Kanji Acquisition by an American Student: An Exploratory Case Study

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Abstract

The purpose of this research will be to determine the extent to which the use of a computer application entitled "Kanji Box" could foster a more positive perception of Chinese character (i.e. "kanji") acquisition by Japanese language students of Western origin. In my proposed research, data will be gathered by interviewing the students in a Japanese language course periodically throughout the semester while they are taking course work specific for teaching these characters. To measure the effects of the application, some students will be given "Kanji Box" iPhone application or alternatively instructed to use the desktop version, compared to students who do not use the application whatsoever. The proposed research methodology includes a case study of one student, me, during the academic year 2011 when I first used the Kanji Box application for Japanese language studies, until the fall of 2014 when I studied Japanese at the Nagasaki University of Foreign Studies.

Introduction

Across the Western world, anecdotally, few topics of study are considered as inscrutable to foreign language learners as the writing systems constructed around the use of characters of Chinese origin which are used in the Chinese and Japanese language. In spite of the fact that over a billion people in China and millions more in Japan successfully live with these languages every day, among westerners, these writing systems are often erroneously represented as being only accessible to the most ingenious or otherwise privileged minds. That said, in the modern world with ever expanding globalization, the strengthening of the Chinese economy, and with many young Western professionals eager to stabilize Japan's quickly shrinking work force, such beliefs form a very common but inauspicious paradigm for both the East and the West. However, thanks to modern technology, these perceptions are changing, and many students, young and old are approaching this subject with newfound confidence.

In spite of many advanced computers and smartphones, Japanese language programs at universities both in and outside of Japan still lament the pyramid shape their programs frequently acquire. In other words, first year Japanese classes are often multiple and filled to capacity, but each successive level loses a substantial number of students as the content, in particular characters of Chinese origin, (which from now on will be referred to as 'kanji') become more numerous, complex, and abstract. This situation is exacerbated by the fact that Japanese language curricula has not progressed appropriately for western,

and, in particular, North American students. A seismic shift in foreign language education in North America was documented by the scholar Kumaravadivelu, who was cited in "Japanese Applied Linguistics: Social Perspectives" authored by Mori and Ohta, within an article contributed by Kubota (2008). Kumaravadivelu states:

During the 1990s, the TESOL (teaching English to speakers of other languages) profession took a decidedly critical turn; simply put, the critical turn is about connecting the world with the world. It is about recognizing language as an ideology, not just as a system. It is about extending the educational space to the social, cultural, and political dynamics of language use, not just limiting it to phonological, syntactic, and pragmatic domains of language usage. (Kubota, 2008, pg. 327)

Unfortunately the same shift has not occurred for native speakers of English studying East Asian Languages.

Based on this development, it is my belief that in order to fully engage a new generation of Japanese language learners, we must update Japanese learning techniques to reflect both the capacities of technology as well as modern Western students' desire to more deeply engage with the content at a more holistic level than current pedagogical resources allow. Thus, this writing has three components: (1) primarily, it is an exploration of the first hand experiences of a long term Japanese student of over ten years (i.e., the author); (2) secondarily it is an account of how and why engaging in computer/smart phone application ("app") based learning may be leveraged to improve the experiences of

the learner, and presumably their motivation toward greater content mastery; and (3) lastly, this work features a suggested methodology so that scholars may verify and quantify the opinions of the author among other students.

Explanation about Types and Purposes of Referenced Materials

Though the determinations presented in this writing are greatly informed by my experiences, equally influential is the foundational research I have undertaken for the purposes of this project. To clarify and substantiate my conclusions, my experiences will be presented in conjunction with two types of literature. The first are works that account for relevant aspects of educational theory, including modern, highly generalized concepts such as the ones cited in "How We Learn," and accompanied by more specifically relevant texts within the field of education and cognitive psychology. As for the second type, I have included a cross section of Japanese textbooks which are to serve as props meant to illustrate more effectively the challenges and opportunities for Japanese language learners.

