Heritage background, motivation, and reading ability of upper-level postsecondary students of Chinese, Japanese, and Korean

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Abstract

In upper-level university foreign language (FL) courses, FL and heritage language (HL) students are often merged into the same classroom in a single-track system. This study investigates whether HL background is a critical factor that may prevent instructors from teaching reading effectively in single-track upper-level university courses. This issue was explored based on reading ability self-ratings and motivation data collected from 123 FL and HL upper-level postsecondary students of Chinese, Japanese, and Korean. The study suggests that HL background per se does not seem to be a critical factor that differentiates the reading ability self-ratings and motivation profiles of such FL and HL students. Overall, students in both groups are strongly motivated to read or at least strongly interested in reading in the target language because of its extrinsic values (knowledge-based and instrumental values). For both groups of students, those who give themselves higher self-ratings seem to be more intrinsically involved in reading in that language. The study concludes by discussing pedagogical implications and making suggestions for future research.

Keywords: heritage language, reading ability, motivation, Japanese, Chinese, Korean

According to a 2007 Modern Language Association report (Furman, Goldberg, & Lusin, 2007), the number of students studying East Asian languages in American higher education is growing rapidly. Some of these students study the target East Asian language as a foreign language (FL), while others study their heritage language (HL). At the lower level (i.e., 1st- and 2nd-year courses), university programs commonly provide a separate track for a subgroup of HL students whose spoken and written language skills are critically unbalanced enough to prevent teachers from providing effective instruction in regular FL courses (Kondo-Brown & Brown, 2008).

At the upper level (3rd- and 4th-year courses), FL and HL students are often merged into the same classroom in a single-track system. Some of these students have moved up from lower-level courses, but others, especially those with HL backgrounds, may have been directly placed in upper-level courses. Such a system is operated on the assumption that HL background is no longer a critical factor that differentiates the interests and needs of upper-level course students.
Unfortunately, FL and HL students in single-track upper-level courses do not seem to have received the attention that they deserve. The present study explores this issue by focusing the investigation on reading ability and its relationship to motivation based on self-reported data collected from 123 FL and HL students of East Asian languages in upper-level university courses. This focus was chosen for these reasons: (a) Advanced-level reading ability is expected in many (if not all) upper-level required courses in FL degree programs at American universities; (b) FL and HL students in upper-level classes appear to have large individual differences in demonstrated reading ability (both outcomes and processes) that suggest special instructional challenges that the teachers face (Kondo-Brown & Fukuda, 2008); and (c) while a large body of second language (L2) reading research focuses on the cognitive processes of L2 reading and related instructional issues (e.g., Grabe & Stoller, 2001; Hudson, 2007; Koda, 2005), few studies have investigated the affective aspects of L2 reading development (Grabe, 2004). However, for learners to remain active readers of the target language (TL) while improving their skills, they may need to possess not only the knowledge and skills to read in an L2 but also the will or motivation to read in that language.

Literature Review and Research Questions

In the last three or so decades, numerous L2 studies have been devoted to developing various L2 motivation constructs because motivation is generally viewed as one of the key factors associated with L2 development (e.g., Clément, 1980; Clément, Dörnyei, & Noels, 1994; Clément & Kruidenier, 1985; Crookes & Schmidt, 1991; Dörnyei, 1994, 2001, 2003; Gardner, 1985, 2001; Gardner, Masgoret, Tennant, & Mihic, 2004; Gardner, Tremblay, & Masgoret, 1997; Masgoret & Gardner, 2003; Noels, 2001; Noels, Clément, & Pelletier, 2001; Oxford & Shearin, 1994; Tremblay & Gardner, 1995).

Some of these studies also examined the degree to which motivation constructs are linked to general L2 learning or development. For example, Masgoret and Gardner’s (2003) meta-analysis, in which 75 motivation studies led by Gardner were analyzed, investigated the relationships between general L2 achievement measures (including final grades) and five affective constructs used in Gardner’s motivation model (i.e., attitudes toward learning situation, integrativeness, motivation, integrative orientation, and instrumental orientation). The study suggests that the correlations between the general achievement measures and the motivation construct are uniformly higher than other comparisons. The relationships between L2 motivation constructs and an L2 achievement measure were also examined in Noels, Clément, and Pelletier (2001). The participants were Francophone university students ($N = 59$) who attended a summer English immersion course at a French-English bilingual university in Canada. The results indicated that intrinsic motivation and integrative orientation variables are positively correlated with final course grades ($r = .29$ and .43).

