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Unique challenges of learning to write in the Japanese writing system

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Introduction

This chapter explores the challenges associated with learning Japanese as a second and foreign language, particularly investigating the barriers to literacy associated with alphabetic first language users who are learning to write in morphographic and syllabic scripts. The Japanese writing system consists of three types of script (*kana*, *kanji*, and *romaji*), which are used simultaneously, and which linguistically represent the language in vastly separate ways: its syllables, its morphemes, and its phonemes. Kana, the Japanese syllabary, is written using a further two scripts, *hiragana* and *katakana*. Due to this complex representation of language at its different linguistic levels, the Japanese writing system is often considered the exception in world writing systems research. Almost all other languages use a writing system that represents just one dimension of the language, usually its phonemes (however orthography varies greatly, and one symbol does not always map to one phoneme in most languages). The unique challenges associated with learning the script often go unaddressed in L2 writing theory, which tends to focus on learning to write in alphabetic scripts. Recent research on other complex scripts has suggested that a script's visual complexity can pose different challenges to those reported for less visually complex orthographies (e.g. Nag et al., 2014). Therefore, for L2 writers, Japanese may pose unique challenges that are largely uncaptured by L2 writing research, which has predominantly focused on learning to write in alphabetic writing systems.

A number of studies have highlighted L2 students' difficulties in learning to write in Japanese, indicative of the slower rate with which learners from alphabetic language backgrounds acquire Japanese compared to other European languages. In early work, researchers (e.g. Walton, 1993) indicated that Western students of Japanese progress more slowly than those studying traditional modern languages, suggesting Japanese is acquired three times more slowly than languages like German or French. In a study conducted with US State Department employees who were engaged in language training, Jackson and Malone (2010) found that learners of Japanese took four times as long to reach the same benchmark of proficiency as French, German and Spanish. Importantly, we cannot attribute slow proficiency development entirely to issues involving L2 writing, as Japanese is also syntactically, morphologically, and

lexically separate from Indo-European languages. However, it is clear that the writing system creates a formidable barrier for L2 learning. Everson (2011, p. 251) concurs with this notion in stating that despite other linguistic differences, the character-based writing system “presents special challenges for learners whose first language (L1) employs the Roman alphabet”. Moreover, the writing system is posited as a deterrent for learners to study the language to higher levels. For example, the difficulties faced by L2 learners of written Japanese has been linked to high attrition rates in Japanese language programs in Australia (Kato, 2002), which was an early adopter of Japanese as a Foreign Language (JFL) education. Such a relationship suggests that research into the challenges of JFL writing is essential in promoting JFL education in general.

My own studies have examined the unique challenges posed by learners of Japanese as a second language (e.g. Rose, 2003; Rose 2013; Rose and Harbon, 2013; Rose, 2017), and have focused on the cognitive, metacognitive and affective load placed on learners when memorizing kanji. When writing up these studies, I have often found it very difficult to position my findings in L2 reading and writing theory, because the learning experiences of Japanese language learners do not align with the learning experiences of students writing in English, in which much L2 writing research is contextualized. In fact this appears to be an issue for other researchers (e.g. Chikamatsu, 2005; McKinley, 2014) who need to position their research in broader concepts of learning, psychology, or cognitive theory in order to contextualize the processes observed in the data. This can be problematic in that much of the research into the L2 learning of Japanese is not being used to inform a current theory of L2 writing.

This chapter aims to provide a theoretical commentary on our current understanding of learning to write in Japanese as a foreign and second language. In this commentary, some key concepts in L2 writing will be challenged as being overly representative of L2 *English* writing, concurring with the findings of McKinley (2014; *see this volume*), who suggests that cross-cultural rhetoric theory is very unidirectional in its description of how Japanese students learn to write in English, but not how English speaking students learn to write in Japanese. The chapter will draw upon data collected from learners in Japan and Australia in order to illustrate key differences. The chapter will show that many currently accepted concepts in L2 writing do not fully explain the learning of complex writing systems such as Japanese.