My Japanese Language Odyssey

My Japanese language instruction began over at the age of 14, at first using solely internet based learning and computer programs, which then progressed into weekly lessons with the Fort Worth Japanese Society a year later. I continued with them through my junior year of high school, which was followed by several years of intermittent self-study after high school, up through completing my Japanese minor at the University of North Texas. After that I did a year of intense study in Kyoto at Ritsumeikan University, and finally another half year of intensive study and research at the Nagasaki University of Foreign

Studies. At this writing I have studied Japanese for over half of my life, and I am certain that it will always be my life-long passion.

However, in the great majority of classrooms, one thing continually troubles me.

One of my favorite (if lamentably obscure) Japanese idioms is "learning to swim on tatami mats," which paraphrases the concept that one cannot know something at only a theoretical level without actual practice. Sadly, in far too many (though thankfully not quite all) cases this pearl of wisdom goes unheeded. I have observed that Japanese language content is far too often parceled out into inanely minimalist, and tediously (though never deeply) studied fragments that are highly abstract in nature and therefore minimally useful for real world application and are in many cases highly demotivating to students. In my opinion nowhere is this problem more apparent than in kanji acquisition.

Problems with Modern Approaches to Kanji Acquisition

Without question, one of the most onerous tasks for students is mastering the 2,136 "Normal Usage Kanji" that must be known to be considered totally fluent. While the sheer number of symbols is daunting by itself, this problem is compounded by (1) the fact that students are not usually equipped with substantially varied, or sometimes any, useful strategies to digest a language that is so radically dissimilar from English; (2) both native and foreign instructors are rarely equipped or permitted to teach their students in especially appropriate or engaging ways; and (3) lastly, the importance of rote memorization (i.e. relatively superficial, basic memory, flash card like learning) is often overstated by educators, yet paradoxically undervalued by students.

Kanji Box as a Tool to Improve Standards of Learning

This research, in regard specifically to the efficacy of the kanji box application, includes an analysis of the third statement, as to me, the first two problems are actually consequences of the third. In my experience, teachers are rarely enabled to explain the profound and engaging elements embedded in the Japanese writing system, focusing rather on cultivating a passive familiarity with the material. This often leads students, particularly Western students, feeling bored and disillusioned with the subject, as well as unmotivated to study outside of the classroom, barring extreme motivation due to personal drive, or some other external factor. In my personal assessment, based on thousands of hours in the classroom with other students, is that for Japanese education to advance as a field, it must recognize the systemic limiting nature of its current practices. It is worth mentioning that with the exception of the personalities of individual instructors, native Japanese language curricula are thoroughly standardized. While individual content among texts and courses may vary to marginal degrees, structure and approaches to learning too often do not.

Although current practices are appropriate to an extent, I have observed a propensity for tedious activities that only supplement the basic content familiarity that could, and with modern technology should, be undertaken more substantially by students outside the classroom. It is my inclination that class time would ideally focus on the educator's explanations of "why" and "how," but all too frequently, Japanese language instruction only answers the question "what." In my estimation, intelligently crafted and engaging resources like "kanji box" could be instrumental in expediting the more

superficial elements of kanji acquisition and may be crucial in providing educators more temporal resources to focus on the "how's" and "why's".

In the interest of maintaining an equitable perspective, I confess that teachers and professors of all fields will attest to the intransigence of their pupils to study content outside of the classroom, and it is a reasonable criticism. Indeed, if students are not properly motivated to familiarize themselves with the material outside of the classroom in order to engage with the content at a deeper level during times of instruction, teachers are completely justified in using their time to obtain a more basic, if comparably inferior level of comprehension in their students. Nevertheless, I would argue that it is precisely because of their roles as educators that it is incumbent on them to employ strategies and tools that can make the material as palatable as they can for their students so as to optimize the learning process.

Problems with Modern Texts

Starting with the readings I have done, I would like to share two examples of texts designed for intermediate to advanced students that demonstrate content that, regardless of their prevailing usefulness, are either insubstantial or incomplete at promoting conceptual understanding. While the works of the authors are commendable, they fall short of providing the contexts and insights that are profoundly crucial to living in one of the planet's most homogenized and insular cultures. I will begin with a more exaggerated examples so as to illustrate precisely what I find lacking.