In addition to the general L2 motivation studies cited above, some recent studies also investigated what constitutes motivation specifically for L2 reading and how it may be related to L2 reading development. These studies suggest that (a) L2 reading motivation is multidimensional, (b) the components of L2 reading-specific motivation are similar to those of general L2 motivation, and (c) motivation is associated with L2 reading behaviors or outcomes.
For example, Mori’s (2002) large-scale pioneering work investigated the underlying structure of L2 reading motivation by examining the applicability to a FL reading context of a number of first-language (L1) reading motivation constructs of Wigfield and Guthrine (1995, 1997) and Gardner’s (1985) integrative orientation construct. A principal components analysis of the data collected from female students of English as a foreign language (EFL) at a university in Japan (N = 447) indicated that motivation to read English as a FL may consist of four motivation factors: (a) Intrinsic Value of Reading in English, (b) Extrinsic Utility Value of Reading in English, (c) Importance of Reading, and (d) Reading Efficacy.

Takase (2007) explored the underlying components of L1 and L2 reading motivation using data collected from another group of EFL students in Japan—Japanese female high school students (N = 219). A principal components analysis of these data identified six motivation factors for L1 and L2 reading. Like Mori’s study, these components include intrinsic motivation for reading English (i.e., Intrinsic Motivation for L2 reading) and specific extrinsic motivation for reading English (e.g., Entrance Exam-Related Extrinsic Motivation). Takase further investigated the relationship between the identified motivation variables and the students’ engagement in extensive English L2 reading using a regression analysis. The results indicated that intrinsic motivation for L2 reading was the most powerful predictor of the students’ engagement in extensive reading in English, which was measured by asking the students to regularly write reading logs (e.g., the number of books and words read in English).

Kondo-Brown (2006a) investigated the degree to which 17 affective factors (7 self-determination motivation subscales, 6 Japanese-language-learning belief subscales, and 4 Japanese-L2-reading motivation subscales) were related to two Japanese L2 reading proficiency measures (a Japanese reading comprehension test and a kanji [Chinese character] knowledge test). The 4 Japanese-L2-reading motivation subscales were constructed by performing a principal components analysis on the data collected from English L1 university students of Japanese (N = 43). Two out of the four motivational factors (i.e., Intrinsic Orientation for Reading Japanese and Extrinsic Orientation for Reading Japanese) seemed to correspond to intrinsic and extrinsic orientation factors identified in Mori’s (2002) and Takase’s (2007) principal components analyses discussed above. In Kondo-Brown’s study, two L2 reading measures were correlated positively with an efficacy factor (i.e., Self-Perception of Reading Japanese) and negatively with a subscale for Lack of Motivation for Reading Japanese.

The present study extends L2 reading motivation research by exploring the following questions within the context of teaching reading as a FL or HL in upper-level East Asian language courses:

1. How do the FL and HL students evaluate their ability to perform various reading tasks in the TL? Do the two groups evaluate themselves similarly or differently?

2. Given the multidimensionality of L2 reading motivation, what are the underlying components of motivation to read in an East Asian language as a FL or HL?

3. Are the identified L2 reading motivation variables equal for the FL and HL groups? Do they have similar or different L2 reading motivation profiles?
4. To what degree is motivation related to the TL reading ability estimates (i.e., self-ratings) for each of the FL and HL groups?

Method

Participants

The participants were post-secondary students of Chinese, Japanese, and Korean enrolled in upper-level classes at an American public university located on the Pacific Rim. There were 40 students of Chinese, 47 of Japanese, and 36 of Korean. The participants were recruited by distributing flyers in classes and posting flyers on bulletin boards. Most of the participants were those recruited in classes. They participated in the research individually in an office, and they were paid for their time. Throughout the research sessions, a graduate research assistant was present.

Of the participants, 77% were undergraduate students of various class standings, and the rest were graduate students; 58, or about 45%, of the participants were FL students, and the remaining 65 participants were HL students (whose parents were immigrants or L1 speakers of the TL). Among the HL students were 26, 12, and 27 speakers of Chinese, Japanese, and Korean. About half of the Japanese group was majoring in Japanese (47%), while fewer students in the other two groups were majoring in the TL, especially the Korean group (where only 2 were Korean majors). The students in all of the language groups had studied the respective TL at the university and also elsewhere (e.g., high schools, HL schools, other universities) for many years. The average of total number of years of instruction in the TL was 5.3. The great majority of all language groups had also visited the TL country for various lengths of time. The average total number of months of visiting or living in the TL regions was 28.

Instruments

Reading ability self-ratings. Each student was asked to rate his or her own ability to perform six reading tasks of various difficulty levels in the TL (adapted from Clark, 1981). The six tasks represent a range of reading proficiency from the most basic reading task up through the most advanced (see Appendix A). The participants’ self-ratings for the six reading tasks were coded as follows: 3 = can perform quite easily, 2 = with some difficulty, and 1 = with great difficulty or not at all. The totals (3 points × 6 tasks = 18 possible points) were entered as individual students’ self-ratings.