Overview of the language

Modern day standard Japanese is rooted within an independent language family of Japonic languages, and as such it does not share historical linguistic origins with other world languages, like Indo-European languages do. Thus, Japanese is fundamentally different from the native languages of all JFL learners on most linguistic dimensions, particularly phonologically, syntactically, and morphologically. However, due to historical ties with China, and then later with the US, there has been substantial lexical borrowing from Chinese, and to a

lesser extent English. Some Japanese dictionary sources claim up to 50% of Japanese have their origin in *kango* (words borrowed from ancient Chinese), and 9% from *gairaigo* (other foreign languages, but predominantly English). However, these words have been integrated in a Japanese phonology, syntax and morphology, so knowledge of Chinese and English only provides a little help in understanding the spoken language. Chinese speakers, however, have one advantage over their English speaking JFL counterparts, in that the Chinese writing system was adopted from China from the 5th century, and remains the predominant script used to represent the Japanese language today. This historical tie means that readers of Chinese language have the advantage of a knowledge of a morphographic script and how it represents language, as well a knowledge of some phonological clues due to shared historical roots of certain modern day Chinese words and Japanese *kango*.

It is important to note that Japanese and Chinese are not linguistically related, which means there are inherent problems in transferring the writing system from one language to the other. This is very different from other examples of writing system transference, such as the adoption of the Roman alphabet to represent other spoken European languages. Although there were fundamental phonological differences in these languages, they were linguistically related and problems were easily overcome with additions, deletions, substitutions, and orthographic rules. Because the Chinese writing system was developed to linguistically represent Chinese languages (tonal languages with relatively transparent morphologies), the adopted script (*kanji*) was in fact a poor match for Japanese. Japanese, compared to Chinese, relies on a lot of verb and adjective inflections to convey its grammar, which are best relayed phonologically—something which a morphographic script is poor in communicating to a reader. This reality saw the introduction of *kana* (two syllabic scripts) from the 9th century, which was first developed as a means to represent the language phonologically. Kana were intended as an uneducated person's substitute for kanji, but their clear effectiveness in representing the sounds of the language meant that they were subsequently adopted into the main writing system to fill the phonological gaps that kanji could not represent. Thus, in modern day Japanese, kanji is still used to represent content words in the language (e.g. its traditional *nouns*, *adjectives*, and *verbs*), while one kana script (*hiragana*) is used to represent its grammar (e.g. its particles and markers) and its morphology (e.g. verb and adjective stem conjugations and inflections). The other kana script (*katakana*) is mostly used to represent foreign words that emerged in the modern era, for which no kanji was assigned (e.g. words like *computer* and *hamburger*, but also words like *table* and *dress*, which were marked differently from the Japanese equivalents of similar objects). Increasingly *romaji* (the Roman alphabet) is being used in Japanese, although it is largely for stylistic purposes, rather than as a replacement for katakana.

The challenge of kanji

Also, due to lexical borrowing from Chinese alongside the use of original

Japanese words, kanji have developed different readings: *onyomi* (readings of Chinese origin), and *kunyomi* (readings of Japanese origin), with some kanji having multiple onyomi or kunyomi, depending on the words they represent. For example, the kanji for under (下) can be read according to:

- three kunyomi: *shita* (in the word for socks), *kuda* (in the verb to go down), and *sa* (in the verb to lower)
- two onyomi: *ge* (in the word for sewer), and *ka* (in the word for earth)

Moreover, due to this type of borrowing, kanji can be monosyllabic, as in the reading of *ha* for 歯 [tooth], and polysyllabic, as in the reading of *ka-su-mi* for 霞 [mist]. Thus, whereas in Chinese, each character of the writing system generally approximates to one morpheme, one syllable, and one reading, in Japanese each kanji does not represent the language with the same level of precision.

The quantity of discrete characters in the Japanese writing system is also a challenge for JFL writers. In addition to 46 hiragana and 46 katakana, which are used to represent 204 sounds with the addition of diacritics, a learner must master 2,136 *joyo* [official everyday use] kanji to be functionally literate in the language. This represents a massive cognitive load of the learner. The challenge of learning to write in such a complex language, therefore, has pedagogical implications that have been largely unaddressed by L2 writing research in applied linguistics.

