Studies in the Expertise Reversal Effect in Teaching Foreign Language Listening

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Introduction

- Listening, as a major source of input, plays a pivotal role in language acquisition. However, listening is a complicated cognitive skill. Hulstijn (2007) commented that listening was ‘the most implicit and least explicit of the four language skills’ (p. 711).
- Because of the transient nature of auditory information and the limited capacity and short duration of working memory when dealing with novel information, learners of a foreign language (FL) usually have a painful experience with listening (Graham, 2006). FL (foreign language) learners with different levels of proficiency may encounter different types of difficulties in their listening learning (Goh, 2000).
- The major implication of this effect is the need to alter the instructional methods according to the levels of learner expertise. Evidence for the expertise reversal effect initially came from research in technical and scientific domains (e.g. Homer & Plass, 2010; Kalyuga et al., 2003; Khacharem, Zouidi, Spanjers, & Kalyuga, 2014), and more recently from research in the domain of language acquisition, particularly reading and writing (e.g. Kalyuga, Law, & Lee, 2013; Oksa, Kalyuga, & Chandler, 2010). However, there has been a paucity of research investigating this effect in the realm of learning second language listening skills.

Research aims

- The primary concern of this study is to explore whether there is an interaction between levels of learners expertise and instructional formats in learning listening skills in a foreign language.
- The study also aims to investigate the transient information effect in learning listening skills in a foreign language.

Empirical investigations

**Experiment 1**

**Hypotheses**

- Performance
- Performance
- Cognitive load
- Cognitive load

**Research design**

- Less complex
- Less cognitive load
- Better comprehension

**Results**

★★ a significant interaction between the instructional approaches and levels of learner listening expertise.★★ a significant simple effect

**Experiment 2**

**Participants** 96 year-1 undergraduate

**Hypotheses**

- Performance
- Performance
- Cognitive load
- Cognitive load

**Research design**

- Less complex
- Less cognitive load
- Better comprehension

**Results**

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>F value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listening score</td>
<td>$F(2, 35) = 3.63$</td>
<td>$p &lt; .05$</td>
</tr>
<tr>
<td>Efficiency of C</td>
<td>$F(2, 35) = 4.19$</td>
<td>$p &lt; .05$</td>
</tr>
</tbody>
</table>

Post hoc (Tukey HSD): read-only > read-listen

**Experiment 3**

**Participants** Novice learners

**Hypotheses**

- Performance
- Performance
- Cognitive load
- Cognitive load

**Research design**

- Less complex
- Less cognitive load
- Better comprehension

**Results**

<table>
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<tr>
<th>Dependent Variable</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Listening score</td>
<td>$F(2, 35) = 4.77$</td>
<td>$p &lt; .01$</td>
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<tr>
<td>Efficiency of C</td>
<td>$F(2, 35) = 4.81$</td>
<td>$p &lt; .01$</td>
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</table>

**General conclusion:** Read-only format is better for lower expertise learners, listen+read instruction format is better for expert learners.

**Experiment 4**

**Participants** 476 Grade 3 high school students

**Hypotheses**

- Performance
- Performance
- Cognitive load
- Cognitive load

**Research design**

- Less complex
- Less cognitive load
- Better comprehension

**Results**

<table>
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<tr>
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<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listening score</td>
<td>$F(2, 35) = 8.04$</td>
<td>$p &lt; .01$</td>
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<tr>
<td>Efficiency of C</td>
<td>$F(2, 35) = 3.31$</td>
<td>$p &lt; .01$</td>
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</table>

**General conclusion:** Read-only format is effective for expert learners while listen+read is beneficial to novices.

Major references


