Errors in Inflectional Morphemes as an Index of Linguistic Competence of Korean Heritage Language Learners Compared to American Learners of Korean
Background

- Enrollments in languages other than English
- Challenges in learning a foreign language
- Learning a language with heritage background
**Background**

- **Enrollments in languages other than English**


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish</td>
<td>746,267</td>
<td>822,985</td>
<td>10.3</td>
<td>864,986</td>
<td>5.1</td>
</tr>
<tr>
<td>French</td>
<td>201,579</td>
<td>206,426</td>
<td>2.2</td>
<td>216,419</td>
<td>4.8</td>
</tr>
<tr>
<td>German</td>
<td>91,100</td>
<td>94,264</td>
<td>3.5</td>
<td>96,349</td>
<td>2.2</td>
</tr>
<tr>
<td>ASL</td>
<td>60,781</td>
<td>78,829</td>
<td>29.7</td>
<td>91,763</td>
<td>16.4</td>
</tr>
<tr>
<td>Italian</td>
<td>63,899</td>
<td>78,368</td>
<td>22.6</td>
<td>80,752</td>
<td>3.0</td>
</tr>
<tr>
<td>Japanese</td>
<td>52,238</td>
<td>66,605</td>
<td>27.5</td>
<td>73,434</td>
<td>10.3</td>
</tr>
<tr>
<td>Chinese</td>
<td>34,153</td>
<td>51,582</td>
<td>51.0</td>
<td>60,976</td>
<td>18.2</td>
</tr>
<tr>
<td>Arabic</td>
<td>10,584</td>
<td>23,974</td>
<td>126.5</td>
<td>35,083</td>
<td>46.3</td>
</tr>
<tr>
<td>Latin</td>
<td>29,841</td>
<td>32,191</td>
<td>7.9</td>
<td>32,606</td>
<td>1.3</td>
</tr>
<tr>
<td>Russian</td>
<td>23,921</td>
<td>24,845</td>
<td>3.9</td>
<td>26,883</td>
<td>8.2</td>
</tr>
<tr>
<td>Greek, Ancient</td>
<td>20,376</td>
<td>22,849</td>
<td>12.1</td>
<td>26,695</td>
<td>–9.4</td>
</tr>
<tr>
<td>Hebrew, Biblical</td>
<td>14,183</td>
<td>14,140</td>
<td>–0.3</td>
<td>13,807</td>
<td>–2.4</td>
</tr>
<tr>
<td>Portuguese</td>
<td>8,385</td>
<td>10,267</td>
<td>22.4</td>
<td>11,371</td>
<td>10.8</td>
</tr>
<tr>
<td>Korean</td>
<td>5,211</td>
<td>7,145</td>
<td>37.1</td>
<td>8,511</td>
<td>19.1</td>
</tr>
<tr>
<td>Hebrew, Modern</td>
<td>8,619</td>
<td>9,612</td>
<td>11.5</td>
<td>8,245</td>
<td>–4.2</td>
</tr>
<tr>
<td>Other languages</td>
<td>25,716</td>
<td>33,728</td>
<td>31.2</td>
<td>46,747</td>
<td>20.8</td>
</tr>
</tbody>
</table>

**Total**

1,297,253 | 1,577,810 | 12.9 | 1,682,627 | 6.6
• **Challenges in learning a foreign language**

- The characteristics of adult language learners (e.g. L1 interference, fossilization, plasticity, etc.)
- Lack of exposure to the language
- Large language distance between L1 and TL
Learner learning a language with heritage background

Heritage Language Learners (HLLs)
- Raised in a home where a non-English language is spoken
- Speak or merely understand the HL
- To some degree bilingual in English and the HL (Valdés, 2001, p. 38).
- Adult Early Bilinguals (EB): in terms of the process of HL and English acquisition (Montrul, 2008, p. 18)
Problem Statements

- Nature of Heritage Language (HL)
- Learning HL in foreign language settings
- Common belief about HL learners
• Nature of Heritage Language (HL)

Is Heritage Language (HL) first language (L1) or second language (L2)?
## Problem Statements

- **Comparison of HL to L1 & L2 (Montrul, 2008)**

<table>
<thead>
<tr>
<th>Language type</th>
<th>L1</th>
<th>L2</th>
<th>HL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of onset</td>
<td>Since birth</td>
<td>After L1 acquisition, usually after critical period</td>
<td>since birth</td>
</tr>
<tr>
<td>Learning environment</td>
<td>Natural settings</td>
<td>Formal instruction settings</td>
<td>Limited natural setting &amp; Formal instruction setting</td>
</tr>
<tr>
<td>Language learning mechanism</td>
<td>Domain-specific linguistic mechanisms</td>
<td>Domain-general cognitive system</td>
<td>?</td>
</tr>
<tr>
<td>Language competence</td>
<td>Full range of language competence</td>
<td>Limited range of linguistic, cultural &amp; communicative competencies</td>
<td>Limited range of linguistic, cultural and communicative competencies</td>
</tr>
<tr>
<td>Developmental error</td>
<td>Overcome eventually</td>
<td>Fossilization effect</td>
<td>?</td>
</tr>
</tbody>
</table>
- Is Heritage Language (HL) first language (L1) or second language (L2)?

Nature of HL does not seem to match either L1 or L2.
- Few American universities provide dual track program.
- Curriculum is usually focused on traditional FL learners.
- Communicative language is emphasized in FL classes in the U.S.

- Comparatively high-level oral perceptive skills
- weakness in grammatical accuracy among HLLs
- Not much progress after two years of the program.
Problem Statements

Common belief about HL learners

- Early exposure and more input
  An advantage in overcoming language barriers.

