Investigating Features Related to Chinese Linguistic Complexities among International Students Learning Chinese as a Foreign Language

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Abstract

This paper reports on a study investigating features related to Chinese linguistic complexities for international students enrolled in Chinese courses in China. The main objective of this study is to highlight the major feature of Chinese complexities encountered by students in learning Chinese. The study used a survey questionnaire developed by Zhang (2013) to collect the data from 147 male and female Bachelor, Master and Ph.D. students enrolled in basic Chinese classes in two universities in China. Based on certain Descriptive and ANOVA calculations, findings of the study indicate that the participants indeed experienced different features related to linguistic complexities.

Keywords

Chinese as a Foreign Language; Linguistic Complexities; Native Language Interference

INTRODUCTION

Success and failure in learning a second language depend on different variables. The most fundamental of these variables are intelligence, attitude, language aptitude, learning styles, learning strategies, second language complexities and native language interference (Nation, 2001; Dornyei, 2006; Lightbown et al., 2006; Ellis, 2008; Lord, 2008; Fatemi, Sobhani & Abolhassan, 2012; Khan, 2011; Karim & Nassaji, 2013).

In the field of second language learning, linguistic complexity has been generally used as a dependent variable (Bulte & Housen, 2012; Norris & Ortega, 2009). Ellis (2003: 128) identifies three main reasons for assessing linguistic complexity as gauging proficiency, describing performance, and benchmarking development. Second language complexity has been recognized in two distinctive ways: as cognitive and linguistic complexity (Williams & Evans, 1998; Housen, Pierrard & vanDaele, 2005; deKeyser, 2008). Both cognitive and linguistic complexity mainly refer to a variety of language features and subsystems like items, patterns, structural, phonological,
morphological, syntactic, lexical rules (Housen, 2009).

On the other hand, native language interference is another variable in second language learning which often takes place in any linguistic situation while learning or using a second language (Nation, 2001; Lord, 2008; Fatemi, Sobhani & Abolhassan, 2012; Nassaji, 2013). Language interference is defined by many linguists. According to Krashen (1982), language interference can due to habit, of the surface structure of the first language onto the surface of the target language”. Ellis (1997) defines language interference as the “errors in the learner's use of the foreign language that can be traced back to the native tongue”. Also, Elder and Davies (1998) state that language interference come from language distance and the relative degree of differences between the target language and native language is referred to as language distance, which may affect the degree of success of language learning.

Thus, as research shows there are different variables which can affect the second language learning process. Two of these variables are language learning complexities and native language interference (Housen, 2009; Lee & Kalyuga, 2011; Mede et al., 2014). This study is to highlight features related to Chinese linguistic complexities as well as native language interference encountered by international students while learning Chinese in China.

**Statement of the Problem**

Recently, there have been many people learning Chinese as a second language, and they begin their studies with profound enthusiasm. However, the level of this enthusiasm does not last long, and soon students change their preferences and lose that motivation especially in their first year studying Chinese (Donche, vanPetegem & Vanthournout, 2011; Vanthournout, 2012).

Research shows that there are different factors which demotivate Chinese language learners to continue their learning process. The target language complexities and native language interference in the target language learning process are two critical issues in second language learning (Lee & Kalyuga, 2011; Mede et al., 2014). When it comes to Chinese, even Chinese people themselves are proud of their language complexities and say that it might be the most difficult language in the world (Moser, 1991). Moser also states that it is familiar with anyone starting to undertake studying Chinese as a foreign language to ask him/herself “why in the world am I doing this?” after some time. Moser (1991) in the end concludes ‘if you don't know the difficulties in the Chinese language, you'll never know it’. Kajta (2015) on the other hand claims that even without the learning the characters, Chinese is
difficult to learn (Kažta, 2015). Moreover, Lee and Kalyuga (2011) state that the lack of resemblance between Chinese language characters and the way they are pronounced (Pinyin) makes the language more difficult. Tinsley (2014) further asserts that there are a great number of students who believe that compared to any other languages, Chinese is hard to learn.

Also, native language interference is seen as another affecting variable on learning a foreign language. Mede et al (2014) state that in second language acquisition, there is a high probability of native language impact which may cause certain errors. Mispronunciation and grammatical errors are reported as the most common types of interference between native language and second language learning by Manrique (2013). Ashari and Munir (2015) also claim that the interference between native language and target language mainly happen about the target language complexities.

