Background Factors of ESL Students and Preference of Computer- or Paper-based Writing Medium

Shengrong Cai
SLA/IT
University of South Florida

Tempe, AZ
CALICO 2009
Problem Statement

Computers as a double-edged sword in education:
- Potentials and new possibilities
- Unintended negative consequences

- Age
- Gender
- Cultural background
- Prior experience
- Anxiety
Research Question

For ESL students, what background factors may influence their preference of either a computer- or a paper-based writing medium for different types of writing task?

Different types of writing task

Background factors \(\rightarrow\) Computer-based?

\(\rightarrow\) Paper-based?
Research Question (cntd)

Background factors:
- age
- gender
- native language
- English proficiency
- computer anxiety
- computer experience
- writing apprehension

Types of Writing task:
- short essay
- longer final-term paper
- timed writing test
Participants

153 EAP students
- age: 18 - 44
- proficiency levels: II – V
- 31 different countries
- 17 different L1s
Instrument

Questionnaire combining existing instruments and researchers’ own design:

- demographic information (age, gender, native language)
- Class level (English proficiency)
- computer anxiety
- computer experience
- writing apprehension
L1s were categorized into three groups for data analysis:

- Indo-European group -
  Italian, Spanish, Portuguese, Russia, French, Greek, Catalan, & Gujarati

- Afro-Asiatic group -
  Arabic, Somali, & Turkish

- Asian group -
  Chinese, Korean, Japanese, Tagalog, Thai, & Vietnamese
Preference of writing medium in completing three hypothetical writing tasks

<table>
<thead>
<tr>
<th>Task</th>
<th>Computer</th>
<th>Paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>A short essay for an ESL class (For example, a 100-word essay about your first day in the U.S.A.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A final-term paper for a university-level class (For example, a 10-page paper on a topic in your major.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A timed writing test (For example, a 30-minute essay for TOEFL.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Data Analysis

- Logistic regression (for dichotomous DV)
- First, all 7 background factors considered
- Then, backward selection to eliminate non-significant factors
## Results - Descriptive

<table>
<thead>
<tr>
<th>Writing Task</th>
<th>Preference</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I: Short essay writing assignment for ESL class</td>
<td>Computer Paper</td>
<td>121 25</td>
<td>83 17</td>
</tr>
<tr>
<td>Type II: Longer final term paper for university academic class</td>
<td>Computer Paper</td>
<td>116 31</td>
<td>79 21</td>
</tr>
<tr>
<td>Type III: Timed writing test such as Test of Written English (TWE) in TOEFL</td>
<td>Computer Paper</td>
<td>104 42</td>
<td>71 29</td>
</tr>
</tbody>
</table>
## Results – logistic regression

<table>
<thead>
<tr>
<th>Types of Writing Task</th>
<th>Significant factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>A short essay for an ESL class <em>(For example, a 100-word essay about your first day in the U.S.A.)</em></td>
<td><strong>Computer anxiety</strong></td>
</tr>
<tr>
<td>A final-term paper for a university-level class <em>(For example, a 10-page paper on a topic in your major.)</em></td>
<td>none</td>
</tr>
<tr>
<td>A timed writing test <em>(For example, a 30-minute essay for TOEFL.)</em></td>
<td><strong>English proficiency</strong></td>
</tr>
</tbody>
</table>
Results – other findings

- For each type of the task, > 70% indicated preference of computer-based medium
- Percentage of computer preference decreased from Type I - III
Discussion

Why different results for different types of task?
• Level of stress involved for each type
• Level of cognitive demanding
Conclusion

• age, gender, cultural background, computer experience, & writing apprehension – not significant in any of the three types of writing task

• computer anxiety & English proficiency – pending on the context (e.g. type of the task)
Limitations & Future Research

- Self-reported data, no triangulation
  Future research: think-aloud protocol or follow-up interview

- Hypothetical preference
  Future research: choice in completing the real tasks
Selected References


Questions & Comments?

Please feel free to contact me at scai@mail.usf.edu

Thank you!