- Better listening comprehension skills
  = Better competence in overall language skills in the TL.
• However, BICS ≠ CALPS (Cummins, 1979)

**BICS**: Basic Interpersonal Communicative Skill
**CALPS**: Cognitive Academic Language Proficiency

• Good oral skills ≠ academic language competence
What seems to be needed:
- Effort to capitalize the higher oral perceptive skill
- Curriculum that can meet the requirements of both learning populations
- In-depth and precise understanding of the linguistic competency of the learners.
Purpose of the study

- To investigate the underlying linguistic knowledge of heritage language learners (HLLs) as compared to non-heritage language learners of Korean (NHLLs); and

- to provide more specialized support for pedagogical methods, upon which receptive communication skills of HLLs can be capitalized
Phenomenon to be explored

• Korean inflectional morphemes with a focus on case and postposition markers and affixal connectives

Errors in markers are frequently observed

Markers and connectives are taught at the beginning

Encouraging learners to move from semantic processing to syntactic processing (Swain and Lapkin, 1995)

Morphosyntactic properties in Korean
1. Are there differences between English-speaking heritage language learners (HLLs) and non-heritage language learners (NHLLs) of Korean in the occurrence and frequency of errors in case and postposition markers and affixal connectives, demonstrated in their writing?

2. Do HLLs and NHLLs exhibit differences in the sources of errors in using these markers and affixal connectives?

3. Are there differences in identifying grammatically correct use of these morphemes between Heritage Language Learners and non-Heritage Language Learners?
Studies of Heritage language learners

• General topics:
  - Language policy, identity, & education (Valdés, Fishman, Chávez, & Pérez, 2006)
  - Linguistics (Polinsky, 2007)
  - Pedagogy (Polinsky & Kagan, 2007)
  - Sociolinguistics (Silva-Corvalán, 1994),
  - The multiplicity of the perspectives above (Kondo-Brown, 2006).
  - Electronic literacy practices in HL (Lee, 2006)
  - Roles of HL in social relationships (Cho, 2000)
  - Benefits of and motivations for maintaining HL (Cho & Krashen, 2000)
  - HL education in K-12 and post-secondary school (Byon, 2005; Kim, 2008)
  - HLLs’ and parents’ attitudes towards maintaining HL (Cho, Shin, & Krashen, 2004)
  - Relationships between the ethnic/cultural identity and HL learning experiences (Jo, 2001, 2002; Lee, 2002)
• A comparison study of the grammatical errors focusing on morphosyntactactic features exhibited by HLLs and non-HLLs of Korean has rarely been conducted.

• Few studies have been conducted on Korean HLLs’ linguistic competence in areas where a small population of Korean Americans live.

• Little empirical research has examined the underlying linguistic competence of Korean heritage language learners (HLLs).
# Literature Review

## Bilingualism

1. Simultaneous & balanced bilingualism
2. Fundamental differences
3. Weaker Language (WL)
4. Heritage Language (HL)

## Korean as a Heritage Language (HL)

1. Korean as a Foreign Language (KFL)
2. Korean language
3. Korean HL learners (KHLL)

## Errors of language learners

1. Theories about learners’ errors
2. Errors among learners of Korean

## Summary
1. Simultaneous & balanced bilingualism

1.1. Simultaneous bilingualism vs. sequential bilingualism: Bilingual L1 acquisition in early childhood vs. acquiring the L2 after L1 acquisition is completed.

1.2. Two balanced L1s of simultaneous bilingual: The development of linguistic knowledge in the individual L1 (Meisel, 2004)
2. Fundamental differences hypothesis (FDH)

2.1. Bley-Vroman (1990) argues that “L1 acquisition and L2 learning are fundamentally different because adult L2 learners deploy domain-general problem solving skills instead of domain-specific linguistic mechanisms” (cited in Montrul, 2003, p. 45).

2.2. Predicts that early bilinguals (heritage learners) should be more successful at attaining native-like knowledge in both languages than L2 learners because L1 acquisition began at an early stage (cited in Montrul, 2008).
3. Weaker Language (WL)

3.1. **Weak Language as L2** Hypothesis (WL as L2) by Schlyter (1993)
- Development of bilingual children in French and Swedish inflectional morphology and syntax
- WL develops like a second language

3.2. **Weak Language as L1** Hypothesis (WL as L1) by Montrul (2003)
- UG provide the initial outline for acquisition of HL as L1
- HLLs should have implicit knowledge of core aspects of phonology and morphosyntax
- Predicts that HLLs are more accurate and faster in oral than in written production as well as comprehension tasks
4. Heritage Language (HL)

4.1. Some heritage speakers do not keep the developmental balance between their L1s due to their limited exposure (Ellis, 1985).

4.2. Interrupted HL acquisition during appropriate developmental stages leads to partial, or total acquisition failure of HL (Meisel, 2007).

4.3. HL learners gradually lose their linguistic competence, and few are able retain a full functional command of their HL (Silva-Corvalan, 2003).

Korean as a Heritage Language (HL)

1. Korean as a Foreign Language (KFL)
2. Korean language
3. Korean HL learners (KDLL)
Korean as a Heritage Language (HL)

1. Korean as a Foreign Language (KFL)
2. Korean language
3. Korean HL learners (KHLL)

Large distances between Korean and English languages make the English-speaking learners of Korean feel it is a difficult language to learn (Sohn).

Many of the problem areas typical of NHLLs also appear to be problematic for HLLs (Au, Knightly, Jun, & Oh).
Errors of language learners

1. Theories about learners’ errors
2. Errors among learners of Korean

∀ Errors in morphosyntactic features are reported as main sources of errors among KFL learners (Kim, Lee).

∀ Correct analysis of errors enables the understanding of learners’ strengths and weaknesses regarding specific linguistic features in TL, and thus promotes learning processes and learning outcomes (Corder, Ellis, Montrul).
Summary

• It is challenging to identify general characteristics of HLLs across languages (Montrul)

• Large distances between Korean and English languages make the English-speaking learners of Korean feel it is a difficult language to learn (Sohn).

• Many of the problem areas typical of NHLLs also appear to be problematic for HLLs (Au, Knightly, Jun, & Oh).

• Errors in morphosyntactic features are reported as main sources of errors among KFL learners (Kim, Lee).

• Correct analysis of errors enables the understanding of learners’ strengths and weaknesses regarding specific linguistic features in TL, and thus promotes learning processes and learning outcomes (Corder, Ellis, Montrul).
**A pilot study of Error Analysis (EA)**

**Purpose:** to determine the feasibility of the proposed study by confirming if the errors in case and postposition markers and affixal connectives are salient for adult learners of Korean.