This aspect of the writing system is further complicated by the different ways in which a kanji can represent the language. Although kanji are often described as being morphographic representations of meaning, the majority of kanji are not pictographic. In basic terms, kanji can be broken into three categorizations according to how they connect to their morphemes: Pictorial characters, which are “stylised representations of the object they represent”; Abstract characters—“arbitrary symbols for words”; and Combination characters—“the synthesis of two characters (or components) into one” (Paradis et al., 1985: 26). As an illustration:

1. a mountain [山] is pictorially represented by the kanji for mountain, where its etymology is still distinguishable in its modern shape;
2. the number 10,000 [千] is abstractly represented by an arbitrary symbol
3. the concept of tomorrow [明] is represented in a single kanji which is formed by the combination of two components for day [日] and night [月].

For learners of Japanese, this basic categorization of kanji is sufficient in providing an understanding that kanji represent morphemes in different ways, however, it should be noted that it is not a comprehensive guide to the full range of ways in which kanji operate. Many Japanese linguists prefer to use a more etymologically accurate categorization of six types of kanji, which are:

1. Shokeimoji (pictographs): Pictorial representations of meaning
2. Shijimoji (logograms): Symbolic representation of abstract ideas

3. Kaiimoji (ideographs): A combination of pictographic components
4. Keiseimoji (semasio-phonetic ideographs): A combination of components, of which one gives a clue to the original pronunciation or meaning
5. Tenchuumoji (derivative characters): Kanji that have been derived from an original concept that has been disassociated
6. Kashamoji (phonetic loan characters): Kanji that have been adopted into current usage for phonetic reasons

This six-type system provides further evidence of the complexity of this script, as some kanji types such as kaiseimoji and kashamoji call into question the notion that all kanji are morphographs, as they actually draw linguistic connections to the phonology rather than the meaning or morphemes of the language.

L2 writing practices

The quantity of kanji and the complexity of the writing system in general means that much effort is required to learn it. Even native speakers of the language require 9 years of formal schooling to master all 2,136 joyo kanji. Moreover a large percentage of the national curriculum is devoted to learning how to write; at most universities kanji knowledge tests make up 25% of their entrance exams. Clearly, from the outset, we can see an importance placed on teaching and testing the writing system, which has no equivalent in alphabetic language contexts. The importance of learning the writing system also filters down into JFL curriculum. When I was a student of Japanese in Australia—and also when I worked later as a teacher—the Japanese writing system took up at least 25% of class time (if not more), and about 75% of assigned homework and self-study. While each teaching and learning context is different, it is a fair assumption to say that a focus on learning to read and write Japanese encompasses a large amount of students' learning focus, and unlike learning to read and write in an alphabetic script, the time devoted to learning the writing system intensifies rather than diminishes as a learner's proficiency develops.

Learning to write in Japanese in JFL classrooms tends to mimic the practices of native Japanese children learning to write. There is a lot of repetitive practice (writing characters over and over), an emphasis on rote memorization of kanji lists, and a clear focus on form in terms of producing visually accurate characters according to the prescribed stroke order. This notion is illustrated by a survey of 251 Japanese teachers in the United States, which found that the preferred instructional method of most teachers was rote learning (Shimizu & Green, 2002). Teachers in this study indicated that they often utilized activities such as repetitive writing, frequent quizzes, and the incorporation of practice drills into writing classes. These practices seem to be in contrast with literature on L2 writing, which has developed “a view of L2 writing as a socially situated activity” (Atkinson, 2003: 5), and has moved beyond process approaches to genre-based pedagogies (Hyland, 2003). Japanese writing, it seems, never made it to the process stage, let alone post-process, and thus remains firmly cemented in

product-based approaches. Second language writing scholars (e.g. Casanave 2003; McKinley, 2010, 2013) have noted that in Japan the process revolution never actually happened, and while she was referring to L2 learning of English, the same observation can be applied to the teaching of Japanese. It also contradicts theory in cognitive educational psychology, which suggests rote learning to be a poor memorization strategy due to a shallow level of processing (e.g. Matlin, 2005). Nevertheless, this teaching method prevails, partly due to its historical tradition in Japanese language education, but also due to a lack of other suitable L2 writing instructional methods.