However, about teaching Chinese as a foreign language, research shows that Chinese has remained as the most understudied as concerned with international students' language learning complexities (Yu, 2010). Yu also adds that very little research has investigated international students' academic adaptation to language attitudes and motivation. Kažta (2015), further states that there are lots of discussion on barriers of teaching Chinese to foreign students and lack of agreement in this regard has led to the application of the variety of approaches to teaching Chinese as a foreign language. China National Knowledge Infrastructure (CNKI), Chinese Teaching in the World and Journal of International Chinese Teaching, on the other hand, confirm that research findings on teaching Chinese as foreign language complexity are scarce (Tsui, 2017).

Considering the everyday number rises of foreign students learning Chinese as a foreign language, linguistic complexities of Chinese and the interferences of native language in learning a second language is essential. It is also needed to highlight the related features of linguistic complexities that are encountered by foreign students. Another languages interfere with the process of learning Chinese as a foreign language. The research questions are as follow:

1. What are the main features related to Chinese linguistic complexities encountered by international students while learning Chinese?
2. Do languages affect Chinese complexities?
3. Do international students with different native language background experience the same level of linguistic complexities while learning Chinese?
The Significance of the Study

The study is conducted to achieve a two-fold purpose: to highlight features related Chines linguistic complexities encountered by international students while learning Chinese in China and to investigate languages interfere in learning Chinese. Findings of this study will result in knowing Chinese complexities to foreign learners of Chinese and reducing the number of linguistic complexities. The findings of this study will also have practical suggestions to Chinese courses instructors as well as new international Chinese learners on understanding Chinese complexities and their native language interference and overcoming these complexities while learning Chinese.

Background of the Study

In an educational setting, learning complexities are generated through different social, cultural, parental, attitudinal, motivational, psychological, personal and academic factors and such complexities limit the achievements of learners (Cassity & Harris, 2000; Copeland, 2007; Eberly, Joshi & Konzal, 2007; Reeves, 2009; Walker-Dalhouse, Sanders & Dalhouse, 2009). According to Conn (1995), there are two main types of learning barriers as the perceived barriers and the actual barriers in adult learning and they are formed into three categories: institutional barriers, situational barriers, and dispositional barriers. Linguistic complexities are part of the institutional barriers (Conn, 1995). Henderson (2005) states that since language can impact various aspects of our daily lives, much research is required to investigate our daily communication complexities especially when it comes to learning a second or a foreign language. Kim (2009) also adds that linguistic complexities are language learning complexities which impact second language learning process and create negative emotional and cognitive reactions, which avoid language learners from taking required actions about their learning progress.

On the other hand, second language complexity has been described as cognitive and linguistic complexities (Williams & Evans, 1998; Housen, Pierrard and vanDaele, 2005; deKeyser, 2008). Cognitive complexity is explained from the second complexity is defined based on the second language features. Cognitive complexity indicates the relative complexity in which language features are applied in second language acquisition and performance. It is a broader concept than linguistic complexity and a factor which can contribute to learning or processing difficulty. Linguistic complexity, on the other hand, is regarded in two different ways. The first is a dynamic feature system and the second is a more constant
feature of the individual linguistic components which construct the interlanguage system (Housen, 2009).

Certain recent studies also demonstrate that international students face linguistic complexities in language performance and proficiency about their second language learning (Hayes & Lin, 1994; Kagan & Cohen, 1990; Ying & Liese, 1994). Among the languages, Chinese is one of the difficult languages, especially for foreign learners. One of the major challenges of learning Chinese is learning different Chinese linguistic elements such as strokes, which requires much time (Lee & Kalyuga, 2011) and this challenge mainly comes from lack of correspondence between the characters and their pronunciations. Moreover, the huge number of Chinese Characters which needs a lot of time to be learned is another complexity for Chinese students as a foreign language (Sung & Wu, 2011). Xing (2004) on the other hand asserts that lots of higher level students have problems using upper intermediate vocabulary in their daily communication and use the lower level words and phrases like beginners.

Some empirical studies also highlight the different challenges that international students face while learning Chinese. Yu and Watkins (2008) in their study on international students explore that second-year international students come across more challenges in learning Chinese than other years. Also, Halliday (2014) suggests three points in his study on problems with teaching Chinese to foreign students. First, he points out that in the beginning, the best Chinese teachers are the ones who speak the same language as the students. Secondly, he states that Chinese characters should not be taught at an early stage and thirdly Halliday adds that much attention should be given to phonological accuracy in Chinese.