**Materials:** 5 samples of the written drafts as part of the final exam in the fall of 2011 were randomly selected.

**Procedure:** Error identification followed error criteria by Ellis (1994) and error coding was implemented based on the morphosyntactic classification by Strauss et al (2006).
A pilot study of Error Analysis (EA)

**Result:** The type of error made, the frequencies of error, and the possible number of errors out of total 160 were identified and the “frequency” column displays the percent frequency of errors.

**Discussion:** Errors in case and postposition markers occur more frequently (45.4%), followed by errors in word (21.8%). Errors in affixal connectives (9%) were not detected as frequently as the markers. Substitution and omission in the case and postposition markers are the most occurring pattern of errors.

**Conclusion:** The errors in markers are more often occurring than those in other categories. Analyzing errors in markers and connectives can be utilized as an index to investigate linguistic competence of HLLs compared to NHLLs.
Participants

English-speaking learners of Korean (N=49)

Korean Heritage Language Learner (N=20)

Beginner (N=6)

Intermediate (N=8)

Advanced (N=6)

Non-Heritage Language Learner (N=29)

Beginner (N=11)

Intermediate (N=12)

Advanced (N=6)
Participants

There are currently taking or have taken a Korean language program at the University of Kansas. Those who are not currently in the program were contacted based on voluntary participation through snowball effect.

<table>
<thead>
<tr>
<th>Year of study</th>
<th>group by language status</th>
<th>L1</th>
<th>L1 of Parent</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year</td>
<td>HLL</td>
<td>E/K</td>
<td>K or K&amp;E</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>NHLL</td>
<td>E</td>
<td>E or L3</td>
<td>11</td>
</tr>
<tr>
<td>2 years</td>
<td>HLL</td>
<td>E/K</td>
<td>K or K&amp;E</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>NHLL</td>
<td>E/K</td>
<td>E or L3</td>
<td>12</td>
</tr>
<tr>
<td>3 years</td>
<td>HLL</td>
<td>E</td>
<td>K or K&amp;E</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>NHLL</td>
<td>E/K</td>
<td>E or L3</td>
<td>6</td>
</tr>
<tr>
<td>Total number</td>
<td>(n=49)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HLL</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>NHLL</td>
<td></td>
<td></td>
<td></td>
<td>29</td>
</tr>
</tbody>
</table>

**HLL**: heritage language learners,  **NHLL**: non-heritage language learners,  **L1**: First language,  **E**: English,  **K**: Korean,  **L3**: languages other than Korean and English
• Exclusion of 3 participants from the original 52 participants
  - Their language experiences did not fit either of the definitions of HLL or NHLL.
  - 1 Japanese student who has been studying in America since the age of 20
  - 2 Korean American student who immigrated to the United States after graduating their elementary schools.
**Research Design**

- **Non-experimental, comparative design**
- **Theoretical framework:** Weak Language (WL) as L1 (Montrul, 2003) vs. WL as L2 (Schatcher, 1993) and Missing Surface Inflections Hypothesis (MSIH) (Lardiere 2005; White, 2000).

- **The research questions:**
  1. What is the occurrence and frequency of case and postposition markers and affixal connectives demonstrated by English-speaking HLLs and NHLLs of Korean in their writing?
  2. Do HLLs and NHLLs exhibit differences in the sources of errors in using these markers and affixal connectives?
  3. Are there differences in identifying grammatically correct use of these morphemes between Heritage Language Learners and non-Heritage Language Learners?

- **Hypothesis:** There is no difference in frequency and types of errors in the concerned inflectional morphemes between HLLs and NHLLs. However, there are differences in perceiving a correct form of these morphemes.
<table>
<thead>
<tr>
<th>Instruments</th>
<th>Sources</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire</td>
<td>Self-assessment questions</td>
<td>Modified version of Kitano’s self-perceived language ability scale (2001)</td>
</tr>
<tr>
<td>Error Analysis (EA)</td>
<td>Errors in markers and affixal connectives</td>
<td>Learner generated writing samples</td>
</tr>
<tr>
<td>Grammaticality judgment in a sentence completion task</td>
<td>30 multiple-choice questions</td>
<td>Textbook and workbook (‘Interchange’ I)</td>
</tr>
</tbody>
</table>
Instruments

- Error analysis: productive competence of the participants in their using inflectional morphemes.

- Grammaticality judgment test in a sentence completion: receptive competence in their perceiving the most acceptable morpheme that makes the sentence grammatically correct.
## Data Collection Procedures

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Source of statistical data collection</th>
</tr>
</thead>
</table>
| Questionnaire                        | A Likert Scale  
Self-ratings of ability in Korean sub-skills                                  |
| Error Analysis                       | Systematic Analysis of Language Transcript (SALT)  
SPSS program                                                                        |
| Grammaticality judgment in a sentence completion task | Scores from a multiple choice, paper-pencil test |
## Data Analysis

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Statistical analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire</td>
<td>Cronbach’s alpha</td>
</tr>
<tr>
<td>Error Analysis</td>
<td>2-way ANOVA</td>
</tr>
<tr>
<td>A sentence completion grammar test</td>
<td>2-way ANOVA</td>
</tr>
<tr>
<td>Date/Description</td>
<td>Dat collection</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Survey</td>
<td>May 4, 2012, before the grammar test in beginner and intermediate classrooms</td>
</tr>
<tr>
<td>Error analysis</td>
<td>May 2 - 4, 2012 based on an individual submission</td>
</tr>
<tr>
<td>Grammar test in a Sentence completion</td>
<td>May 4, 2012 after collecting consent form and Survey</td>
</tr>
</tbody>
</table>
Construct Definitions of Key variables

• **Heritage language learner (HLL):** limited to individuals whose parents or parent immigrated to the United States prior to the subject’s birth or when they were babies, heterogeneous, children of first-generation immigrants (both parents, or mother or father).

• **Non-HLL:** The counterpart Korean learner of HLL in the current research; generally identified as English-speaking learners of Korean, whose L1 is English, was born and had formal education (K-12) in the United States.

