Instructional Design for Second Language Learning

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### Learning by Design

<table>
<thead>
<tr>
<th>Instructional design that incorporates the power of the (design) principles to support the learning process; specifically, a <strong>cognitive theory of learning</strong> using cognitive processes important for language and language development.</th>
<th>Informed by</th>
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<tbody>
<tr>
<td></td>
<td>Science of Learning</td>
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<td>Future Learning Ecosystem: Design Component</td>
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<tr>
<td></td>
<td>Mayer’s 12 Principles of Multmedia Learning*</td>
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<tr>
<td></td>
<td>Maslow’s Hierarchy of Needs for Online Learning</td>
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</table>

* A cognitive theory of learning focusing on delivery of content using multiple modes, including audio and visual input; states learning can be improved when properly designed multimedia resources are utilized.
<table>
<thead>
<tr>
<th>Principle</th>
<th>Application</th>
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<tr>
<td>Coherence (extraneous, distracting material not included)</td>
<td>Show exactly what learners need to pay attention to on the screen; no extraneous words.</td>
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<tr>
<td>Signaling (show exactly what to pay attention to on the screen)</td>
<td>Highlight and point out essential information.</td>
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<tr>
<td>Redundancy (use narration and graphics - dual code)</td>
<td>If narration and graphics suffice, no need to include text or keep to a minimum (use close-captioning) - for language learning, this redundancy is beneficial.</td>
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<tr>
<td>Spatial Contiguity (relevant text and visuals are close together)</td>
<td>Make it easy for learners to comprehend how images and text are related and to know where to look for information.</td>
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<td>Temporal Contiguity (text and images are simultaneous)</td>
<td>Visuals and audio occur at the same time.</td>
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<td>Segmenting (information is presented in segments)</td>
<td>“Chunk” information so lessons and activities flow from one to the next once completed; provide a play bar for videos; include links to next activity or “next” arrows; gives students control over learning.</td>
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<td>Pre-Training (provide some of the basics at the onset of a course, lesson, etc.)</td>
<td>Create an introductory guide, glossary of related terms, overview of the course before the lesson begins; guides and cheat sheets or an entire introductory lesson so they also get used to using the course platform or e-resource.</td>
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<tr>
<td>Modality (use visuals and spoken words more often than visuals and printed words)</td>
<td>Too much text can overwhelm learners so use sparingly; rely on visuals; use more text for Glossaries, key terms definitions, directions; use bullets to create lists rather than lengthy paragraphs.</td>
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<tr>
<td>Multimedia (use words and pictures rather than words alone)</td>
<td>Words and pictures better than words only; words, pictures, and audio also beneficial; visuals should enhance/clarify information in the text.</td>
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<tr>
<td>Personalization (use a more informal, conversational voice)</td>
<td>Keep spoken messages conversational, simple and casual; avoid formal, complex language and use of long, complex words (keep it at the i+1 level of the learner); use the first person (I, you, we our).</td>
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<tr>
<td>Voice (use a human voice rather than a computer voice)</td>
<td>Record your own voice.</td>
</tr>
<tr>
<td>Image (humans do not learn better from a talking head)</td>
<td>Use relevant visuals and narration; talking heads work well for a course introduction and welcome on the homepage in establishing instructor presence.</td>
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</table>

Design Principles in Support of Multimedia Language Learning/Best Practices

Learning Environment (Coherence, Maslow)
* Welcoming/engaging
* Well-organized
* User-friendly interface

Teacher presence, synchronous and asynchronous

Ease of use:
* navigation
* access to materials
* tutorials and support

Content
* multiple modalities
* presented in chunks
* active engagement
* communication
* clear and concise
A Metamorphosis through Design

French curriculum created in MS Word

- Readability?
- Coherence?
- Dual Modalities?
- Redundancy?

School of Distance Learning (DL)
French Familiarization Course (2021)

Bienvenue en classe de français !

Module 1 – Module Un

Introduction : Greetings – Farewells

1. Salutations (greetings) – commencer une discussion (to start a discussion)

Les mots et les phrases en vert sont dans le livret des affaires civiles.
(The words and the sentences in green are in the Civil Affairs booklet or LSK.)

Le langage courant (the general register, as the one used in class)

(le soleil – the sun) ... Quand c’est le jour. (When it’s daylight)

Bonjour Monsieur – Bonjour Madame (Good morning or good afternoon Sir or Madam)

Bonjour mon Commandant / Bonjour mon Lieutenant...
Metamorphosized
(coherence, multiple modalities, chunked)

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French Familiarization Course (2021)

Bienvenue en classe de français !

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Le langage courant (the general register, as the one used in class)

Bonjour Monsieur – Bonjour Madame (Good morning or good afternoon Sir or Madame)

Exemple: Salut Claude! (Hello, Claude)

Language courant: everyday language; general register, as the one used in class

Exemples:

Il habite dans une maison. (He lives in a house)
Le soleil (the sun)...Quand c’est le jour. (When it’s daylight)
Le lune (the moon)...Quand c’est la nuit (When it’s night time)
Online Version Created in Canvas

No extraneous information
Option to include narration or welcome video
Clear guidance
Image contextualizes
A Virtual Tour of Multimedia Language Learning / Instructional Design at DLI
(the remainder of the presentation will highlight examples from the DTRA and French Fam Canvas courses)

Design for Optimal Learning

- Coherence
- Personalization
- Chunking
Final Thoughts (and thank you)

"There is an important link between lesson, course, and activity design for any multimedia application that promotes and enhances language learning in meeting the unique culture of the Continuing Education/Distance Learning mission." ~SWagner
References


• Definitions and Research on Multimedia Learning, https://www.igi-global.com/dictionary/digital-textbook/19596

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  • 12 Principles of Multimedia, https://www.nyu.edu/content/dam/nyu/facultyResources/documents/ESMITS/12PrinciplesofMultimedia.pdf