The Cronbach alpha reliability estimates of this measure proved to be high for both the FL and HL groups (i.e., α = .84 and .88). The concurrent validity (i.e., whether the present self-rating measure correlates reasonably well with an established direct reading measure) was also examined in the Chinese group. The Cronbach alpha reliability estimate of self-ratings for the Chinese group was excellent (α = .92). We adopted the Computer-Adaptive Test for Reading Chinese (CATRC) for this purpose. The Chinese language students’ reading proficiency levels
ranged from intermediate to superior levels. The students’ CATRC test results were then converted into interval scales (e.g., intermediate-low = 1, intermediate-mid = 2, intermediate-high = 3, advanced-low = 4, advanced-plus = 5, superior = 6) for a correlation analysis (\(M = 3.70, SD = 1.79, \text{skewness} = 0.03, SE = 0.37\)). The CATRC scores had a reasonably high correlation with the self-ratings for the Chinese group, \(r = .65, p < .01\), suggesting that the present self-ratings have some validity. The self-ratings were also significantly and moderately correlated with years of instruction, \(r = .46, p < .1\), and months of living abroad, \(r = .52, p < .01\).

**FL or HL reading motivation questionnaire.** The reading motivation questionnaire used in this study is a modified version of Mori’s (2002) L2 reading motivation questionnaire. The present version was also developed with reference to a L2 motivation questionnaire created for university-level FL and HL students (Schmidt & Watanabe, 2001). The present questionnaire included a total of 30 items to measure the following theoretical motivation components: (a) reading involvement, (b) motivational strength for reading, (c) reading efficacy, (d) intrinsic motivation, (e) knowledge-based value, and (f) instrumental value. Each component was measured with five items. (See Appendix B for a complete list of the items for each theoretical component.)

The participants were asked to indicate their degree of agreement or disagreement with each of the 30 statements on a scale ranging from 1 (**most strongly disagree**) to 7 (**most strongly agree**).

**Results and Discussion**

**RQ1: How do the FL and HL students evaluate their ability to perform various reading tasks in the TL? Do the two groups evaluate themselves similarly or differently?**

Descriptive statistics for the TL reading ability self-ratings for the FL and HL groups are shown in Table 1.7 The means of the self-ratings for the FL and HL groups were about the same, (i.e., 10.41 and 10.02). A \(t\) test performed on the data showed no significant difference in the means of self-ratings between the groups, \(t(121) = 0.78, p = .437\). The distributions of total TL reading ability self-ratings for the FL and HL groups are visually presented in Figure 1. The individual differences in total self-ratings within each group are considerable.

<table>
<thead>
<tr>
<th>Group</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL students ((n = 58))</td>
<td>7</td>
<td>18</td>
<td>10.41</td>
<td>2.05</td>
<td>1.17*</td>
<td>.31</td>
</tr>
<tr>
<td>HL students ((n = 65))</td>
<td>6</td>
<td>18</td>
<td>10.02</td>
<td>3.09</td>
<td>1.12*</td>
<td>.30</td>
</tr>
</tbody>
</table>

*Note.* * denotes a positively skewed distribution.
The TL self-rating distributions by task for each of the FL and HL groups are shown in Figures 2 and 3. For each of the six tasks of various difficulty levels, the FL and HL groups have similar self-rating distributions. The majority of students in both groups reported that they could “easily” read letters and notes that deliberately used simple TL words and constructions but read personal letters or notes for “native” readers and newspaper headlines “with some difficulty.” The great majority of students in both groups also reported that, without using a dictionary, they either “have great difficulty” in reading or “cannot read at all” magazine articles that are similar to those found in *Times* or *Newsweek*, popular novels, or highly technical materials.
RQ2: Given the multidimensionality of L2 reading motivation, what are the underlying components of motivation to read in an East Asian language as a FL or HL?

To find the best items to identify the underlying components of this group’s L2 reading motivation, a principal components analysis was performed on the motivation questionnaire data. Based on a scree plot and the eigenvalue criterion (i.e., a minimum of 1.0), four components were extracted for follow-up varimax rotations. Factor loadings of .40 and above were chosen as the criterion for interpretation. Eight items (i.e., Items 4, 7, 14, 15, 17, 19, 20, and 28 in Appendix B) that did not contribute to the solution (e.g., those with loadings less than .40) were eliminated, and the correlation matrix was reanalyzed. The remaining 22 statements yielded four interpretable components that accounted for 61% of the variance (see Table 2).