Moreover, Wang, Perfetti, and Liu (2003), in their study in an American college find that students who study the Chinese language for one semester face significant challenges about learning the tones and these challenges mainly come from lack of languages. They further conclude that a large number of homophones in the Chinese language is another challenge that Chinese foreign language learners encounter. Further, Gao (2007) investigates the obstacles that American students encounter during their studies in China. He highlights three types of obstacles as cognitive, motivational and cognitive obstacles are due to their low language proficiency levels.

On the other hand, due to different factors, research shows that the first language influences the process of second language learning. Factors like similarities and differences in the structure of the two
languages, prior know and first language proficiency but these factors have both positive and negative impacts (Drakhsahn, 2015). Hayati (2008) states that the degree of difference between the first and target language depicts the degree of complexity while the degree of similarity shows the degree of simplicity. Bhela (1999) asserts that writing and speaking in a target language, the learners tend to rely on their native language structures. Bhela adds that language interference is an error which is traced back to the first language. Karim and Nassaji (2013) examine the native language interference in second language writing skill and find a significant interference of native language in the second language writing performance. Fatemi, Sobhan, and Abolhassan (2012) also in their study on the interference of native language and second language explore that the difference in consonant clusters in native and second languages causes challenges about second language pronunciation. However, Jin (2006) claims that only a few studies investigated the impact of particular linguistic strategies on learning Chinese.

Thus, as research shows there are lots of challenges that non-Chinese students face while learning Chinese. Findings of this study will result in knowing these complexities and reducing the number of them as learning barriers, non-Chinese learners.

METHODS

Participants

The participants of the current study were 147 international bachelors, master, and Ph.D. students who enrolled in different majors at two universities in China. They were enrolled in 6 different basic Chinese courses 16 to 40. Their native languages were different. The 147 participants spoke in 12 different languages and came from 15 different countries. Out of 147 students, 40 (27%) were female. Beside their majors, they were also enrolled in basic Chinese classes by the universities.

Almost half of the participants (46%) were Asian (Afghan, Pakistani and Arab), whose native languages were Persian, Urdu and Arabic, respectively. Most of the participants (98, 66.7%) spoke five languages, Urdu, (32, 21.8%), Persian (20, 13.6%), Spanish (19, 12.9%), Arabic (17, 11.6%) and Swahili (10, 6.8%).

Instrument

The instrument was a survey questionnaire adopted from Zhang (2013) and used to collect the data in the current study. It was conducted at the end of
December 2018. The instrument was found to have a high internal consistency when $\alpha = 0.774$, which indicates it to be reliable.

The questionnaire comprised two major parts with 23 items. The first part included ten items asking demographic information such as gender, age, country of origin, native language, education level, university, major, English proficiency, number of months/years in China and how long they studied the Chinese language.

The second part of the questionnaire comprised of two different themes with 13 items. The first theme including eight items was mainly on features related to Chinese linguistic complexities. The second theme comprising seven items was asking about native language interferences. The second part of the questionnaire must have been answered on a five-point Likert scale from 1 (Strongly disagree) to 5 (Strongly agree).

The questionnaire sheets were distributed to the participants by their Chinese class teachers. They were asked to read every part carefully and respond truthfully.

To answer the first research question, a descriptive analysis was conducted to show the frequency and percentage of the participants and their level of agreement in terms of every item in Chinese linguistic complexities. As shown in table 3, the statistics demonstrates that for linguistic complexities theme, the items in which the participants showed the highest level of agreement are item 4, 112 (76.2%), followed by item 2, 109 (74.2%), item 3, 107 (72.7%), item 5, 94 (64%), items 7 and 8, each 91 (61.9%), item 1, 77 (52.4%) and item 6, 67 (45.6%).
The results suggest that the participants believed that the most complicated part of learning Chinese is learning the Sound Similarities in oral communication. Following this, learning Chinese Characters are reported as the second most challenging part of learning Chinese. For the rest of items, 3, 5, 7 & 8, 1 and six respectively, the participants also represent a higher level of agreement than disagreement. Among the eight items, item 6, Chinese Grammar is believed to be the least complex. Thus, it could be assumed that the participants agree with the total items in the linguistic complexity theme as Chinese complexities.

