constructivism views each learner as a unique individual with unique needs and backgrounds - not only acknowledges the uniqueness and complexity of the learner, but actually encourages, utilises and rewards it as an integral part of the learning process

knowledge construction as a social process. We can work to clarify and organize their ideas so we can voice them to others. It gives us opportunities to elaborate on what they learned. We are exposed to the views of others. It enables us to discover flaws and inconsistencies by learning we can get good results. Constructivism itself has many variations, such as Generative Learning, Discovery Learning, and knowledge building. Regardless of the variety, constructivism promotes a student's free exploration within a given framework or structure.

Informal and Post-Modern theories deal with more practical breakdown of the learning process. One of these deals with whether learning should take place as a building of concepts toward an overall idea, or the understanding of the overall idea with the details filled in later. Modern thinkers favour the latter.

Other concerns are the origins of the drive for learning. To this end, many have split off from the mainstream holding that learning is a primarily self taught thing, and that the ideal learning situation is one that is self taught. According to this dogma, learning at its basic level is all self taught, and class rooms should be eliminated since they do not fit the perfect model of self learning.

Informal learning theory also concerns itself with book vs real-world experience learning. Many consider most schools severely lacking in the second.

THE NATURE OF THE LEARNING PROCESS

The role of the instructor

According to the social constructivist approach, instructors have to adapt to the role of facilitators and not teachers. Where a teacher gives a didactic lecture which covers the subject matter, a facilitator helps the learner to get to his or her own understanding of the content. The emphasis thus turns away from the instructor and the content, and towards the learner. A teacher tells, a facilitator asks; a teacher lectures from the front, a facilitator supports from the back; a teacher gives answers according to a set curriculum, a facilitator provides guidelines and creates the environment for the learner to arrive at his or her own conclusions; a teacher mostly gives a monologue, a facilitator is in continuous dialogue with the learners.

Learning is an active process where learners should learn to discover principles, concepts and facts for themselves, hence the importance of encouraging guesswork and intuitive thinking in learners. Sustaining *motivation* to learn is strongly dependent on the learner's confidence in his or her potential for learning. These feelings of competence and belief in potential to solve new problems, are derived from first-hand experience of mastery of problems in the past and are much more powerful than any external acknowledgement and motivation. If learners are challenged within, yet slightly above their current level of development, they can experience the successful completion of challenging tasks, hence gain confidence and motivation to embark on more complex challenges.

Learning is a social process that not only takes place inside our minds, nor is it a passive development of our behaviours that is shaped by external forces. Meaningful learning occurs when individuals are engaged in social activities.

The importance of context

Social constructivist paradigm views the context in which the learning occurs as central to the learning itself. One social constructivist notion is that of authentic or situated learning, where the student takes part in activities which are directly relevant to the application of learning and which take place within a culture similar to the applied setting. Cognitive apprenticeship: social learning and modelling (Bandura). The context in which the learning occurs as well as the social contexts that the learners bring to their learning environment are thus critical to the learning itself.

In order to fully engage and challenge the learner, the task and the learning environment should reflect the complexity of the environment that the learner should be able to function in at the end of learning. Learners must not only have ownership of the learning or problem-solving process, but of the problem itself.

Dynamic assessment as a continuous and interactive process that measures the achievement of the learner, the quality of the learning experience and courseware. It is an integral part of the learning experience and not a loose-standing process. The feedback created by the assessment process serves as a direct foundation for further development. It should not be an intimidating process that causes anxiety in the learner, but rather a supportive process that encourages the learner to want to be evaluated in order for future, more focused development to take place.

Collaborative learning is an umbrella term for a variety of approaches in education that involve joint intellectual effort by students or students and teachers. Groups of students work together in searching for understanding, meaning or solutions or in creating a product. Learners share a common purpose, depend upon each other and are accountable to each other for their success.

Collaborative learning-work, occurs in the context of a group with a common mission or agreed-upon-purpose. The work involves the structuring and restructuring of conceptual knowledge. Learning-work involves the cognitive processes of assimilation--intake of information from the environment, accommodation--restructuring to fit new into the old, present structure, and integration--directly fitting information into existing structure. Collaborative learning activities can include collaborative writing, group projects, and other activities.

CONCEPTS OF LANGUAGE TEACHING AND CALL

Computer-assisted language learning (CALL) is an approach to language teaching and learning in which computer technology is used as an aid to the presentation, reinforcement and assessment of material to be learned, usually including a substantial interactive element.

The development of learning theories mentioned above influenced the methodology of teaching various subjects, including language teaching and also its technology enhanced forms. In general it is true, and as a principle should be kept in mind, that it is never the technology in itself that revolutionize pedagogy, on the contrary, new pedagogical ideas are better served with modern technology. This is the case with CALL as well.

The pioneering versions of language teaching programmes did not mean much more than the replacement of printed course books and audio cassettes by CD-ROMs. These learning

material, even if some multimedia element was added, were based on the traditional **structuralist/behaviourist** view of language teaching. This theory thinks that teaching a foreign language should be based on the understanding of grammatical rules and the repetition of grammatically correct panels, such as memorizing ready-made dialogues or completing exercises. The curricula is made of texts and exercises that are more and more complicated grammatically and rich in vocabulary. The teacher (or computer programme) is seen as information provider whilst the pupils are only passive receivers. Most early language teaching CD-ROMS and e-learning courses reflected this approach.