These components were labeled as follows: Extrinsic Value (e.g., By learning to read in X, I hope to understand more deeply the lifestyle and culture of X), Intrinsic Involvement (e.g., I like reading X novels in the original language), Motivational Lack (e.g., I do not have any desire to read in X even if the content is interesting), and Reading Efficacy (e.g., My fluency in reading X is native-like or almost native-like). Note that the Extrinsic Value component clearly has two subcomponents, namely, knowledge-based value (e.g., By learning to read in X, I hope to understand more deeply the lifestyle and culture of X) and instrumental value (e.g., By learning to read in X, I hope to enhance my ability to read newspapers and/or magazines in the original language). In Table 3, the four L2 reading motivation components identified in the present study are compared to those identified in three recent published studies discussed earlier. As shown in the table, all studies consistently identify intrinsic and extrinsic motivation components.
Table 2. **Principal components analysis**

<table>
<thead>
<tr>
<th>Statement in the questionnaire</th>
<th>C1: Extrinsic value</th>
<th>C2: Intrinsic involvement</th>
<th>C3: Motivational lack</th>
<th>C4: Reading efficacy</th>
<th>h²&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>• By learning to read in X, I hope to understand more deeply the lifestyle and culture of X people. (KNO22)</td>
<td>0.82 *</td>
<td>0.14</td>
<td>-0.16</td>
<td>-0.08</td>
<td>0.73</td>
</tr>
<tr>
<td>• Learning to read in X is important because it will broaden my view. (KNO23)</td>
<td>0.79 *</td>
<td>0.07</td>
<td>-0.27</td>
<td>0.08</td>
<td>0.71</td>
</tr>
<tr>
<td>• By learning to read in this language, I hope to learn more about various opinions of X people. (KNO21)</td>
<td>0.78*</td>
<td>0.26</td>
<td>-0.13</td>
<td>-0.02</td>
<td>0.69</td>
</tr>
<tr>
<td>• By learning to read in X, I hope to enhance my ability to browse the Internet in this language. (INST26)</td>
<td>0.71*</td>
<td>0.18</td>
<td>-0.14</td>
<td>0.07</td>
<td>0.56</td>
</tr>
<tr>
<td>• By learning to read in X, I hope to enhance my ability to read newspapers and/or magazines in the original language. (INST27)</td>
<td>0.70*</td>
<td>0.23</td>
<td>-0.11</td>
<td>0.03</td>
<td>0.56</td>
</tr>
<tr>
<td>• Learning to read in X is important because it will make me a more knowledgeable person. (KNO24)</td>
<td>0.66*</td>
<td>-0.13</td>
<td>0.10</td>
<td>0.14</td>
<td>0.49</td>
</tr>
<tr>
<td>• Learning to read in X is important because I might work/study in China/Japan/Korea in the future. (INST29)</td>
<td>0.60*</td>
<td>0.08</td>
<td>-0.23</td>
<td>0.14</td>
<td>0.44</td>
</tr>
<tr>
<td>• Learning to read in X is important because I plan to get a job that requires advanced skills in reading the language. (INST30)</td>
<td>0.58*</td>
<td>0.16</td>
<td>-0.30</td>
<td>-0.01</td>
<td>0.45</td>
</tr>
<tr>
<td>• I like reading novels in X in the original language. (INTR16)</td>
<td>0.13</td>
<td>0.77*</td>
<td>-0.08</td>
<td>0.25</td>
<td>0.67</td>
</tr>
<tr>
<td>• Long and difficult texts written in X put me off.&lt;sup&gt;b&lt;/sup&gt; (INV03)</td>
<td>0.19</td>
<td>-0.76*</td>
<td>0.25</td>
<td>0.04</td>
<td>0.68</td>
</tr>
<tr>
<td>• Besides reading assignments for X classes, I often look for other readings in X that fall under my interests. (MOT6)</td>
<td>0.26</td>
<td>0.66*</td>
<td>-0.03</td>
<td>0.30</td>
<td>0.59</td>
</tr>
<tr>
<td>• I tend to get deeply engaged when I read in this language. (INVO1)</td>
<td>0.36</td>
<td>0.65*</td>
<td>-0.15</td>
<td>0.32</td>
<td>0.68</td>
</tr>
<tr>
<td>• Reading X is a challenge I enjoy. (INTR18)</td>
<td>0.37</td>
<td>0.64*</td>
<td>-0.18</td>
<td>0.12</td>
<td>0.59</td>
</tr>
<tr>
<td>• I get immersed in interesting stories even if they are written in X. (INVO2)</td>
<td>0.23</td>
<td>0.60*</td>
<td>-0.18</td>
<td>0.18</td>
<td>0.48</td>
</tr>
<tr>
<td>• I do not have any desire to read in X even if the content is interesting. (MOT10)</td>
<td>-0.26</td>
<td>-0.14</td>
<td>0.78*</td>
<td>-0.10</td>
<td>0.71</td>
</tr>
<tr>
<td>• Learning to read in X is not important to me: It is a waste of time. (KNO25)</td>
<td>-0.21</td>
<td>0.13</td>
<td>0.71*</td>
<td>-0.10</td>
<td>0.58</td>
</tr>
<tr>
<td>• I often feel lazy or bored when I engage in reading assignments for X classes. (INV05)</td>
<td>-0.11</td>
<td>-0.32</td>
<td>0.66*</td>
<td>-0.19</td>
<td>0.59</td>
</tr>
<tr>
<td>• I would not read in X unless it was required as homework or an assignment. (MOT8)</td>
<td>-0.34</td>
<td>-0.23</td>
<td>0.64*</td>
<td>-0.08</td>
<td>0.58</td>
</tr>
<tr>
<td>• When reading assignments are too difficult, I either give up or only study the easy parts. (MOT9)</td>
<td>-0.02</td>
<td>-0.31</td>
<td>0.56*</td>
<td>0.02</td>
<td>0.41</td>
</tr>
<tr>
<td>• I think I am good at reading in X. (EFF11)</td>
<td>0.10</td>
<td>0.32</td>
<td>-0.11</td>
<td>0.86*</td>
<td>0.87</td>
</tr>
<tr>
<td>• My fluency in reading X is native-like or almost native-like. (EFF13)</td>
<td>0.02</td>
<td>0.15</td>
<td>0.01</td>
<td>0.86*</td>
<td>0.77</td>
</tr>
<tr>
<td>• Reading in X is my weak subject.&lt;sup&gt;c&lt;/sup&gt; (EFF12)</td>
<td>-0.03</td>
<td>-0.22</td>
<td>0.35</td>
<td>-0.65*</td>
<td>0.60</td>
</tr>
</tbody>
</table>