Disjuncture between speaking and writing abilities

Likewise, it is difficult to position the teaching of L2 writing in Japanese with instructional approaches of other foreign languages. In learning English, for example, learners have long been encouraged to engage with authentic materials in their writing (Breen, 1985; Widdowson, 1998), and to develop writing through process approaches (Flower & Hayes, 1981). However, any learner of Japanese will soon discover the inaccessibility of authentic materials to them. Most students at an intermediate level (or even at an advanced level) would be unable to read a newspaper aimed at a Year 6 reading level, due to an insufficient knowledge of kanji. Likewise, an adult learner trying to engage with authentic materials at younger levels would still find it difficult to engage with books aimed at children, who would have a vastly wider vocabulary range. Thus, the use of such materials, particularly when writing on topics related to their Japanese classes, is impossible for most learners, even at the intermediate and advanced level.

A problem, therefore, with the teaching of JFL is a disconnection between progression in the written language and the overall proficiency of the student. A student will build up a knowledge of spoken Japanese at a much faster rate than their written knowledge. This gap is illustrated by using the Education Queensland curriculum for high school Japanese. Queensland was an early adopter of Japanese language education (Rose and Carson, 2014), and thus makes a useful backdrop to explore a mature JFL program of study, which may be reflective of other JFL curricula. In this curriculum, students at the exit level of senior Japanese are expected to converse on a range of topics from economic and social issues, to current affairs, to music, art and literature. In addition to this they must be able produce all kana and 250 kanji. In reality, many students do not reach this benchmark, and have a knowledge of spoken language which they cannot fully represent in written form. What results from this disparity is a gap between a learner's vocabulary knowledge and their writing development; simply put, one can know a word, but not know how to read or write it. This leads one to question the role of writing in JFL contexts, and to question the purpose it serves. While writing can be used to support foreign language development in most languages, this cannot be said for Japanese as writing skills lag behind spoken skills development.

Uniqueness of these challenges

Because of the unique features of the Japanese writing system, many accepted practices of L2 writing pedagogy are ill-fitting for JFL instruction. Practices that fall within theories of process writing, genre-based approaches, responding to writing, rhetoric and composition seem somewhat out of reach for JFL learners, who are for the majority of their writing classes still learning the equivalence of their 'ABCs'. To provide an illustration of how research into writing practices and L2 instruction in general are an ill fit for the challenges outlined thus far, I refer to a summary of research into L2 instruction by Hinkel (2011). In this summary, Hinkel showcases L2 instructions centering on activities such as:

“generating ideas and producing L2 text, organizing ideas in keeping with L2 discourse conventions, planning and outlining, paragraph and text development, drafting, revising at the discourse and sentence levels, considerations of audience, lexical choice, precision, and vocabulary changes, dictionary uses, spelling, punctuation, editing, and error correction, as well as using computers for writing, grammar practice, and vocabulary development... .. As a follow-up, learners usually receive instruction in paragraphing, discourse structuring and organization, sentence construction, vocabulary, narrative or argumentation conventions, cohesion development, revising, and editing, as well as linguistic aspects of text” (Hinkel, 2011: 532)

Hinkel (2011) goes further to explain that innovative modern activities have increased in popular use in L2 writing classes, including writing from source materials, analysing language in print and online media, examinations of academic texts or business sources, and producing critiques.

Much of this research, however, is based on studies with speakers of alphabetically-based first languages learning to write in a second language which uses the same or a similar alphabet (e.g. Spanish speaking students learning English). Even in the cases of research with students writing in a different writing system (e.g. Chinese or Japanese students learning to write in English), the research is almost entirely unidirectional, with a paucity of research for English speakers learning to write in Chinese or Japanese. Moreover, due to the pervasiveness of the Roman alphabet within Chinese and Japanese writing (e.g. roman letters are learned by Chinese and Japanese children to write *pinyin* and *romaji*), L2 learners are already familiar with the script before learning their L2.