The computer as a platform still gave many advantages to printed course material and classroom activity: individual timing and speed, repetition of tasks as demanded, quick and interactive ways of assessment, etc.

Though language teaching still cannot lack some of these activities, new pedagogical theories appeared in language teaching as well. **Cognitive constructivist** thinkers, (Chomsky, Bruner, Paiget) say that humans have an innate information processing mechanism in their brain – a language acquisition device – that enable them to analyze linguistic data, to find rules and to create endless number of grammatically correct sentences. They see the language learning student as the creator of his own personal knowledge, who only needs abundant foreign language input to find out rules and the meaning of words. This pedagogical method emphasizes the importance of problem solving activity and exploration. Thus the second generation of language teaching computer programmes consisted of games and puzzles.

Typical software of this generation of CALL included Wida's "matchmaster" (where students have to match two sentence halves or anything else that belongs together); "choicemaster" (the classic multiple-choice test format); "gapmaster" (for gapped texts); "textmixer" (which jumbles lines within a poem or sentences within a paragraph); "wordstore" (a learner's own private vocabulary database, complete with a definition and an example sentence in which the word to be learned is used in a context); and "storyboard" (where a short text is blotted out completely and has to be restored from scratch).

The other pedagogical theory that influenced language teaching is the social constructivist view. (Hymes, Halliday) They emphasize the communicative function of languages; we speak and listen because we want to express and understand thoughts and feelings and to build and maintain relationships. This theory gave us the **communicative language teaching** method. Communicative competence became a key word and collaborative learning was emphasized. This approach – as we will see – can also be served by e-learning solutions, even if at first glance it is surprising. Most people still think, that the social aspect of learning cannot be replaced by computer mediated communication, especially not in language learning. Experience shows the opposite though: latest internet technology can not only replace printed course material but also makes it possible to keep contact with the teacher and learning mates.

TECHNOLOGY TRENDS: WEB 2.0

Web 2.0 applications

Web 2.0, a phrase coined by O'Reilly Media in 2004, refers to a supposed second-generation of Internet-based services, an improved form of the World Wide Web — such as social networking sites, wikis, communication tools, and folksonomies — that emphasize online collaboration and sharing among users. The term has become a popular buzzword amongst technical and marketing communities.

Instant Messaging and Internet Relay Chat is a form of real-time communication between two or more people based on typed text. In contrast to e-mails, the parties know whether the peer is available. Most systems allow the user to set an online status or away message so peers get notified whenever the user is available. On the other hand, people are not forced to reply immediately to incoming messages. This way, communication via instant messaging can be less intrusive than communication via phone, (yahoo messenger)

VOIP or internet telephony means that Incoming phone calls can be automatically routed to your VoIP phone, regardless of where you are connected to the network. You can take your VoIP phone with you on a trip, and wherever you connect to the Internet, you can receive incoming calls. (e.g. skype)

A **blog** is a website where entries are made in journal style and displayed in a reverse chronological order. Blogs often provide commentary or news on a particular subject, such as food, politics, or local news; some function as more personal online diaries. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic. Most blogs are primarily textual although some focus on photographs (photoblog), videos (vlog), or audio (podcasting), and are part of a wider network of social media.

Podcasts are a delivery mechanism to store audio/video on a portable player. Organizations can produce and provide audio and video (infotainment) broadcasts that can be downloaded and played on their portable player (“iPod”).

RSS is an automatic notifier for Weblogs. This turns blogs and newsgroups from posting repositories into a form of interactive communication.

Social bookmarking is a web based service, where shared lists of user-created Internet bookmarks are displayed. These sites generally organize their content using tags. This is an increasingly popular way to locate, classify, rank, and share Internet resources. (del.icio.us, furl.net)

Collaborative writing and peer collaboration refer to projects where written works are created by multiple people together (collaboratively) rather than individually. Some projects are overseen by an editor or editorial team, but many grow without any top-down oversight. (Enterprise information portals-and knowledge management systems, Google docs,)

Novel Twists Online collaborative novel where each of the 150 pages is written one at a time by a different person. The website features a distinctive book/desktop design, and has received worldwide press interest. The finished book will be published via [lulu.com\(wiki\)-lulu.com\(web\)](http://lulu.com(wiki)-lulu.com(web)).

co-write.me.uk : a collaborative project, where authors submit their short stories, and users vote on the stories. The winning entries are published (in print) and sold through Amazon.co.uk

Wiki is a type of website that allows the visitors themselves to easily add, remove and otherwise edit and change some available content, sometimes without the need for registration. This ease of interaction and operation makes a wiki an effective tool for collaborative authoring. A wiki enables documents to be written collectively in a simple markup language using a web browser.