Proportion of variance explained by each factor: 0.34, 0.13, 0.08, 0.06, 0.61


<sup>a</sup>Communalities (h²) for a variable is “the variance accounted for by the factors. . . . It is the sum of squared loadings (SSL) for a variable across factors” (Tabachnick & Fidell, 2007, p. 621).

<sup>b</sup>This item was reverse-coded after the components analysis.

<sup>c</sup>This item was reverse-coded after the components analysis.
Table 3. Comparisons of L2 reading motivation components identified in recent published studies using principal components analyses

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Chinese, Japanese, Korean</td>
<td>English</td>
<td>Japanese</td>
<td>English</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>123 university students</td>
<td>219 high school students</td>
<td>43 university students</td>
<td>447 university students</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Extrinsic</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Importance of reading</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Motivational strength</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Reading efficacy</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

RQ3. Are the identified L2 reading motivation variables equal for the FL and HL groups? Do they have similar or different L2 reading motivation profiles?

The Cronbach alpha reliability estimates and descriptive statistics for the four identified motivation components for the FL and HL groups are provided in Table 4. As the table shows, all components indicate good or excellent reliabilities for both groups. For both groups, the mean was the highest for Extrinsic Value but the lowest for Motivational Lack. The score distributions for these motivational variables were significantly skewed (skewness value > standard errors of skewness × 2), especially for the FL group (extreme skewness values: -1.46 and 1.65). This result suggests that neither group, especially the FL group, had wide within-group score variation for these variables. On the other hand, descriptive statistics for Intrinsic Involvement and Reading Efficacy are more or less normally distributed around the middle value of 3.0–4.0 for both groups.

Table 4. Descriptive statistics for L2 reading motivation variables for the foreign language (FL) and heritage language (HL) groups

<table>
<thead>
<tr>
<th>Motivation component</th>
<th>k</th>
<th>Student group</th>
<th>Reliability</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>FL</td>
<td>.88</td>
<td>5.60</td>
<td>1.21</td>
<td>-1.46** .31</td>
</tr>
<tr>
<td>Extrinsic value</td>
<td>8</td>
<td>HL</td>
<td>.88</td>
<td>5.38</td>
<td>1.24</td>
<td>-0.83** .30</td>
</tr>
<tr>
<td>Intrinsic involvement</td>
<td>6</td>
<td>FL</td>
<td>.82</td>
<td>4.33</td>
<td>1.33</td>
<td>-0.18 .31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HL</td>
<td>.86</td>
<td>3.98</td>
<td>1.43</td>
<td>0.07 .30</td>
</tr>
<tr>
<td>Motivational lack</td>
<td>5</td>
<td>FL</td>
<td>.79</td>
<td>2.18</td>
<td>1.02</td>
<td>1.65* .31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HL</td>
<td>.77</td>
<td>2.24</td>
<td>1.67</td>
<td>0.88* .30</td>
</tr>
<tr>
<td>Reading efficacy</td>
<td>3</td>
<td>FL</td>
<td>.77</td>
<td>3.04</td>
<td>1.44</td>
<td>0.41 .31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HL</td>
<td>.86</td>
<td>3.70</td>
<td>1.67</td>
<td>0.40 .30</td>
</tr>
</tbody>
</table>