• **Linguistic competence:** the system of linguistic knowledge possessed by speakers of a language, the ideal language system that enables speakers to produce and understand an infinite number of sentences in the language, and to distinguish grammatical sentences from ungrammatical ones (Chomsky, 1981).
Construct Definitions of Key variables

- **Case and postposition markers**: Noun affixes that indicate hierarchies of person, animacy, and classes, as well as time, location, direction, and instrument.

- **Affixal connectives**: Morphemes that connect words, phrases, and clauses as in a verbal affix.

- **Error Analysis**: Identifying errors produced by learners and classifying them according to type and source. Overtness and degree of an error are not considered in this study.

- **Grammaticality judgment in a sentence completion task**: A test where participants review a series of incomplete sentences with a blank and identify which words from accompanying lists extend the expressions in a grammatically appropriate way to fill the blank.
Results

Reliability/Validity Analysis

Main Analysis – Research Q1.

Main Analysis – Research Q2.

Main Analysis – Research Q3.
### Reliabilities

<table>
<thead>
<tr>
<th>Items tested</th>
<th>Survey</th>
<th>Error analysis</th>
<th>Sentence completion grammaticality judgment test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal consistency</td>
<td>Consistency between two ratings by Inter-</td>
<td>Consistency between two Inter-raters’ ratings</td>
<td></td>
</tr>
<tr>
<td>of the question items</td>
<td>raters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tests</td>
<td>Cronbach’s Alpha</td>
<td>Pearson’s r</td>
<td>Pearson’s r</td>
</tr>
<tr>
<td>Reliability estimates</td>
<td>0.91</td>
<td>0.95</td>
<td>1</td>
</tr>
</tbody>
</table>
### Mean Length of Utterance (MLU)

#### Descriptive statistics

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>HERITAGE STATUS</th>
<th>NON-HERITAGE</th>
<th>HERITAGE</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>N</td>
<td>Std. Deviation</td>
<td>Mean</td>
<td>N</td>
</tr>
<tr>
<td>Beginner</td>
<td>NON-HERITAGE</td>
<td>5.84</td>
<td>12</td>
<td>1.19</td>
<td>6.26</td>
<td>6</td>
</tr>
<tr>
<td>Intermediate</td>
<td>NON-HERITAGE</td>
<td>8.36</td>
<td>9</td>
<td>1.93</td>
<td>6.97</td>
<td>7</td>
</tr>
<tr>
<td>Advanced</td>
<td>NON-HERITAGE</td>
<td>11.05</td>
<td>8</td>
<td>2.06</td>
<td>9.74</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>8.06</td>
<td>29</td>
<td>2.72</td>
<td>7.72</td>
<td>20</td>
</tr>
</tbody>
</table>
## Mean Length of Utterance (MLU)

### Dependent Variable: MLU

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>177.80&lt;sup&gt;a&lt;/sup&gt;</td>
<td>5</td>
<td>35.56</td>
<td>12.77</td>
<td>.00</td>
<td>.60</td>
</tr>
<tr>
<td>Intercept</td>
<td>3011.43</td>
<td>1</td>
<td>3011.43</td>
<td>1081.28</td>
<td>.00</td>
<td>.96</td>
</tr>
<tr>
<td>Heritage</td>
<td>6.79</td>
<td>1</td>
<td>6.79</td>
<td>2.44</td>
<td>.13</td>
<td>.05</td>
</tr>
<tr>
<td>Language Level</td>
<td>148.04</td>
<td>2</td>
<td>74.02</td>
<td>26.58</td>
<td>.00</td>
<td>.55</td>
</tr>
<tr>
<td>Heritage * Language Level</td>
<td>8.22</td>
<td>2</td>
<td>4.11</td>
<td>1.48</td>
<td>.24</td>
<td>.06</td>
</tr>
<tr>
<td>Error</td>
<td>119.76</td>
<td>43</td>
<td>2.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3373.05</td>
<td>49</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Survey

• Section I: Demographic information
• Section II: Language experience beyond the Korean classroom setting
• Section III: Self-assessment questionnaire
Demographic info.

- BNHLL: Beginner non-heritage language learner
- INHLL: Intermediate non-heritage language learner
- ANHLL: Advanced non-heritage language learner
- BHLL: Beginner heritage language learner
- IHLL: Intermediate heritage language learner
- AHLL: Advanced heritage language learner

Percentage of participants by language status and language proficiency level:

- BNHLL: 25%
- INHLL: 21%
- ANHLL: 14%
- BHLL: 12%
- IHLL: 14%
- AHLL: 14%
## Language Proficiency*Group Cross tabulation

<table>
<thead>
<tr>
<th>Language Proficiency</th>
<th>Group</th>
<th>NHLL</th>
<th>HL</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginner</td>
<td>Count</td>
<td>12</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>% within Group</td>
<td><strong>41.4%</strong></td>
<td><strong>30.0%</strong></td>
<td><strong>36.7%</strong></td>
</tr>
<tr>
<td>Intermediate</td>
<td>Count</td>
<td>10</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>% within Group</td>
<td><strong>34.5%</strong></td>
<td><strong>35.0%</strong></td>
<td><strong>34.7%</strong></td>
</tr>
<tr>
<td>Advanced</td>
<td>Count</td>
<td>7</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>% within Group</td>
<td><strong>24.1%</strong></td>
<td><strong>35.5%</strong></td>
<td><strong>28.6%</strong></td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>29</td>
<td>20</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>% within Group</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Demographic info.

- BNHLL: Beginner non-heritage language learner
- INHLL: Intermediate non-heritage language learner
- ANHLL: Advanced non-heritage language learner
- BHLL: Beginner heritage language learner
- IHLL: Intermediate heritage language learner
- AHLL: Advanced heritage language learner

### Length of study

<table>
<thead>
<tr>
<th>Level</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNHLL</td>
<td>2.42</td>
</tr>
<tr>
<td>INHLL</td>
<td>4.2</td>
</tr>
<tr>
<td>ANHLL</td>
<td>5.29</td>
</tr>
<tr>
<td>BHLL</td>
<td>2.67</td>
</tr>
<tr>
<td>IHLL</td>
<td>4.43</td>
</tr>
<tr>
<td>AHLL</td>
<td>5.29</td>
</tr>
</tbody>
</table>
Demographic info.