To answer the second research languages interfere learning Chinese, a descriptive analysis was conducted to show the frequency and percentage of the participants and their level of agreement in terms of every item in their native language interference. The statistics in Table 4 shows that the item in which the participants represent the highest level of agreement is item 1, 109 (74.1%). It shows that most of the participants thought that the Chinese

## Table 3. Linguistic Complexities Theme

<table>
<thead>
<tr>
<th>No</th>
<th>Theme 1</th>
<th>Likerts (Number &amp; Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Items</td>
<td>1 SD</td>
</tr>
<tr>
<td>1</td>
<td>Choosing proper words in oral Chinese learning is the most difficult</td>
<td>6 (4.1)</td>
</tr>
<tr>
<td>2</td>
<td>The most difficult part of learning Chinese is learning the Characters.</td>
<td>12 (8.2)</td>
</tr>
<tr>
<td>3</td>
<td>Differentiating the tones in words are the most difficult in learning oral Chinese.</td>
<td>3 (2)</td>
</tr>
<tr>
<td>4</td>
<td>Sound similarities in oral communication are most challenging in learning Chinese.</td>
<td>5 (3.4)</td>
</tr>
<tr>
<td>5</td>
<td>Finding the proper words in expressing meaning in oral Chinese is the most complicated.</td>
<td>0 (0)</td>
</tr>
<tr>
<td>6</td>
<td>Chinese Grammar is the most difficult part of learning Chinese.</td>
<td>14 (9.5)</td>
</tr>
<tr>
<td>7</td>
<td>I always have difficulties remembering Chinese words that I try to memorize.</td>
<td>8 (5.4)</td>
</tr>
<tr>
<td>8</td>
<td>I always have difficulties in using words in the right context in oral Chinese.</td>
<td>9 (6.1)</td>
</tr>
</tbody>
</table>
language is more difficult than their native languages. However, the item in which the participants show the lowest level of agreement is item 3, with a frequency of 67 (45.6%). It means that there is an almost moderate level of agreement in the fact that the participant's native languages always interfere with their oral Chinese learning.

Table 5. The total means of Linguistic Complexities and Native Language Interference

<table>
<thead>
<tr>
<th>Themes</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text Complexities</td>
<td>147</td>
<td>3.57</td>
<td>.670</td>
</tr>
<tr>
<td>Native Language Interfere</td>
<td>147</td>
<td>3.42</td>
<td>.705</td>
</tr>
</tbody>
</table>

As for the other two items, item 2 and five each shows 89 (60.5%) and 83 (56.5%) of the agreement, respectively. These results suggest that the participants thought that native language significantly interferes in learning Chinese as a foreign language, especially through language structure. This is similar to what is highlighted in related research on the interference of native language on learning a second language.

To answer the third research questions, 98 participants were grouped by their native language backgrounds. They spoke five different languages: 32 Urdu, 20 Persian, 19 Spanish, 17 Arabic, and 10 Swahili, as their native languages. A one-way ANOVA was conducted to calculate the mean difference among five different languages' groups. Tables 6 and 7 show the descriptive analysis
as well as the output of ANOVA of the five different language groups, respectively.

Table 6. Descriptive statistics of the mean, standard deviation and confidence interval of the five different language groups

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persian</td>
<td>20</td>
<td>3.6692</td>
<td>.61695</td>
<td>.13795</td>
<td>3.3805 - 3.9580</td>
<td>2.15</td>
<td>5.00</td>
</tr>
<tr>
<td>Urdu</td>
<td>32</td>
<td>3.7452</td>
<td>.50628</td>
<td>.08950</td>
<td>3.5627 - 3.9277</td>
<td>2.62</td>
<td>5.00</td>
</tr>
<tr>
<td>Arabic</td>
<td>17</td>
<td>3.5158</td>
<td>.39107</td>
<td>.09485</td>
<td>3.3148 - 3.7169</td>
<td>2.92</td>
<td>4.23</td>
</tr>
<tr>
<td>Spanish</td>
<td>19</td>
<td>3.5749</td>
<td>.47720</td>
<td>.10948</td>
<td>3.3449 - 3.8049</td>
<td>2.69</td>
<td>4.62</td>
</tr>
<tr>
<td>Swahili</td>
<td>10</td>
<td>2.9615</td>
<td>.84206</td>
<td>.26628</td>
<td>2.3592 - 3.5639</td>
<td>1.54</td>
<td>4.38</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>3.5769</td>
<td>.58356</td>
<td>.05895</td>
<td>3.4599 - 3.6939</td>
<td>1.54</td>
<td>5.00</td>
</tr>
</tbody>
</table>

As shown in Table 6, Urdu has the highest mean of (3.7452). Following that, Persian, Spanish and Arabic have a lower mean, respectively. However, among the five languages, Swahili has the lowest mean of (2.9615).