Note. * denotes a positively skewed distribution; ** denotes a negatively skewed distribution.
The FL and HL groups’ means for each of the four L2 motivation variables are graphically profiled in Figure 4. To statistically compare motivation profiles between the FL and HL groups, a profile analysis (i.e., two-way repeated-measures ANOVA) was performed with group as one factor and motivation variable means as the other repeated-measures factor (see Kondo-Brown, 2005, for details on profile analysis procedures). When significant differences in level (the between-subject main effect), flatness (the within-subject main effect), and/or parallelism (the interaction effect) were found, follow-up analyses were conducted to identify the specific sources of the differences.8

The results are summarized in Table 5. First, the motivation effect for flatness indicates that the result deviated significantly from flatness, \( F = 140.197, p < .001 \). The post-hoc comparisons indicate that all comparisons were statistically significant \( (p < .001) \). For example, the overall mean for Extrinsic Value was significantly higher than those for the remaining variables. Second, the interaction effect for parallelism was also significant, \( F = 3.772, p < .011 \), indicating that means for the two groups are not completely parallel. That is, while the HL group has a slightly higher mean for Reading Efficacy than the FL group, the former group has slightly lower means for Extrinsic Value and Intrinsic Involvement than the latter group. Third, the group effect for level indicates no significant difference between the FL and HL groups, \( F = 0.095, p < .758 \). Therefore, no post-hoc test was used.

Figure 4. Means for four L2 reading motivation variables between the foreign language (FL) and heritage language (HL) groups.
Table 5. Profile analysis for four motivation variable means by group

<table>
<thead>
<tr>
<th>Source of variance</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
<th>Partial $\eta^2$</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation (flatness)</td>
<td>684.198</td>
<td>3</td>
<td>231.399</td>
<td>140.197</td>
<td>.001</td>
<td>.539</td>
<td>1.000</td>
</tr>
<tr>
<td>Motivation*group (parallelism)</td>
<td>18.678</td>
<td>3</td>
<td>6.226</td>
<td>3.772</td>
<td>.011</td>
<td>.030</td>
<td>.811</td>
</tr>
<tr>
<td>Error</td>
<td>594.198</td>
<td>360</td>
<td>1.651</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group (level)</td>
<td>189</td>
<td>1</td>
<td>0.189</td>
<td>0.095</td>
<td>.758</td>
<td>.001</td>
<td>.061</td>
</tr>
<tr>
<td>Error</td>
<td>237.832</td>
<td>120</td>
<td>1.982</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RQ4. To what degree is motivation related to the TL reading ability estimates (i.e., self-ratings) for each of the FL and HL groups?

The correlations between the TL reading self-ratings and each of the four motivation variables for the FL and HL groups are summarized in Table 6. As the table shows, HL students’ self-ratings were significantly correlated with all motivational variables. The correlations with the Intrinsic Involvement and Reading Efficacy were particularly high for this group ($r = .65$ and $.73$). The FL group’s self-ratings were also significantly correlated with Intrinsic Involvement and Reading Efficacy ($r = .48$ and $.65$) but not with Extrinsic Value and Motivational Lack. As discussed earlier, the FL group’s score distributions for these variables seem to have little variation, and the lack of variance may have caused the lack of significant correlations.

Table 6. Correlations between L2 reading ability self-ratings and reading motivation variables for the foreign language (FL) and heritage language (HL) groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Extrinsic value</th>
<th>Intrinsic involvement</th>
<th>Motivational lack</th>
<th>Reading efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL students</td>
<td>$ns$</td>
<td>$.48^{**}$</td>
<td>$ns$</td>
<td>$.65^{**}$</td>
</tr>
<tr>
<td>HL students</td>
<td>$.44^{**}$</td>
<td>$.65^{**}$</td>
<td>-.28*</td>
<td>$.72^{**}$</td>
</tr>
</tbody>
</table>

Note. *significant at $p < .05$. **significant at $p < .01$.

Conclusions

Pedagogical and Research Implications

The present study found that, first, there was no significant difference in the means of TL reading ability self-ratings between the FL and HL students. The majority of students in both groups reported that they could read simplified notes and letters “easily” and authentic notes and letters “with some difficulty.” The students were also asked to rate their ability to read more advanced-level authentic texts such as magazine articles and novels, which may be expected outcomes for many upper-level FL courses at the university level. The great majority of students in both groups responded that, without using a dictionary, they “have great difficulty or cannot do (it) at all.”

The sources of the difficulties that the FL and HL students reported experiencing in reading authentic texts in the TLs may be worth investigating. For example, research with students in upper-level Japanese language courses has suggested that the lack of knowledge of vocabulary
and especially *kanji* may critically influence the process and outcome of comprehending authentic texts (Kondo-Brown, 2006b). Other studies have suggested that one source of difficulty for advanced-level learners of Japanese in comprehending authentic texts in Japanese is the lack of ability to establish anaphoric or causal relations (i.e., whether statements are meaningfully connected to previous statements; Horiba, 1996; Kondo-Brown & Fukuda, 2008). This line of research—how advanced-level FL and HL students process advanced-level texts—is recommended for all language groups.