* NHLL: non-heritage language learner, HLL: heritage language learner
## Language Experience

### Age of contact Korean

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHLL</td>
<td>18.07</td>
<td>29</td>
<td>3.18</td>
</tr>
<tr>
<td>HL</td>
<td>.42</td>
<td>19</td>
<td>1.26</td>
</tr>
</tbody>
</table>
Language Experience

- BNHLL: Beginner non-heritage language learner
- INHLL: Intermediate non-heritage language learner
- ANHLL: Advanced non-heritage language learner
- BHLL: Beginner heritage language learner
- IHLL: Intermediate heritage language learner
- AHLL: Advanced heritage language learner
• Data about how learners perceive their current language skills - speaking, listening, writing, and reading- in Korean

• Question items in the third section on the survey questionnaire are in 5 Likert scales, with a gradual increasing proficiency level starting from 1 for ‘Poor’, 2 for ‘Relatively poor’, 3 for ‘Average’, 4 for ‘Good’, and 5 for ‘Very good’ (Appendix 2).

• The participants were asked to check only one number among the five choices that they think best explains their own language skills.
### Descriptive statistics (con.)

<table>
<thead>
<tr>
<th>Language situations</th>
<th>NON-HERITAGE</th>
<th></th>
<th></th>
<th>HERITAGE</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BEGINNER (N=12)</td>
<td>INTERMEDIATE (N=10)</td>
<td>ADVANCED (N=7)</td>
<td>BEGINNER (N=6)</td>
<td>INTERMEDIATE (N=7)</td>
<td>ADVANCED (N=7)</td>
</tr>
<tr>
<td></td>
<td>MEAN</td>
<td>STD. DEVIATION</td>
<td>MEAN</td>
<td>STD. DEVIATION</td>
<td>MEAN</td>
<td>STD. DEVIATION</td>
</tr>
<tr>
<td>Conversation in Korean</td>
<td>2.42</td>
<td>1.08</td>
<td>2.00</td>
<td>.47</td>
<td>3.00</td>
<td>.58</td>
</tr>
<tr>
<td>Listening Korean Music</td>
<td>2.25</td>
<td>.62</td>
<td>2.60</td>
<td>.84</td>
<td>2.00</td>
<td>.58</td>
</tr>
<tr>
<td>Writing Message in Korean</td>
<td>3.25</td>
<td>1.06</td>
<td>2.80</td>
<td>.79</td>
<td>3.00</td>
<td>1.15</td>
</tr>
<tr>
<td>Reading Non-textbook in Korean</td>
<td>2.67</td>
<td>.98</td>
<td>2.00</td>
<td>.67</td>
<td>2.14</td>
<td>1.07</td>
</tr>
<tr>
<td>Korean Pronunciation</td>
<td>2.67</td>
<td>.78</td>
<td>2.80</td>
<td>.92</td>
<td>3.71</td>
<td>.76</td>
</tr>
<tr>
<td>Fluency in Speaking</td>
<td>2.75</td>
<td>.75</td>
<td>2.50</td>
<td>.71</td>
<td>3.29</td>
<td>.76</td>
</tr>
<tr>
<td>Global Listening Comprehension</td>
<td>3.00</td>
<td>.85</td>
<td>3.00</td>
<td>.67</td>
<td>3.29</td>
<td>.49</td>
</tr>
<tr>
<td>Listing comprehension In Detail</td>
<td>2.17</td>
<td>.94</td>
<td>2.30</td>
<td>.48</td>
<td>2.71</td>
<td>.76</td>
</tr>
</tbody>
</table>
### Descriptive statistics

<table>
<thead>
<tr>
<th>Language situations</th>
<th>GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NON-HERITAGE</td>
</tr>
<tr>
<td></td>
<td>Beginner (N=12)</td>
</tr>
<tr>
<td>Guided Writing</td>
<td>Mean: 3.33, Std. Deviation: .78</td>
</tr>
<tr>
<td>Accuracy In Writing</td>
<td>Mean: 3.00, Std. Deviation: .60</td>
</tr>
<tr>
<td>Reading Other L2 learner’s Writing</td>
<td>Mean: 3.58, Std. Deviation: 1.08</td>
</tr>
<tr>
<td>Reading Comprehension</td>
<td>Mean: 3.42, Std. Deviation: 1.00</td>
</tr>
<tr>
<td>Reading Rate Comparing English</td>
<td>Mean: 2.17, Std. Deviation: .83</td>
</tr>
</tbody>
</table>

Self-assessment Questionnaire
2-way ANOVA

Significant differences between two groups at .05 alpha level in:
- Conversation in Korean
- Listening Korean music
- Comprehension in detail
Significant differences between HLLs and NHLLs in:

- **Conversation in Korean:** $F(1, 43) = 5.10, \ p = .03, \ \eta^2 = .11$, with a higher score by HLL ($M = 3.16, \ SD = .82$) than NHLL ($M = 2.47, \ SD = .71$)

- **Listening Korean Music:** $F(1, 43) = 5.23, \ p = .03, \ \eta^2 = .11$, with a higher score by HLL ($M = 2.93, \ SD = 1.21$) than NHLL ($M = 2.28, \ SD = .68$)

- **Listening Comprehension in Detail:** $F(1, 43) = 8.64, \ p = .01, \ \eta^2 = .17$, with a higher score by HLL ($M = 3.15, \ SD = 1.01$) than NHLL ($M = 2.37, \ SD = .73$)
Results

Main Analysis – Research Q1.