Table 7 demonstrates there is statistically a significant difference between the groups as determined by the one-way ANOVA, F (4. 93) = 4.076, p = .004. A Bonferroni Post-hoc comparison was also carried out to show where the significant difference was among the groups. There was statistically a significant difference between Swahili and the other four languages. Swahili had a significantly lower mean than Urdu, Persian, Spanish, and Arabic, respectively. However, the means of the other four languages were different but not statistically significant from one another.

DISCUSSION

The current study aimed at finding complexities as well as their native learning Chinese. In addition, the study also explored whether international students with different native languages experienced the same linguistic complexities while learning Chinese. The result revealed that the participants indeed experienced a lot of linguistic complexities. Moreover, the result languages interfered the process of learning Chinese. The following are the issues that cause linguistic complexities and native language interference.

Learning sound similarities in oral communication is reported to be the most complex part of learning Chinese. The participants believed that among other complexities such as characters, grammar, and tones, sound similarities in oral communication is the most complex part of
this language. After sound similarities, learning characters are reported as the second most complex part. Thus, among the eight items in the questionnaire, which demonstrate eight different complexities, the Similarities in were reported to be the most complex parts of learning Chinese respectively. This result is somehow in line with Wang, Perfetti and Liu (2003) who claim that these challenges mainly came from a lack of the same characteristics in the students' native languages. They further concluded that a large number of homophones in Chinese is another challenge that Chinese foreign language learners encounter.

As for native language interference, there were five items which demonstrate native language interferences. Most of the participants (74.1%) thought that Chinese is more difficult than their native languages. Following this, the result showed that when participants came to difficult sentences in Chinese, they always thought in their languages first and translated them into Chinese.

<table>
<thead>
<tr>
<th>Table 7. The output of the analysis of variance (ANOVA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANOVA</strong></td>
</tr>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>Between Groups</td>
</tr>
<tr>
<td>Within Groups</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

In terms of whether participants with different native languages background experienced the same Chinese linguistic complexities, the result of one-way ANOVA showed that Swahili language speakers experience the least Chinese linguistic complexities with a mean of (2.9615) while Urdu native speakers experienced the most complexities with a mean of (3.7452) among the five language groups. Following Swahili, Arabic with a mean of (3.5158), Spanish (3.5749) and Persian (3.6692) speakers were reported to experience lower Chinese linguistic complexity compared to Urdu speakers, respectively. However, there were no statistically significant differences between the means of Arabic, Spanish, Persian, and Urdu.

CONCLUSION

Language complexities and native language interference are barriers which can create negative emotional and cognitive reactions and avoid language learners from taking required actions about their learning progress (Kim, 2011). This study aimed at highlighting Chinese linguistic complexities as
language interference in China. The data was gathered through a thirteen-item survey questionnaire on Chinese linguistic complexities. The paper analyzed and discussed the major features related to Chinese linguistic complexities and native language interference. Out of eight linguistic complexities, Sound Similarities, learning Characters and Tones in Chinese were reported as the most major features of complexities in learning Chinese as a foreign language, respectively. However, for native language interference, the item in which the participants showed the highest level of agreement was the issue that Chinese is more difficult than their native language. Translating Chinese into their native language while facing a linguistic difficulty, was regarded as another interference.

As for the participants with different native languages backgrounds, the result showed that participants who used Swahili as their native language experienced the least Chinese linguistic complexities while Urdu native speakers experienced the most complexities. However, there were no significant differences among the means of Arabic, Spanish, Persian, and Urdu.

Limitations

One of the purposes of this study was to explore whether students with different language background experienced the same Chinese linguistic complexity. However, the number of Swahili language speakers who was shown to experience the least complexities in this study was only 10, which is limited. Thus, future studies are suggested to include more languages with more participants to see which language speakers experience more or less linguistic complexities while learning Chinese.

Implications

Sound Similarities, Chinese Characters, and Chinese Tones are three main features related to Chines linguistic complexities. Non-Chinese students are recommended to elaborate more on them, which will result in reducing the level of such linguistic complexities. Also, Chinese teachers are suggested not to underestimate such native language interference. Moreover, future studies are also recommended to elaborate on what in first languages cause complexities in learning a second language.

REFERENCES


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