Second, in the present profile analysis, among the four identified motivation components, the mean for the Extrinsic Value variable was clearly the highest for both groups of students. In other words, whether they are HL or FL students, students enrolled in upper-level courses are strongly motivated to read or at least strongly interested in reading in the TL because of its extrinsic values. Some of these values seem to be knowledge-based, and others, instrumental. Teachers in upper-level courses should therefore consider helping students achieve these goals: (a) understanding more deeply the lifestyle and culture of the TL group, (b) broadening their view and becoming more knowledgeable, (c) gaining knowledge about various opinions of the TL group, (d) browsing the Internet in the TL, (e) reading newspapers and magazines in the original language, and (f) working or studying in the TL country.

Third, while the present study found no significant difference in TL reading ability self-ratings between the FL and HL groups, the self-ratings seem to vary considerably within each of the FL and HL groups. The present correlation analyses indicate that the self-ratings are positively correlated with two motivational components for both groups: Intrinsic Involvement and Reading Efficacy. In other words, for both groups of students, those who gave themselves higher self-ratings seemed to consider themselves better readers of the TL and were more intrinsically involved in reading in that language.

The association between the intrinsic component of motivation and L2 reading outcomes was confirmed in previous L2 reading motivation studies. The question, then, is how teachers can help students get intrinsically involved in reading. Drawing on meta-analyses of L1 reading research and other references, Guthrie and his associates recommended several interrelated instructional practices to foster elementary and secondary students’ engagement in L1 reading (e.g., Guthrie & Wigfield, 2000; Guthrie et al., 2006). Based on their recommendations, future L2 reading research should investigate how the following recommendations help university students develop the motivation and ability to become competent readers who enjoy reading:

1. Set up clear knowledge-based reading goals that are interesting, personally meaningful, and appropriately challenging to the students (e.g., extrinsic goals discussed above).

2. Use stimulating activities that connect reading to the students’ lives outside of the classroom or school.

3. Support students’ autonomy by providing them with a variety of texts to choose from, based on their cognitive capacity and topics of interest.
4. Provide strategy instruction that may help students improve bottom-up and top-down processing (e.g., effective questioning, use of advanced organizers).

5. Encourage collaborative learning by providing students with opportunities to share their opinions on what they read.

6. Create assessment tools (e.g., rubrics, reading logs) with which students can systematically monitor what they read and how they read.

7. Let the students know that the teacher cares about their progress.

The present study did not find any significant difference in TL reading self-ratings or in the reading motivation profiles. In other words, as far as reading instruction is concerned, HL background does not seem to be a critical factor differentiating the interests and needs of upper-level students. This issue should be explored with a focus on production skills such as writing and speaking. Is HL background a critical factor that may prevent teachers from teaching speaking or writing effectively in single-track upper-level courses?

**Limitations of the Present Study and Suggestions for Future Research**

First, although the self-ratings in this study showed some degree of validity in terms of high reliabilities and concurrent validity, can those who gave higher ratings actually read better? The way FL or HL students appraise their own reading abilities may be influenced by a number of psychological, social, and cultural factors; hence, careful interpretations of self-ratings are recommended. Also, in a study like the present one, where the ability measure in the TL is the key dependent variable, the adoption of multiple ability measurements is recommended to make inferences about the participants’ language abilities.

Second, neither correlation nor regression analyses often used in L2 reading motivation studies (including the present study) are suited for explaining causal relationships between motivation and the development of reading ability. In other words, these studies cannot indicate if motivation is a cause or a result of the measured reading abilities or if both are true. However, another view is that motivation is a dynamic process that evolves in stages and therefore is both a cause and a result of success or failure in language learning (Ushioda, 2001). Future longitudinal qualitative research that investigates the dynamic and complex relationships between motivation and the development of reading ability should be conducted to complement quantitative L2 reading motivation studies.

**Acknowledgments**

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Notes

1. For example, between 2002 and 2006, the enrollments for Chinese grew 51%; Korean, 37%; and Japanese, 28%.

2. The sampling procedures of the present study may have influenced the results. The students who volunteered to participate may have common traits that may not be shared by those who chose not to participate.

3. In this study, heritage identity students who have some connections to the target HL but without immigrant parents were coded as FL students. According to Kondo-Brown (2005), FL students and heritage identity students (students whose grandparents are speakers of the TL and students of the TL descent) had striking similarities in language use and skills. Further, the language use and skills of heritage language students (students whose parents are speakers of the HL) were significantly different either from foreign language students or heritage identity students.

4. The total number of years of studying the TL at the university and elsewhere were entered as a continuous code (e.g., 2 for 2 years, 1.5 for one and a half years).

5. The number of months of living in the region(s) where the TL is spoken were entered (e.g., 0 for never lived or visited less than a month, 1 for 1 month, 60 for 5 years).

