Digital Assisted Language Learning (DALL) Series

DALL series-001:

Introduction to a New Era and a New Paradigm for Japanese Learning and Pedagogy.

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Introduction

I was able to successfully finish a one-year JETRO Internship in Japan as of June 11, 2001. My stay in Japan gave me further insight to learning Japanese and mastering kanji. So far I've written Level-0 articles, in which I've introduced some basic technology to help Japanese learners in the Post-Internet Era.

In this new series of articles, I will propose new methods to learn, to teach, and to research Japanese as well as other major languages. Almost all of the SLA (Second Language Acquisition) researchers may feel that there are no satisfactory theories in this area. This is because human language (non computer) itself contains subtle and vague notions compared to a concrete, well-formed formal language. If you want to know more about pre-Internet research themes, please refer to *"Rod Ellis's Understanding Second Language Acquisition."* It is easy reading and he did a good job showing the big picture to newcomers in this area. His book also contains a good bibliography, and definitely will lead you to explore a number of things regarding pre-Internet era methodologies and research themes.

However, for CALL (Computer Assisted Language Learning), and its variant areas, IALL (Internet Assisted Language Learning), and DALL (Digital Assisted Language Learning), there is a lack of references and there is virtually no satisfactory research that I am familiar with.

Initially, the IALL model was conceptualized when I wrote "Learning Japanese Through The Internet". Since then I've expanded its concept to DALL. This is because I will use Digital technology as well as the Internet when I develop the integrated innovative language-learning model.

From now on, I want to make an in-depth coverage of readily available and upcoming technology combined with language learning and its pedagogy through this series of writings. This series will be based on initiating the *"Rosetta Project"*, in which I propose to build a modern Rosetta Stone for learning all major foreign languages.

With this modern *"Rosetta Project"*, we want to make complete digital systems based on wireless and Internet computing power, and ultimately provide cost-efficient and readily usable server-client systems to major language institutions including universities and k-12 education systems. Moreover, I will concentrate on researching multimedia Internet systems, human computer interfaces, and digital technology, which will be essential tools for language learning. I will let you know more when I initiate this project with major computer companies and research universities. I am currently contacting them regarding the *"Rosetta Project"*.

As an engineer, I will try to give readily available cost and time efficient solutions for SLA and will develop and provide theories to support my site. Developing acceptable language theories may take a couple of decades, however, I will readily dedicate my life to make good language learning environments and discover universal mechanisms and methodologies in SLA.

Note: In my articles, I will not make any distinctions between language learning and language acquisition when I mention them. I will use each interchangeably. I prefer to leave the debate related to those terms to Linguistics scholars.

Chapter 1.

What is DALL?

My discussions in the “Power Tool Series for Japanese Learning” will give you some ideas about how new computer technologies and gadgets can cut down language learning time. As I mention in my articles, none of them is perfect and there is a lot of room for improvement. Microsoft’s upcoming windows XP and tablet computers will help Japanese learners as it provides full computing power with pen input capabilities, http://news.cnet.com/news/0-1006-200-5253122.html.

Using these digital devices and developing standard tools, we can develop total education and business solutions. I made a summary of new technologies in Computer and Consumer Electronics industries and possible usage in SLA.

Table 1.1 DALL related Technologies compare chart

	Competing Standards and Technologies	
Computers and the Internet	XML	Adopted data model by Internet Communities Including Java and .NET
	Java	Gradually adopted by Academia and Industry. Sun Micro Systems is the major player.
	.NET	Microsoft is implementing this technology Note) MS is known as 90-95% market shares in OS.
Language Learning Materials	Closed Captioned educational TV Programs ex) NHK’s Closed Captioned Programs, etc.	
Recording Devices for Educational Materials	DVD-RAM	Panasonic, Toshiba, Hitachi, etc. Computer Drivers, Standalone Recorders, and Camcorders are available.
	DVD-RW	Recorders are available from Pioneer Comparable players are available from several Japanese makers including Victor, etc.

Table 1.2 DALL-Related Server and Client Systems.

	Major Players
Client Side	Microsoft's Windows System (Especially, Windows 2000 and its newer versions)
	Apple's OS X and its successors For hard core Apple fans
Server Side	MS Windows System with .NET and Java
	Linux with Java
Note) Wireless Technology, Bluetooth, is gaining momentum in Asian and European Countries with developments in wireless communication gadgets using Java technology.	