Because many students of Japanese (even at the intermediate and advanced levels) have not mastered the orthography of the language, ideas of incorporating source material in L2 writing, or examining print and online media, or writing critiques are far beyond the capabilities of most JFL learners. While some level of composition does take place in JFL classes, especially when learners are allowed to write in the syllabary (kana), the type of writing covered in most L2 writing research such as exploring genre constructions, argumentation

conventions, or cohesion development are also beyond the scope of most JFL classrooms.

Furthermore, some findings of L2 writing research, which are seen to enhance writing in other languages, cannot easily be applied to JFL contexts. For example dictionary use and computer use can actually be major obstacles in JFL writing. Kanji can be notoriously challenging to locate in a dictionary (although new image recognition software is changing this), and the use of computers when writing in Japanese requires typing in the phonology of the language (commonly using the Roman alphabet) and selecting the correct choices in the Japanese writing system. Some research has suggested that the use of computers actually detracts from a user's ability to write in Japanese by perpetuating the "tip-of-the-pen" phenomenon (Chikamatsu 2005), where a writer is unable to produce a known kanji when engaged in writing. Acts of typing in Romaji and selecting kanji improve a learner's recognition of a kanji, but result in an inability to produce it once the technological aide is taken away. Computers, thus, enhance receptive rather than production skills when writing in Japanese.

Positive results of the use of computers have been noted in an earlier study by Chikamatsu (2003). She found that the use of computers allowed JFL students to write more accurately with a larger number of kanji compared to the similar handwritten work. However, she also noted that the study was unable to explore the long-term effects on writing development, including the issue of interference with kanji production abilities discussed above. Chikamatsu (2003) further argues that her study examines the written product, with a particular focus on kanji, which is somewhat different to the focus of other writing research, which looks "beyond the grammatical and linguistic" (p. 122), and calls for more research that is more situated with the discourse, organization, cohesion, and coherence research more typical of L2 writing research. Although McKinley (2014) examines this gap, very little research into L2 writing of Japanese is in this vein.

Strategies for more efficient learning of kanji

One area of writing research that has interested scholars is the exploration of the strategies students use to help them to acquire written Japanese, in particular kanji. In early work, which tied in with learning strategy research at that time, Bourke (1996) identified 15 categories of kanji learning strategies. This work was clearly based in the burgeoning field of language learning strategies at the time, led by Rebecca Oxford. There are clear conceptual similarities between Oxford's (1990) Strategy Inventory for Language Learning (SILL), and Bourke's Strategy Inventory for Learning Kanji (SILK). However, the items in the SILL and SILK are vastly different, once again highlighting the ill-fit of the SILL to the unique task of learning kanji, which appears to be a separate process to learning the Japanese language in general. As a result, although the SILL has fallen out of popularity due to its one-size-fits all approach (see Dornyei and Ryan 2015; Rose, 2015), I would argue that the SILK is still a largely valid instrument, and I have adapted it for my own research purposes since (Rose, 2003; 2013; 2017). Bourke's study

found successful learners in a kanji recall task also used the highest number and widest variety of strategies (Bourke, 1996: 131). She also discovered that the type and complexity of the kanji as well as the proficiency of the student influenced which strategies they applied. Unsurprisingly, she found that beginner students tended to apply pictorial strategies, but higher-level students tended to break kanji into their components in order to memorize more complicated kanji.

This finding was also supported by my own studies, which found that component analysis was an essential strategy for all students, particularly those at the intermediate and advanced levels (Rose, 2013). These findings also point to the importance of developing an awareness that most kanji contain morphemic clues. Toyoda (1998: 156) calls this understanding graphemic awareness, which can be described as “awareness that kanji can be segmented into graphemes and that graphemes can be the subject of analysis.” Graphemes are the smallest unit a kanji can be broken into, and these components can then be learned via any number of suitable memorization strategies. If learners can develop their own graphemic awareness from the outset of learning kanji, it could aid them in their writing development.

