An exploration of the use of mobile apps to support the learning of Chinese characters employed by students of Chinese as a foreign language (CFL)

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Outline

- Background
- Rationale
- Methods of Data Collection
- Preliminary findings
- Initial conclusions
- Future Research
Background

- Experience of Chinese as a Foreign Language (CFL) teaching and learning
- Increasing availability of mobile apps
- Potential for efficient learning
Aim and objectives

Aim: to explore strategy use in relation to the learning of Chinese characters amongst adult CFL learners

Objectives:

- to investigate the use of mobile apps by adult CFL learners to support character learning;
- to identify how strategy use might change with experience and proficiency;
- to gain a deeper understanding of the cognitive and metacognitive processes involved in the learning of new Chinese characters.
Rationale

- Challenge of character learning for CFL students
- Limited literature exploring character learning strategies
- Potential limitations of current language learning strategy models for CFL
- Rapid rise in availability of apps for CFL
Research Design

Mixed-methods

Survey
  to identify most common strategies used and overall use of apps

Interview
  to understand learning context and environment and observe any changes over time and with proficiency
Sampling Strategy

- Convenience Sample
  - Different levels of CFL learners at International School, Xi’an Jiaotong University, China
  - Liverpool John Moores University graduates
  - Other professional contacts
Methods (1) Survey

Questionnaire design based on Shen (2005) with additional items related to use of apps, focus on most commonly used apps and most effective mobile app strategies

Hard copies distributed and completed copies returned by colleague in XJT University
Electronic Copies distributed to individuals via e-mail
Methods (2) - Interviews

- Interviews conducted either face-to-face or online via Skype
- Recorded using digital voice recorder

- Interviews (30 minutes to 1 hour 30 minutes)
- Questions about learning experience in general, overall process of learning characters, use of apps and changes over time and proficiency,
Data Analysis

- Process is ongoing, focus of this presentation is on learners’ use of apps.
- Excel used to provide descriptive statistics on app use and compare students according to proficiency level and study mode.
- Interview analysed thematically, then quantitatively to
  - understand how apps support process;
  - explore changes over time and with proficiency.
Current Sample Size

- 140 CFL learners completed survey
- Interviews with 8 CFL learners
Proficiency Level of Participants

Survey Respondents

- Beginner: 25%
- Intermediate: 35%
- Advanced: 40%

Interview Participants

- Beginner: 29%
- Intermediate: 28%
- Advanced: 43%
SOME PRELIMINARY QUANTITATIVE FINDINGS
Three strategies used the most frequently by learners:

- Spot any characters that learners already know (3rd effective)
- Write characters out lots of times with correct stroke order (most effective)
- Self-test by writing characters out without seeing (2nd effective)
Strategies Perceived to be Most Effective for Different Levels of Learners

**Beginner level**
- Write characters out lots of times with correct stroke order
- Self-test by writing characters out without seeing

**Intermediate Level**
- Group Similar character into categories
- Place the new word in a group with other words that are similar in some way.

**Advanced Level**
- Group Similar character into categories
- When copying the character, keep thinking of the sound and meaning
Q: approximately what proportion of all the time you spend learning characters is spent using apps?

99.2% of respondents use mobile apps to support their character learning.
Mobile Apps Employed by Respondents

**Pleco is the most widely used app for character learning**

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**Character learning strategies learners used with an app**

- **1st:** “I use a dictionary app to look up words and sentences that contain the characters.”
- **2nd:** I use an app animation app to view the stroke order of the character.
- **3rd:** I check characters in an online dictionary or app for other meanings.

Strategies used by different levels of learners are very similar. Learners are only using very limited types and functions of mobile apps.
PRELIMINARY QUALITATIVE FINDINGS
Strategy Framework (in progress)
## Types of Strategy (Schmitt, 1997) Supported by Apps

<table>
<thead>
<tr>
<th>TYPE</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Determination</strong></td>
<td>Looking up stroke order</td>
</tr>
<tr>
<td></td>
<td>Looking up meaning</td>
</tr>
<tr>
<td></td>
<td>Looking up radical or components</td>
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<tr>
<td><strong>Memory</strong></td>
<td>Looking up possible associations</td>
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<td></td>
<td>Using ‘mems’</td>
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<tr>
<td><strong>Cognitive</strong></td>
<td>Creating flashcards</td>
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<tr>
<td><strong>Metacognitive</strong></td>
<td>Using flashcards to test oneself</td>
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<td></td>
<td>Reading and listening to Chinese media</td>
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</tbody>
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Preliminary conclusions

- The Chinese character memorisation strategies employed by CFL learners may change with proficiency.
- Mobile apps play a very important role to support learners' character learning due to their increasing availability and functionality.
- Pleco is used by majority of students interviewed and large number of survey respondents but only small proportion of its functionality is exploited.
- Apps may have the potential to increase learning efficiency, particularly in relation to long-term retention and recall.
Implications for Teaching

- Teacher may introduce character memorization strategies to students from the beginning of their study and help them identify the most suitable strategies.
- Students may need instruction/guidance/opportunities to share experience of using mobile apps
- Further research and development required
Future Research

- Longitudinal cases studies of CFL learners
- Develop taxonomy of character learning strategies based on Schmitt (1997)
- Develop framework/guidelines for strategy teaching based on our own data and current evidence from cognitive psychology, include Pleco
- Seeking collaboration with other CFL practitioners and material developers
References