Computer and Internet technologies tend to change very quickly so, I will revise this information according to their developments. Table 1.1 and Table 1.2 reflect the conditions when I wrote this article.

In short, DALL will maximize existing technologies rather than inventing them. I have continued to research the Japanese Closed Caption Broadcasting System (JCCBS) with regard to learning the Japanese language, Japanese culture, and kanji since March 3, 2001. The results so far are extremely positive.

I will discuss JCCBS in one of my upcoming articles. My current interest is developing a *"language learning model with Japanese text decoder and DVD-RAM technology"* as part of DALL.

Once the research is done, I will research fully integrated server-client systems including networking technologies, which are essential to build this model. If you want to know more about what CS and EE researchers do, please check the free Internet computer seminars from Stanford and Berkeley Universities, which are freely available via the Internet. I will mention the details in the next chapter.

Resources:

If you watch the video clips from CNET (I put some links below), you may be able to grasp a picture of what I mentioned here.

- News.com (CNET) video articles

  http://news.cnet.com/news/0-4204072.html?tag=vid#

  - June 26, 2001: Have tablet PCs come of age?
    Frank Spindler, VP, Intel Mobile Computing
  - June 27, 2001: ViewSonic pits Web tablet against laptop
    Dave Feldman, product manager, ViewSonic
  - June 27, 2001: New frontiers in DVD
    Paul Liao, CTO, Panasonic
  - June 27, 2001: Microsoft answers XP-upgrade questions
    Shawn Sanford, product manager, Microsoft
  - June 29, 2001: Microsoft to continue OS integration
    Jeff Raikes, group VP, Microsoft

- About Tablet PCs

  http://news.cnet.com/news/0-1006-200-5253122.html.

  - ViewPad 1000, tablet pc from ViewSonic.
    http://www.viewsonic.com/products/productdetail.cfm?productid=00005EB8-507D-1B26-9E3F80E5D315FE68

- DVD Recorder and Camcorder from Panasonic (DVD-RAM)

  http://www.panasonic.com/consumer_electronics/dvd_recorder/default.asp

- DVD White Paper from Toshiba (DVD-RAM)
  http://www.toshiba.com/taecdpd/products/docs/dvdramwhitepaper.shtml
  - HDD&DVD レコーダーRD-2000 (In Japanese)
    http://www2.toshiba.co.jp/webcata/av/webcata.cgi?code=rd_2000

- DVD information from Hitachi (DVD-RAM)
  http://dvd.hitachi.co.jp/ (In Japanese)

- DVD-RW Recorder from Pioneer.
  - http://www.pioneer.co.jp/dvdld/dvr/ (In Japanese)

- Resources for Microsoft Technologies.
  http://msdn.microsoft.com/

- Java Technologies
  - Sun Microsystems' Java Site.
    http://java.sun.com
  - Great site for Java Developers.
    http://www.javaworld.com

- Bluetooth Technology
  http://www.bluetooth.com/

- Mac OS X from Apple
  http://www.apple.com/macosx/
  - About Japanese fonts
    http://www.apple.com/macosx/theater/fontpanel_japanese.html

Chapter 2.

For CALL Researchers and Multimedia Content Developers.

Throughout the history of Technology and the Net, researchers and developers came to realize that well-formed standards could lead to great productivity and could create a "*Network Effect*", or a "*Synergy Effect*".

We've all been able to witness how technology is adopted by the mass public. It is not due to the superiority of the technology, but to the readily available resources. (Ex. VHS vs. Beta Max; and Windows vs. OS/2)

When developing multimedia content, one can choose any technology, but as if one chooses a mainstream standard technology, the works of CALL and DALL developers can be easily compared to that standard technology. That can ultimately lead to better quality and productivity of SLA research.

Instead of constantly re-inventing the wheel, we can use what we already have. Currently, the HTTP, XML, CCBS (Closed Caption Broadcasting System), Java, and DVD-RAM technologies are just taking off with the Internet. So, here I propose to use these technologies to implement and develop future CALL and DALL projects to take the *"Network Effect"* into SLA.

My research team, Research-J, and I formed to make an SLA portal site to introduce, to provide, and to propose all the useful technologies to language learners and researchers. To accomplish this grand goal, I formed a multi-national, multi-disciplinary research team. Ultimately, I want to make it a non-profit organization to help and to coordinate multi-national efforts regarding SLA.

I have realized that my classmates in Japanese classes, my staff, my graduate student friends in non-technical fields, and a lot of SLA authors do not have a strong knowledge of current Internet technologies and use them comparatively less than people with backgrounds in technical fields, such as myself.