Main Analysis – Research Q2.
Error Analysis

• Analysis of error occurrence and frequency
  Research question 1

• Analysis of error sources
  Research question 2
1. Errors and their sources were tagged in each test in SALT software, which calculated the frequency of each error.
2. The frequency was input into SPSS to calculate the percentage of each type of error and each type of error source.
3. This was completed by dividing the number of each error type by the sum of the total number of morphemes.
## Analysis 1 - EA by type

<table>
<thead>
<tr>
<th>Research Question 1</th>
<th>Are there differences in error rates on writing products between Heritage Language Learners (HLLs) and non-Heritage Language Learners (NHLLs)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis</td>
<td>There are differences in error rates between HLLs and NHLLs.</td>
</tr>
</tbody>
</table>
| Methods             | Two-way ANOVA  
                      | One-way ANOVA                                                                 |
| Software            | SALT  
                      | SPSS                                                                 |
| Independent Variables | Focal: Heritage status (HLL vs. NHLL)  
                         | Moderator: language proficiency levels (Beginner, Intermediate, Advanced) |
| Dependent Variables (DV) | 14 inflectional morphemes     |
### DVs: 14 inflectional morphemes

<table>
<thead>
<tr>
<th>Suffixes</th>
<th>Function</th>
<th>Yale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Case markers</strong></td>
<td>Subject</td>
<td>ka/i, kkeyse</td>
</tr>
<tr>
<td></td>
<td>Topic</td>
<td>(kkese)un/nun</td>
</tr>
<tr>
<td></td>
<td>Object</td>
<td>ul/lul</td>
</tr>
<tr>
<td></td>
<td>Possessive</td>
<td>uy</td>
</tr>
<tr>
<td><strong>Postposition markers</strong></td>
<td>Indirect object</td>
<td>eykey, hantey, kkey</td>
</tr>
<tr>
<td></td>
<td>Location</td>
<td>ey, eyse</td>
</tr>
<tr>
<td></td>
<td>Direction</td>
<td>ey, lo/ulo, kkaci</td>
</tr>
<tr>
<td></td>
<td>Instrument</td>
<td>lo/ulo</td>
</tr>
<tr>
<td></td>
<td>Companion</td>
<td>hako, kwa/wa</td>
</tr>
<tr>
<td></td>
<td>Temporal</td>
<td>ey, poote, kkajci</td>
</tr>
<tr>
<td><strong>Affixal connectives</strong></td>
<td>AND (in English)</td>
<td>ko</td>
</tr>
<tr>
<td></td>
<td>SO (in English)</td>
<td>ese</td>
</tr>
<tr>
<td></td>
<td>BUT (in English)</td>
<td>ciman</td>
</tr>
<tr>
<td></td>
<td>WHILE (in English)</td>
<td>ndey/nundey, ndey/indey</td>
</tr>
</tbody>
</table>
- Errors in case markers are obviously frequent among the error categories.
- The highest frequency is found in Object marker errors (8%) both in HLLs and NHLLs, with a slightly higher score by HLLs (M=7.99, SD =7.12) than NHLLs (M=7.51, SD=8.96),
- Followed by Subject marker (6%), with a higher score by NHLLs (M=5.62, SD=5.34) than HLLs (M = 5.37, SD = 4.96).
- The most contrasting results in the frequency of errors between HLLs and NHLLs are found in Topic marker, with a higher score by NHLLs (M = 5.04, SD = 3.85) than HLLs (M= 2.84, SD = 2.79) and in Locative particle, with a higher score by HLLs (M = 3.71, SD = 4.49) than NHLLs (M= 2.25, SD = 3.62).
- No error was found in Instrumental marker either by HLLs and NHLLs.
Main test: two-way ANOVA

13 out of 14 dependent variables were explored, as there was no error found in Instrument marker.

One-way ANOVA when interaction effect between heritage status and proficiency level is identified.
Error frequency in **Directional** marker

No significant main effect was presented for **heritage** effect, $F (1,43) = .54$, $p = .47$, with a trivial effect size, $\eta^2 < .01$. However, the main effect of language **proficiency** level was **significant** with an F ratio of $F (2, 43) = 3.19$, $p = .0$, with a medium effect size, $\eta^2 = .13$, indicating that language proficiency level is not significantly related to errors in directional marker; and there was no significant interaction effect between proficiency level and heritage status, $F (2,43) = .36$, $p = .70$, with a small effect size, $\eta^2 = .02$. 
## Analysis 1 - EA by type

### Tests of Between-Subjects Effects
Dependent Variable: Directional marker

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis</td>
<td>17.06(^a)</td>
<td>5</td>
<td>3.41</td>
<td>1.59</td>
<td>.18</td>
<td>.16</td>
</tr>
<tr>
<td>Intercept</td>
<td>15.02</td>
<td>1</td>
<td>15.02</td>
<td>7.01</td>
<td>.01</td>
<td>.14</td>
</tr>
<tr>
<td>HERITAGE</td>
<td>1.16</td>
<td>1</td>
<td>1.16</td>
<td>.54</td>
<td>.47</td>
<td>.01</td>
</tr>
<tr>
<td>LEVEL</td>
<td>13.66</td>
<td>2</td>
<td>6.83</td>
<td>3.19</td>
<td>.05</td>
<td>.13</td>
</tr>
<tr>
<td>HERITAGE * LEVEL</td>
<td>1.56</td>
<td>2</td>
<td>.78</td>
<td>.36</td>
<td>.70</td>
<td>.02</td>
</tr>
<tr>
<td>Error</td>
<td>92.07</td>
<td>43</td>
<td>2.14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>125.86</td>
<td>49</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>109.13</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Error frequency in affixal connective ‘WHILE’
The main effect of heritage status was insignificant, $F (1, 43) = .33$, $p = .57$, with a small effect size, $\eta^2 = .01$; the main effect of proficiency level yielded an $F$ ratio of $F (2, 43) = 2.46$, $p = .10$, with a medium effect size, $\eta^2 = .10$, which demonstrates that proficiency level to error rate in affixal connective ‘WHILE’ was non-significant. There was no significant interaction effect between heritage status and proficiency level, $F (2, 43) = .47$, $p = .63$, with a small effect size, $\eta^2 = .02$. 

