



NATIONAL FOREIGN LANGUAGE CENTER



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THE ROLE OF TECHNOLOGY IN FOREIGN LANGUAGE LEARNING AND TEACHING

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SLA - INTERNAL FACTORS

- Age of onset
- Aptitude
- Motivation
- Discipline

SLA - EXTERNAL FACTORS

- Time on task
- Input
 - Observational input
 - Instructive input
 - Interactional input

PRINCIPLES IN FL TEACHING

Areas of General Agreement

- Extensive, comprehensible input
- Extensive interaction
- Developmental sequences
- “Guide on the side” vs. “Sage on the stage”

Areas of Debate

- Inductive vs. deductive teaching/learning
- Implicit vs. explicit feedback

PUTATIVE ADVANTAGES OF TECHNOLOGY

- Dissolution of geographical barriers
- Individualized instruction
- Complementary asynchronous support
- Enhanced motivation

TECHNOLOGY TOOLS

Feature	Tool	Commercial Products
Eliminates Geographical Barriers	Web Conferencing	Skype, Apple Facetime, Google+ & Hangout, WebEx, etc.
Facilitates Asynchronous Learning	Online Course Management Systems	Khan Academy, Moodle, Canvas, Blackboard, eFront, etc.
Facilitates Individualized Instruction	Online Communication Platforms/Forums	Socrative, Edmodo, Adobe Connect, SharePoint, Padlet, etc.
Enhances Motivation	Study Games	Minecraft, Quizlet, etc.

RESEARCH: ONLINE VS. TRADITIONAL

Supporting Traditional Learning

- Ocker & Yaverbaum (1999)
- Brown & Liedholm (2002)
- Schmeeckle (2003)
- Turner et al. (2006)

Supporting Online Learning

- Zhang et al. (2006)
- Englert et al. (2007)
- Maki & Maki (2002)
- Sun et al. (2008)

No Significant Difference

- Harris et al. (2005)
- Mentzer et al. (2007)
- Hugenholtz et al. (2008)
- Beeckman et al. (2008)

FINDINGS: ONLINE vs. TRADITIONAL

No Difference

Students' performance under two conditions was comparable, and their preferences were mixed.

Traditional > Online

- *Students were significantly less satisfied with the asynchronous learning experience.*
- *Students from traditional classroom performed better on answering more difficult questions.*

Online > Traditional

- *Students in web-based learning conditions performed better on achievement tests.*
- *Web-based course advantages became greater as students' comprehension skill increased.*
- *Interactive e-learning led to better performance and higher satisfaction.*

RESEARCH: STRENGTHS & WEAKNESSES

Strengths

- *Controlled designs (experimental group vs. control group)*
- *Random assignment*
- *Both quantitative (achievement tests) and qualitative (survey) measurements*
- *Pre- and post-tests*

Weaknesses

- *Evidence from participant feelings alone is not adequate to support traditional learning*
- *Inadequate length of treatment*
- *Failure to go beyond the “no difference” result*

RESEARCH: BLENDED VS. TRADITIONAL

- Schilling et al. (2006)
- Zacharia (2007)
- Al-Jarf (2008)
- Means et al. (2013)

FINDINGS: BLENDED VS. TRADITIONAL

- Blended learning group performed significantly better on objective achievement tests
- Results of qualitative measurements also supported blended learning

RESEARCH: STRENGTHS & WEAKNESSES

Strengths

- *Controlled design*
- *Random assignment*
- *Both quantitative and qualitative assessments*
- *Pre-post comparisons (some studies also include delayed post-tests)*

Weaknesses

- *Lack of control for exposure (additional time and resource for experimental group)*
- *Length of treatment*
- *No comparison between blended and pure online learning*

NEEDED RESEARCH

- What are the internal and external SLA factors leading to mixed results?
- Is blended learning better than pure online learning?
- Should there be differences in terms of instructional method for different age groups?
- What are the advantages and disadvantages of each instructional mode? How can we make best use of them given current technology?

SUGGESTED DESIGN

Target populations

- *K-3, 4-6, 7-9, 10-12, college students, and adults*

Experimental design

- *Group 1: blended; Group 2: pure online; Group 3: traditional*
- *Random Assignment*
- *Pre-test; post-test; delayed post-test*
- *Achievement test: 1) basic knowledge of concepts and facts; 2) deeper understanding of the issues; 3) the ability to analyze and apply what has been learned*

Variables to be controlled

- *Pre-existing differences: age, aptitude, proficiency*
- *Length of treatment: at least one full semester*
- *Exposure: all groups should have same amount of time and resources (e.g., textbooks, supplementary materials, instructors)*

PROMISING DIRECTIONS



QUESTIONS?

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