6. The CATRC was developed based on the American Council on the Teaching of Foreign Languages reading proficiency ratings (for more information on the CATRC, see Yao, 1995). Although the validity of this instrument has not been published in a major journal, the usefulness of the CATRC to assess reading ability has been validated at such institutions as Brigham Young University, University of Hawai‘i at Mānoa, and Middlebury College.

7. Note that the self-rating distributions were positively skewed for both groups.

8. All repeated-measures ANOVA procedures including profile analysis are highly sensitive to outliers (Tabachnick & Fidell, 2007, p. 395). To screen for outliers, an error-bar chart was created representing the means of the four motivation variables and mean variations (equivalent to three standard errors) for the FL and HL groups. This procedure found no univariate outliers for either group.

9. An analysis of placement essay data collected from HL and FL university students of Japanese (N = 225) indicated that those who received the highest scores were mostly HL students, although in some exceptional cases, FL students demonstrated outstanding writing abilities (Kondo-Brown, 2007).
References


Horiba, Y. (1996). Narrative comprehension processes: A study of native and non-native readers...


### Appendix A

**Can Do Questions for Second Language Reading**

Instructions: Indicate how well you can carry out the following tasks in X using this scale: 1(*with great difficulty or not at all*), 2 (*with some difficulty*), and 3 (*quite easily*).

1. Read personal letters or notes written to me in which the writer has deliberately used simple X words and constructions.
2. Read personal letters or notes written as they would be to a native user of X.
3. Understand newspaper headlines in X.
4. Read and understand magazine articles in X at a level similar to those found in *Time* or *Newsweek*, without using a dictionary.
5. Read popular novels in X without using a dictionary.
6. Read highly technical material in X in a particular academic or professional field with no or only very infrequent use of a dictionary.

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*aThis instrument has been adapted from Clark (1981).

*bNote that “X” in the items refers to the target language, that is Chinese, Japanese, or Korean.

### Appendix B

**Theoretical L2 Reading Motivation Components**

**Reading involvement**

1. I tend to get deeply engaged when I read in X.* (INVO1)
2. I get immersed in interesting stories even if they are written in X.** (INVO2)
3. Long and difficult X passages put me off.* (INVO3)
4. Even when reading materials are dull and uninteresting, I always finish the assignments.** (INVO4)
5. I often feel lazy or bored when I engage in reading assignments for X classes.** (INVO5)

**Motivational strength for reading**

6. Besides reading assignments for X classes, I often look for other readings in X that fall under my interest. (MOT6)
7. I can truly say that I put my best effort into learning to read X.** (MOT7)
8. I would not voluntarily read in X unless it is required as homework or an assignment.* (MOT8)
9. When reading assignments are too difficult, I either give up or only study the easy parts.** (MOT9)
10. I do not have any desire to read in X even if the content is interesting.* (MOT10)

**Reading efficacy**
11. I think I am good at reading in X.* (EFF11)
12. Reading in X is my weak subject.* (EFF12)
13. My fluency in reading X is native-like or almost native-like. (EFF13)
14. My grades for X classes at UH with an emphasis on reading were excellent* (EFF14)
15. I believe I have the ability to reach the point where I will be able to read X novels and newspapers effortlessly someday. (EFF15)

**Intrinsic motivation**
16. I like reading X novels in the original language.* (INTR16)
17. I like reading X newspapers and/or magazines in the original language.* (INTR17)
18. Reading X is a challenge I enjoy.* (INTR18)
19. It is fun to read in X.* (INTR19)
20. It is a pain to read in X. * (INTR20)

**Knowledge-based value**
21. By learning to read in X, I hope to learn more about various opinions of X people.* (KNO21)
22. By being able to read in X, I hope to understand more deeply the lifestyle and culture of X people.* (KNO22)
23. Learning to read in X is important because it will broaden my view.* (KNO23)
24. Learning to read in X is important because it will make me a more knowledgeable person.* (KNO24)
25. Learning to read in X is not important to me: It is a waste of time.* (KNO25)

**Instrumental value**
26. By learning to read in X, I hope to enhance my ability to browse the Internet in X.* (INST26)
27. By learning to read in X, I hope to enhance my ability to read X newspapers and/or magazines in the original language.* (INST27)
28. By learning to read in X, I hope to enhance my ability to read X novels in the original language.* (INST28)
29. I am learning to read in X because I might work/study in China/Japan/Korea in the future.* (INST29)
30. Learning to read in X is important because I plan to get a job that requires advanced skills in reading the language.* (INST30)

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*Items marked by a single asterisk have been adapted from Mori’s (2002) L2 reading motivation questionnaire. Those marked by two asterisks have been adopted from Schmidt and Watanabe (2001).

**The “X” in the items refers to the target language, that is Chinese, Japanese, or Korean.
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