Analysis 1 - EA by type

Statistical test: 2-way ANOVA
Analysis 1 - EA by type

Statistical test: 2-way ANOVA

• Summary
  - No difference in the main effect of heritage status (HLL vs. NHLL) to occurrences of 13 types of errors, and
  - no interaction effect between heritage status & level
  - with an exception of a significant difference in the effect of proficiency level in Directional marker.
• Conclusion
  - There are no differences in error rates on writing products between Heritage Language Learners (HLLs) and non-HLLs.
1. Errors and their sources were tagged in each test in SALT software.
2. The frequency was input into SPSS to calculate the percentage of each type of error source.
3. This was completed by dividing the number of each error source by the sum of the total number of errors in these morphemes.
## Analysis 2 - EA by source

<table>
<thead>
<tr>
<th>Research Question 2</th>
<th>Are there differences between HLLs and NHLLs in sources that cause errors in writing products?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis</td>
<td>There are differences in sources that cause errors between HLLs and NHLLs.</td>
</tr>
</tbody>
</table>
| Methods             | Two-way ANOVA  
                      | One-way ANOVA                                                |
| Software            | SALT  
                      | SPSS                                                          |
| Independent Variables | Focal: Heritage status (HLL vs. NHLL)  
                      | Moderator: language proficiency levels (Beginner, Intermediate, Advanced) |
| Dependent Variables (DV) | Error sources: Omission, Replacement, Addition, Malformation |
Main source of errors by NHLLs: Replacement ($M = 45.48$, $SD = 23.84$)
Main source of errors by HLLs: Omission ($M = 39.89$, $SD = 26.59$).
Analysis 2 - EA by source

Statistical test: 2-way ANOVA

- Summary
  - No main effect of heritage status (HLL vs. NHLL) to the differences in the 4 sources of errors.
  - No interaction between heritage status and proficiency level was not statistically significant in the different sources of errors.
• Conclusion
- The sources of errors produced by Heritage group are not significantly different from the sources of errors produced by non-Heritage group at all three different proficiency levels.
Results

Main Analysis – Research Q3.
- To measure the participants’ receptive competence in their using inflectional morphemes
- 30 questions in a multiple-choice format
- The number of the questions that require a certain type of morpheme was limited to two or three because asking many questions that require a certain type of particle can make the respondent set one’s own rule while answering similar questions.
## Analysis 3

<table>
<thead>
<tr>
<th>Research Question 3</th>
<th>Are there differences in identifying grammatically correct use of these morphemes between Heritage Language Learners (HLLs) and non-Heritage Language Learners (NHLLs)?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hypothesis</strong></td>
<td>There are differences in identifying grammatically correct use of these morphemes between HLLs and NHLLs.</td>
</tr>
</tbody>
</table>
| **Methods**         | Two-way ANOVA  
One-way ANOVA                                                                                                                                  |
| **Software**        | SPSS                                                                                                                                            |
| **Independent Variables** | Focal: Heritage status (HLL vs. NHLL)  
Moderator: language proficiency levels (Beginner, Intermediate, Advanced)                                                                 |
| **Dependent Variables** | 14 inflectional morphemes                                                                                                                        |
Grammaticality judgment test

**Statistical test**: 2-way ANOVA

- **Focal independent variable**: heritage status (HLL vs NHLL)
- **Moderator variable**: language proficiency level (beginning, intermediate, advanced)
- **Dependent variables**: 4 case markers, 6 postposition markers, 4 affixal connectives.
Statistical test: 2-way ANOVA

- **Subject, Locative, Temporal, BUT, WHILE:** No main effect of heritage status and no interaction effect between heritage status and proficiency level.
- **Topic, Object, Possessive:** Significant difference in the effect of proficiency level to the errors.
- **Indirect object, instrument, Companion, Direction, AND, SO:** Significant interaction effects between heritage status & language proficiency level.
Statistical test: 1-way ANOVA

- Once significant interaction was found (Indirect object, instrument, Companion, Direction, AND, SO),
- 1-way ANOVA followed in order to see in which proficiency level the errors are different between two heritage groups.
Grammaticality judgment test

**Statistical test**: 1-way ANOVA

- To check whether the effect of heritage status is different depending on the level of proficiency to the errors in these 6 types of morphemes,
- Indirect object, instrument, Companion, Direction, AND, SO.
**Dependent Variable: Indirect Object**

### Advanced
- No significant difference between HLLs and NHLLs, $F(1, 12) = 4.50$, $p = .06$
- With a higher score by HLL ($M = 1.43$, $SD = 1.78$) than HLL ($M = .00$, $SD = .00$)

### Intermediate
- No statistically significant difference between HLL and NHLL, $F(1, 15) = 2.68$, $p = .12$,
- With a higher score by NHLL ($M = 1.00$, $SD = 1.62$) than HLL ($M = .00$, $SD = .00$)

### Beginning
- No statistically significant difference between HLL and NHLLs, $F(1, 16) = .14$, $p = .71$
- With a higher score by NHLL ($M = .83$, $SD = 1.52$) than HLL ($M = .56$, $SD = 1.36$).
Dependent Variable: Instrument

**Advanced**

- **A significant difference** in the score of the Instrumental particle error between Advanced HLLs and NHLLs, $F(1, 12) = 8.00, p = .02, d = .56$
- With a higher score by HLL ($M = 1.90, SD = 1.78$) than NHLL ($M = .00, SD = .00$)

**Intermediate**

- No statistically significant difference between HLLs and NHLLs at Beginner level, $F(1, 15) = 2.55, p = .13$
- With a higher score by NHLL ($M = 3.00, SD = 1.05$) than HLL ($M = 1.90, SD = 1.78$)

**Beginning**

- No significant difference found between HLL and NHLL, $F(1, 16) = 1.58, p = .23$
- With a higher score by NHLL ($M = 3.00, SD = 1.05$) than HLL ($M = 1.90, SD = 1.78$)
Dependent Variable: Companion

**Advanced**
- No errors found both among HLL and NHLL ($M = .00, SD = .00$).

**Intermediate**
- No statistically significant difference between HLLs and NHLLs at Beginner level, $F (1, 15) = .04, p = .85$,
- With a higher score by NHLL ($M = 1.67, SD = 2.36$) than HLL ($M = 1.43, SD = 2.62$)

**Beginning**
- **A significant difference** in the score of the Instrumental particle error between HLLs and NHLLs, $F (1, 16) = 8.60 p = .01, d = .56$
- With more errors produced by HLL ($M = 4.44, SD = 2.72$) than NHLL ($M = 1.39, SD = 1.72$)
Dependent Variable: Directional