The use of mnemonic strategies to attach meaning to a kanji’s components has also been investigated in terms of their efficacy in learning kanji, but with varying results. From a cognitive perspective a mnemonic strategy is defined as “a method for enhancing memory performance by giving the material to be remembered a meaningful interpretation” (Anderson, 2005: 461). Some studies have pointed to the importance of mnemonic strategies (e.g. Toyoda, 1998; Lu et al. 1999), but my own research has highlighted issues when learners rely on one strategy for all kanji (Rose, 2013). Moreover, I discovered a limitation in most mnemonic strategies that linked a kanji’s physical properties with its meaning, in that the strategy did not facilitate the learning of a kanji’s pronunciation in Japanese:

while a mnemonic strategy may be used to connect the kanji 下 [below] to its meaning, the same mnemonic strategy provides no indication whether the kanji should be read *ge*, *shita*, *kuda*, *ka* or *sa*, all of which are possible (Rose, 2013: 982)

Thus, all research points to two facts. First the learning of kanji is a major obstacle in mastering Japanese writing. Second, this research does not align well with general research into the learning of writing of other languages. In fact, much research into the L2 writing strategies for kanji draws upon cognitive theory and memorization strategies rather than with the work of other L2 writing strategies scholars.

Pedagogical implications and applications

If both teachers and learners better understand of the linguistic features of the Japanese writing system, and how it differs from writing in an alphabetic script

they can adjust their teaching and learning accordingly. Due to a lack of suitability of L2 writing approaches for learning Japanese writing, most teachers and learners study the writing system via methods designed for L1 learners, which can be problematic.

Most novice learners of Japanese, like the general population as a whole, believe that the writing system consists of pictographic representations of meaning, or abstract derivations that have evolved from their pictographic etymologies. Researchers have suggested that beginner learners of kanji almost always apply pictographic strategies to all kanji they encounter. Some widely used resources leverage this assumption and encourage learners to draw pictographic associations with hiragana and katakana. A famous series used in Australia in the 1970s and 1980s purported it was possible to learn hiragana in 48 minutes (Quackenbush & Mieko, 1999), at least at a receptive level. This approach utilizes a mnemonic strategy to encourage associations with the sounds of the language rather than its morphemes.

This strategy also appears to be effective for the beginning stages of learning, where most commonly used kanji are shokeimoji (e.g. the kanji for tree, mountain or river). However, the strategy soon outlives its usefulness as students progress in proficiency and encounter more and more kanji which are abstract or complex in their representations of the language's morphemes and phonology. To provide an example I have used elsewhere (Rose, 2017), a learner would be unwise to associate the shape of the *kaijimoji* (combination kanji) such as 鍵 with its meaning of key, as the shape bears no resemblance to the kanji meaning. For this type of kanji, a strategy that examines the components of the kanji for derived meaning would be more applicable. A study by Mori (1999), which examined learners' success in deciphering unknown kanji, showed that learners had greater success when components were semantically semi-transparent.

In contrast, a *keiseimoji* or seimo-phonetic ideograph would best be associated with its sound rather than its meaning because it is specifically marked for phonological decoding. The Japanese character for time [時], for example, contains a character on the left meaning sun or day, which ties it to its meaning of time, and a character to its right meaning temple, which gives a clue that the pronunciation of the character is *ji*, identical to how the left character is pronounced in isolation. While the meaning of temple has little to do with the kanji's meaning of time, the right component remains as a clue to the pronunciation (In fact, most kanji with temple as its right side component are pronounced *ji*). There has been some research (e.g. Horodeck, 1989; Sayeg, 1996) which suggests that native speakers of Japanese draw on phonological processes when reading and writing kanji. Both of these studies found that many errors are phonologically based rather morphemically based. That is, a writer may make an error in writing by substituting an incorrect kanji of the same pronunciation with the correct one.

JFL learners and teachers should be made more explicitly aware of the fact that the majority of kanji are not pictographs, and many are not morphographic, and thus a single method of learning cannot possibly account for their successful mastery of this script. Research suggests that the use of a wide repertoire of strategies that are selected according to kanji type may greatly reduce the cognitive energy spent by JFL learners. Indeed, some learning strategy research points to the importance of raising learners' awareness of the strategies available to them to use (Macaro, 2001). It is important to note that raising awareness of strategies to better memorize and recall kanji when writing need not take up a large amount of class time. White et al. (2007), in their review of strategy research, note that even showing students an inventory of strategies can expose learners to new ideas they can use in their own learning.