Social network services enable people to rendezvous, connect or collaborate through computer-mediated communication and to form online communities (orkut, facebook, myspace)

Collaborative filtering (CF) is the method of making automatic predictions (filtering) about the interests of a user by collecting taste information from many users (collaborating). The underlying assumption of CF approach is that: Those who agreed in the past tend to agree again in the future. For example, a collaborative filtering or **recommendation system** for music tastes could make predictions about which music a user should like given a partial list of that user's tastes (likes or dislikes). Note that these predictions are specific to the user, but use information gleaned from many users. CF is the base of many **Social Shopping Applications** (Amazon, e-Bay, Yahoo Movies)

A **Massively Multiplayer Online Game** (MMOG or MMO) is a computer game which is capable of supporting hundreds or thousands of players simultaneously, and is played on the Internet. Typically, this type of game is played in a giant persistent world. MMOs can enable players to compete with and against each other on a grand scale, and sometimes to interact meaningfully with people around the world.

New services

In addition to trends, new technologies enable Web 2.0 applications. These technologies are used and combined to create new services.

Focus on “the long tail”

This refers to the portions of the population/market bell curve that reflect smaller markets. The tail can be very long — there are many potential users who are not being serviced by the organizations that service the core consumers. Mass marketing organizations focus on the center of the bell — that’s where the majority of the people are. With so many people on the internet the Internet it has become much easier to market to people in the tails of the curve. Specifically, there can be many geographically dispersed people with a like interest who are not interested in what the majority wants. (e.g. non-mainstream films delivery)

Mashups involve taking multiple technologies or services and providing new added value services. A site like Zillow.com lets you view an online map and see the price of houses in a specific neighborhood. Zillow.com accesses two different databases of informatio — maps and county assessment records, combining them into a new added value service.

Enlisting end users to add value

End-user comments, blogs, and critiques may add value to generic information. Amazon was one of the first to stumble onto this. By allowing everyone to provide book reviews, they added value to their service as a bookseller, made it difficult for competitors to replicate, and increased the value of their service. Wikis are a new form of this phenomenon. By providing the infrastructure and focus, a Wiki harnesses end users to add value to a Web site.

Providing services above the level of a single device

This is about the ability to provide Web services that run smoothly on any configuration of PC or portable device. Installed software is usually designed for a single operating system (e.g. MS Windows, Macintosh, or Linux). By providing software services through a Web browser interface, operating system dependence is eliminated. This means the same service is accessible from a PC, a Mac, or a PDA.

E-LEARNING 2.0

Now that we know what the 2.0 trends and technologies are, we need to understand how these trends and technologies are applied to e-Learning. But let's keep in mind: only because a technology is in fashion does not mean it has to be deployed. The goal is to provide effective, accessible learning — not to show off that you can use a new technology.

E-Learning mashups

E-Learning does mashups by taking multiple sources to provide additional services for a learning experience. We call it “blended e-Learning.” A good trainer will look at the different technologies and delivery systems available and mash up a solution that is effective for their learner base. This may include text, pictures, multimedia, and quotes from different authors, hands-on training, live presentations, and self-paced delivery.

Harnessing end users (learners) to add value

Forums, blogs, wikis, etc. can all be created to surround your course with an expanded set of learner resources. But let's be careful: You will never get these expanded resources off the ground if you don't have a culture that fosters and gives value to adding and joining Wikis, blogs, and forums. Also, don't make the mistake of thinking that Wikis, blogs, and forums are e-Learning. They are resources. E-Learning needs structure and instructional design to be effective

Edutainment (also educational entertainment or entertainment-education) is a form of entertainment designed to educate as well as to amuse. Edutainment typically seeks to instruct or socialize its audience by embedding lessons in some familiar form of entertainment: television programs, computer and video games, films, music, websites, multimedia software, etc. (science museums, children's television series, such as Sesame Street)

Educational games are games; board and card games, including video games that are designed to teach people, typically children, about a certain subject, expand concepts, reinforce development, understand an historical event or culture, or assist them in learning a skill as they play.

Microcontent is small training sessions that are taken as the need arises and moves learners from training to learning. Knowledge Pills Inc. for example is a Web 2.0 e-Learning company that develops short, 15-minute long, training courses for the consumer and corporate market place. Employees should be able to search a string of words in their corporate search engine and a Knowledge Pill containing this information should come up.

Employees can take a course on whatever device they use without restrictions, or needing additional technology that will slow them down.

So what does a 2.0 course look like? 2.0 courses should never be a hodge-podge assembly of old methodologies delivered through new technologies. They should be a true “2.0 course,” rather than a self-propelled PowerPoint presentation presented on a PDA. 2.0 courses provide just-in-time training. They are used as a resource — not a one-time event. A 2.0 course lasts 15 to 20 minutes, runs smoothly on any configuration of device (high resolution, portable) or PDA, and delivers smoothly on all versions of Web browsers.

A new technology is only effective if it provides you with a better service. The benefit of Podcasts is the delivery mechanism and the popularity among the consumer electronic market. It is much easier to put an audio on a Web site and let iPod users download it then it was to send people tapes and have them play the tape in their car or Walkman. However, the new technologies have not added any value to the content. A boring speaker will be just as boring on an iPod as they were on a Walkman. New technology will only serve us if we know the needs of our specific target group and we have clear pedagogical concept as how to meet these needs.