In order to catch up with current research themes in computer science and electrical engineering, I strongly suggest watching free Internet seminars, which are provided every quarter and semester by major American universities and research companies. Please refer to Table 2-1.

Table 2-1

Bona Fide Free Online Sources for CALL and DALL Researchers.

Academia	Berkeley (Archived)	**http://media2.bmrc.berkeley.edu/bibs/schedule.cfm** Berkeley Multimedia, Interfaces, and Graphics Seminar, etc.
	Stanford	**http://stanford-online.stanford.edu/seminar/index.html** Human-Computer Interaction Seminar, etc.
Industry	MURL (Archived)	**http://murl.microsoft.com/ContentMap.asp** This is the site you have to check frequently.
CNET	News.com (Archived)	**http://news.com/** (Tech. oriented) If you click on "CNET News.com TV", you can watch all of the archived video articles. (*Weekly available on air*)
	Tv.com (Archived)	**http://tv.com/** (for general audience) If you are not familiar with Internet technologies, then please start with them site. (*Weekly available on air*)

If someone wants to research DALL, I strongly suggest these online video clips.

- ACM '97 Conference
  http://murl.microsoft.com/ContentMapDetails.asp?SeriesID=6
  - The Future of the Internet
    http://murl.microsoft.com/LectureDetails.asp?72
  - The Long-Term Impacts of Information Technology on K-12 Education
    http://murl.microsoft.com/LectureDetails.asp?92

- MIT Media Lab *(Human-Computer Interaction Seminar 2000-2001 at Stanford)*
  http://www.media.mit.edu/
  - New Learning Environments
    http://murl.microsoft.com/LectureDetails.asp?758
  - Lifelong Kindergarten
    http://murl.microsoft.com/LectureDetails.asp?757

- Microsoft Research *(Human-Computer Interaction Seminar 2000-2001 at Stanford)*
  http://research.microsoft.com/ *(please check out its publications from the menu)*
  - Making Audio and Video First-Class Objects
    http://murl.microsoft.com/LectureDetails.asp?759

More Resources)

- ACM Digital Library
  (Need membership, or via major University Libraries)
  http://www.acm.org/dl/newsearch.html
- IEEE Explore
  (Need membership, or via major University Libraries)
  http://ieeexplore.ieee.org/lpdocs/epic03/
- Tokyo IBM Research
  http://www.trl.ibm.com/projects/index_e.htm

Chapter 3.

To Language Instructors and Lecturers

Since the fall of 1995, my department, Electrical Engineering at the Ohio State University, has provided web-accounts to its students through the department's student computer accounts. Thanks to that, I was able to gain valuable hands-on experience on the web as it developed. Since that time, handouts and assignments for the courses of EE have become available through the courses' web pages.

What I find interesting is that I hardly hear about or see course web pages from non-technology fields. Moreover, I've heard most non-technical major departments do no provide web accounts for their students and sometimes do not even provide them for their faculty members.

This situation hinders the acquisition of appropriate hand-on experience using web technology for Japanese language students and instructors. I strongly suggest using web for Japanese language curriculum and taking advantage of the power of the Internet. If you do not know how to use it, please visit my site, ~~" *http://e-japanese-online.org*."~~
http://plaza.snu.ac.kr/~ilang/e-japanese/

Some useful information on Japanese learning and its computing materials is available, and more articles are coming. I am trying to publish at least one article per month. When I get proper funding for this experimental project, I can do more than what I can do now.

Resources)

The non-profit and pure academic site of Japanese and DALL

Maintain by Research-J

~~http://e-japanese-online.org~~
http://plaza.snu.ac.kr/~ilang/e-japanese/

Conclusions

I have initiated this project and this site to bring the Internet and Digital Technology to SLA. In this DALL series, I want to discuss more in-depth topics in higher education and the application of new technology. Ultimately, I want to devise and to propose a total educational and business solution in SLA.

However, due to the fact that I initiated this project just before leaving Japan, I do not have a web server for the site at the moment. Actually, I am currently using my department's student account. This situation limits my research a lot. I am currently searching for web hosting and research funds. If there are some institutions and companies interested in this project, please feel free to contact me without hesitation.

If you have any questions regarding my project and DALL, please send me an e-mail. I will try to give as much feedback as I can.

Sincerely,

Young Joon Moon
The Director of Research-J