However, teachers must also understand that the use of strategies is highly individualized; just because a teacher finds a strategy helpful for their own learning should not be seen as an indication that their own students will feel the same way. Indeed, L2 reading and writing research of Japanese is in line with general language acquisition research (e.g. Dornyei and Ryan, 2015) that suggests each individual learns in uniquely different ways. In learner strategy training, therefore, the teacher should take on a facilitating role in order to encourage their learners to experiment with different ways of tackling the kanji problem, rather than forcing particular solutions on them, which may not be a good fit for everyone. In my own study (Rose, 2013), I found a number of students who resented using particular strategies because their use was over emphasised by their teachers. Thus, in raising an awareness of the numerous strategies learners use to acquire the Japanese writing system, teachers can help their students select strategies most salient to their own needs.

Japanese instructors often struggle to introduce kanji in creative and meaningful ways to our learners—indeed one study of mine indicated that as students encounter more kanji they can become fatigued by the learning process (Rose and Harbon, 2013). In this multiple case study of 12 learners of Japanese studying on a year abroad in Japan, we found students who maintained an intense cultural curiosity with the Japanese writing system were not affected in terms of procrastination, boredom and fatigue by the task of learning kanji. To the contrary, these students were fascinated by the origins of kanji, their complexities and their etymologies. Such a result could indicate that in sparking learners' cultural curiosity in the writing system, not only might this result in an increase in student motivation to write in the language, but it could also provide them with an historical appreciation of kanji. Activities such as calligraphy and the use of writing to produce art might be small tasks that could potentially spark an interest in the cultural traditions of writing. Such ideas are supported by evidence that participating in the writing culture of the target language can motivate learners (see Yigitoglu, 2016). In Yigitoglu's (2016) study, she found that the calligraphy writing culture of Arabic motivated Arabic foreign language learners to learn the

language in general, as did participating in the letter writing culture of Russia for Russian foreign language learners.

The pedagogical implication in understanding the uniqueness of the Japanese writing system are immense: both for JFL contexts, and for other languages which use a logographic script (e.g. Chinese), and may be encountering similar difficulties. Research suggests that L2 writing practices that have been borrowed from first language writing practices, such as requiring learners to write out characters repetitively, are not useful substitutes for the second language learner. This practice, nevertheless, continues to be pervasive illustrated by Shimizu and Green's (2002) study that found repetitive writing was the preferred format of teaching writing in American classrooms. Toyoda and Kubota (2001) found this practice to be one of the least effective memorization techniques in learning (Toyoda & Kubota, 2001), concurring with cognitive theory on memorization strategies that also depict repetitive writing as a shallow and ineffective encoding technique. Thus, JFL teachers need to consider the effectiveness of the classroom activities they use to teach Japanese writing, and to ensure their practices are underpinned by educational theory rather than maintaining the status quo in terms of how they learned to write. Activities that encourage JFL learners to make meaningful connections between the characters in the writing system and the language it represents will prove more efficient than those that encourage shallow learning and production.

Research Implications

Considering that very few languages use a logographic script in the world today (Chinese and Japanese), and that the widespread learning of Japanese and Chinese as a foreign language (CFL) is a relatively new phenomenon compared to European languages, there is currently a paucity of research into the learning of these scripts by second language learners. Problems encountered by JFL and CFL learners provide a unique opportunity for researchers to examine the cognitive processes involved when transitioning from an alphabetic writing system to a morphographic one for the first time. For Japanese—even more so than Chinese—the cognitive processes involved in learning a writing system that constantly jumps between a logographic script and a phonetic script should be of primary interest to cognitive linguists, yet it remains severely under researched. Such research would substantially add to our understanding of mapping and decoding in writing systems research, which provides excellent accounts of phonological decoding and mapping of typographically similar L1 and L2 writing systems (e.g. Woore, 2014, 2016), but currently does not account for the complexities of morphemic decoding in non-alphabetic languages in dissimilar L1 and L2 writing systems.