**Advanced**
- No statistically significant difference HLL and NHLL, $F(1, 12) = 2.40, p = .15$
- With a higher score by HLL ($M = .95, SD = 1.63$) than NHLL ($M = .00, SD = .00$)

**Intermediate**
- A significant difference between HLLs and NHLLs, $F(1, 15) = 6.18, p = .03$
- With a higher score by NHLL ($M = 1.67, SD = 1.76$) than HLL ($M = .00, SD = .00$)

**Beginning**
- No statistically significant difference between HLLs and NHLLs, $F(1, 15) = 1.47, p = .24$
- With more errors produced by HLL ($M = 2.22, SD = 2.75$) than NHLL ($M = .83, SD = 2.07$)
Dependent Variable: AND

**Advanced**
- No statistically significant difference between HLLs and NHLLs, $F(1,12) = .17, p = .69$
- With a higher score by HLL ($M = 4.76, SD = 6.04$) and NHLL ($M = 3.81, SD = 1.26$)

**Intermediate**
- No statistically significant difference between HLLs and NHLLs at this level, $F(1,15) = 2.08, p = .17$
- With a higher score by NHLL ($M = 6.00, SD = 4.10$) and HLL ($M = 2.86, SD = 4.88$)

**Beginning**
- A significant difference in the score of the connective AND between HLL and NHLL, $F(1,16) = 7.33, p = .02, d = .56$
- With a higher score by HLL ($M = 8.89, SD = 2.72$) and NHLL ($M = 5.28, SD = 2.64$)
# Dependent Variable: SO

## Advanced
- No errors in affixal connective SO both by HLL and NHLL \((M = .00, SD = .00)\)

## Intermediate
- No statistically significant difference between HLLs and NHLLs at Beginner level, \(F (1, 15) = 1.05, p = .32\)
- With a higher score by NHLL \((M = 2.00, SD = 1.72)\) than HLL \((M = .95, SD = 2.52)\)

## Beginning
- No statistically significant difference between HLLs and NHLLs, \(F (1, 16) = 3.69, p = .07\)
- With more errors produced by HLL \((M = 6.11, SD = 2.51)\) than NHLL \((M = 3.61, SD = 2.64)\)
Grammaticality judgment test

No differences at all three levels in:
• Indirect object, SO

Significantly more errors by HLL in:
• Instrument marker, AND at Advanced level
• Companion at Beginning level

Significantly more errors by NHLL in:
• Directional marker at Intermediate

Statistical test: 1-way ANOVA
Conclusion

No significant differences between HLLs and NHLLs in identifying a grammatically correct morpheme among Subject, Locative, Temporal, BUT, WHILE.

Significant differences in the errors in Companion marker between Beginning HLL and NHLL;
Direction marker between Intermediate level of HLL and NHLL; and Instrument and AND between Advanced level of HLL and NHLL.
Results

Summary

Error analysis by type & source
- No significant differences between HL learners and NHL learners were identified in the use of 14 inflectional morphemes in their writing production.
- Confirmed Schlyter’s hypothesis, Weak Language as L2, in the productive skill.

Grammaticality judgment in a sentence completion task
- Significant differences were presented by the data from the GJSC in several types of morphemes at certain proficiency level.
- However, both HLLs and NHLLs revealed weak competences in different types of inflectional morphemes with each other.

Montrul’s hypothesis, Weak Language as L1, was not supported by the results from either EA or GJSC.
Discussion about the findings

- As the heritage group evaluated their skills in ‘listening detail information’ and ‘listening comprehension’ better than the ratings of the categories by their counterpart learners, the receptive oral skills may be advanced to non-heritage language learners.

- Their receptive competence in linguistic components was somewhat surprising in that Advanced heritage had higher error scores in Instrument marker , the connective AND.

- It seems that Informal input leads to fossilized errors in a written form or formal speech, especially among advanced level of HLLs.
Discussion

1. Schlyter’s Weak Language as L2
2. Persistence of errors despite advances in HLLs
3. Larger linguistic variation
4. MSIH for the underlying linguistic competence of HLL
Discussion

1 Schlyter’s WL as L2 VS Montrul’s WL as L2

◊ Despite reasonably good comprehension skills learners may be unable to apply their language knowledge in actual use, hence their linguistic knowledge at the cognitive level is not utilized during performance.
• fluency, accuracy, and complexity ideally develop in harmony.

• In order for learners’ language to complexify, new linguistic forms have to be acquired and added to their productive linguistic repertoire.
Noticing and Focused output

- Schmit’s (1995) Noticing Hypothesis: input does not become intake for language learning without conscious awareness

- Swain’s (1985) Output Hypothesis: the learner should realize what they do not know or only partially know while the learner produce utterances. And then feedback should be followed in order to improve.
Discussion

Persistence of errors despite advances in HLLs

- Earlier informal input (e.g. marker deletion) could lead to fossilized errors in a written form or formal speech.

- Fossilized errors are persist despite progress in other areas of language development (Lightbown and Spada, 2006).
Focus-on-form Teaching

• Incorporating a more explicit treatment of grammar within the curriculum.

• Building a focus on form into teaching through the use of activities

• centering on raising consciousness, or noticing grammatical features of input or output.
Discussion

◊ Larger linguistic variation among HLLs.

◊ Different level of exposure depending on the area in America
◊ While linguistic competence is gradually lost
◊ Interrupted HL acquisition during appropriate developmental atages also often happens.
Critical roles of universities

“.... in offering a second chance to individuals while helping the nation rebuild its linguistic resources” (Wiley, 2002, p. 2).
Pedagogical Implications

- Applicable measurements of productive and receptive linguistic knowledge
- Better instructional methods and appropriate instructional treatment
- Awareness of the unique nature of heritage language learners
- Capitalizing perceptive skills of HLLs for balanced language development
Limitation & delimitation

1. Non-random sampling of convenience sampling as a threat to the internal validity.

2. The small size of the HLLs population could be problematic in generalizing the results of the study.

3. Research design & Measurement