Recent research by Matsumoto (2013) starts to address this gap. Her study examined learners from different writing system backgrounds engaged in reading three types of kanji. There is potential to expand research of this type in order to fully understand the complex effects of learners' first language writing system on

the learning of a new writing system, especially Japanese which represents language both phonologically and morphographically. Furthermore, as Matsumoto only explored the reading process, L2 writing still remains severely under researched.

Other studies such as Horodeck's (1989) investigation of the role of phonology for native Japanese speakers when reading and writing Japanese show the importance of phonological processes when decoding and producing kanji. However, Horodeck's study was not published, and this research approach has not been fully developed by researchers since this time. Sayeg's (1996) research also found phonologic decoding was as important as semantic decoding when reading kanji, but did not extend this exploration to the writing process. Thus, there remains a vacuum of studies in the past two decades that have examined the processing of kanji by second language learners when writing in Japanese. There is an urgent need for a study such as Horodeck's on second language learners, and also for the replication of the Sayeg (1996) study that also incorporates the writing process.

I also see the need for more focussed comparative research on kana and kanji learning, particularly examining what strategies work best for different types of linguistic representations (e.g. a comparison of strategies salient to learning kana versus kanji; but also comparisons of strategies salient to different types of kanji, such as pictographs versus logograms versus ideographs versus semasio-phonetic ideographs). Previous studies—including my own—have been narrowly focused and typically involved learners studying kanji lists, reporting the strategies they used, and sitting kanji recall tests to examine the effectiveness of these strategies. Few studies have compared how processes vary according to the different scripts of the writing system, or different linguistic representations within the kanji script. Moreover, most studies have focused on kanji recognition (the reading of kanji), and have ignored how these processes manifest in L2 writing. The prevalence of the 'tip-of-the-pen' phenomenon (Chikamastu, 2005) indicates that the two processes are quite distinct—a learner may be able to read many more characters than they are able to write.

Finally there is a need for an exploration of the efficacy of current writing practices in JFL classrooms. Shimizu and Green's (2002) study on teaching practices focussed on the teaching of kanji alone, was only conducted in the US, and is now more than 15 years old, therefore there is a need for an updated study exploring the current practices for Japanese language. Such a study will help researchers to better situate JFL writing practices within the current literature of L2 writing instruction. Likewise there is a need for more intervention research exploring the efficacy of teaching practices on the learning of the writing system. Topics such as written corrective feedback are booming in L2 English writing research, but are scarcely explored in JFL contexts. This is despite clear applications of such research on 'focus on form' teaching and error correction practices, which are prevalent in JFL writing instruction.

Conclusion: implications for L2 writing in general

The chapter has shown that learning to write in Japanese poses unique challenges for many learners. Challenges stem from the complexities of the writing system in terms of how it represents the language, and the large number of novel characters a learner must memorize before they are able to write. As a result of these hurdles, the challenges of JFL learners are not fully explained by much L2 writing research, which tends to focus on the linguistic, discoursal, organizational and cohesive structures of writing, rather than the learning of features across writing systems. This disparity exists because much L2 writing research centers on L2 writing of English, which uses a comparatively more transparent writing system. I concur with Nag and Snowling (2012) who state that “compared to the voluminous literature on reading development in alphabetic languages, studies of nonalphabetic scripts are still relatively rare” (p. 404). The same imbalance can also be observed within extant literature on writing development. In short, over-emphasis on English and other alphabet-based L2 writing has created a skewed understanding of challenges in second language writing.

This skewedness is also prevalent in many research papers, which claim to contribute to L2 writing theory building, but do so through a narrow focus on one language. As a result, many conclusions drawn from L2 English research contexts are unjustifiably generalized to all L2s. Thus, the field desperately requires a boost in research on languages other than English. Such research can help to confirm what theory is universal to L2 reading and writing, and what theory is language specific (Nag & Snowling, 2012). JFL research, in particular, has much to offer L2 writing theory, because many learners from an alphabetic writing system need to adapt to an unfamiliar non-alphabetic writing system, which poses unique challenges for learning. At the moment these challenges, and the search for suitable solutions are largely undocumented, under-researched, and thus highlight new avenues for L2 writing research.

Further Reading

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Bio

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