Published by a trio of Japanese authors, Suzuki, Hajikano, and Kataoka, "Business Kanji" (1999) is an advanced text containing "1,700 essential business terms in Japanese," which is an impressive sum, but surely becomes quite imposing to the reader as one discovers it is nothing more than reams and reams of vocabulary list. While this approach is not limited to Japanese authors, based on my readings it has to some degree been ingrained into the DNA of Japanese language education culture that language acquisition is little more than an exercise of brutally raw memorizing until the information is seared into the folds of the learner's brain. There is certainly room for this approach, especially when a person is just starting out learning, but for advanced learners, according to my personal experience and observations, to rely on it exclusively is more than inadequate, it is counterproductive. This approach presents the words as a laundry list of unrelated and isolated terms; instead of exploring and clarifying their complex and fascinating etymological ecosystems, it hinders the development of conceptual comprehension by the student that is indispensable for the purposes of nuanced, effective communication within the target language.

Within "Business Kanji" (1999) alone, there are many words that are semantically complex when compared to rudimentary vocabulary. Surprisingly, even though the scope of the text is confined to business terms with many opportunities to link them together in interesting and meaningful ways, the text, time and time again fails to do so. For example the kanji \pm (shu) appears in several chapters. In the index, its meanings are enumerated as "master, owner, principal, chief, main, important" which would at first appear to be straight

forward. This character is often used in a fairly predictable manner with some words such as 主に(omo ni), "mainly" and 主体 (shutai) "main body.

However, for other words, its meaning becomes esoteric, for instance, "step 34" (p. 112) briefly explains 主義 (shugi), which corresponds to the suffix for "ism" in English. 主 義(shugi) seems simple to English speakers at first because it translates as neatly linked Western words, but the de facto (if not necessarily historical) reality is that because this suffix is largely employed as a means of creating a Japanese lexicon for Western ideas, this suffix is indeed linguistically complex. My evidence for this is that, while the original meanings of the symbols are "main" and "righteousness" suggesting they were appropriated for the various religious ideologies that came to Japan via the west, (in contrast, words such as Buddhism and Confucianism do NOT use this suffix in Japanese) this suffix has evolved in step with other words in English that are obscure and religiously neutral such as 印象主義 (inshoushugi). This word, whose symbols mean "imprint", and "image", respectively, with the "shugi/ism" suffix attached, have etymologically coalesced to form the word for "impressionism", referring to the artistic style. It is hard to overstate however, that words using this suffix, while seemingly apparent to many English speakers, often lose or sometimes gain entirely different shades of meaning that a would-be Japanese speaker must consider when communicating. Words such as 民主主義 (Minshushugi) whose symbols mean "people" "rule" and ends with the "ism" suffix, creating the word "Democracy", do not share a sentimentalized political legacy or venerated Hellenic origin in the Japanese language, and recognizing such cultural nuances is critical to express

complex ideas competently. I have had many personal occasions when speaking to

Japanese people where words with this suffix have done nothing but engender confusion,
and so rather than western students simply committing these words to their memory,
understanding the background concepts as well as limitations of these words within an
estranged culture is paramount.

Another example that appears in the text is 主張(shuchou), appearing in "step 32" (p. 106) which means "claim, assertion, or insistence." While these are accurate definitions, at no point does the text address how the second kanji, while literally meaning "to lengthen," is often employed (though not necessarily in the above example) in order to endow the word with a connotation of being tenacious and is related to words such as 頑張 3 (ganbaru) a common word which means "to try one's best," or alternatively that 1 以張 3 (iiharu) also means "to insist in an overbearing manner", but may in certain contexts be translated as "claim". Written in plain list form, it gives no mention of other notable details, for example, it does not address that the word 2 ν — ν (kureimu), may be confused as a cognate of the English word "claim," yet actually means "complaint", and so "kureimu" must not be mistaken as an alternative to the word for 主張(shuchou)- a relatively objective iteration of "claim."

Lastly it does not mention that the word 主張 (shuchou) for "claim" sounds almost identical to the word 出張 (shucchou) which means "business trip" and would therefore likely be relevant commentary in a book specifically about Business vocabulary. Though, I

can appreciate the authors' desire to ensure that their text's content is appropriate, straightforward and manageable, it is my view that such texts, which attempt to convey advanced content while minimizing relevant information ironically for the sake of clarity, will in the long term manifest gaps in knowledge for committed, long term pupils, as a consequence of providing almost no practically related background or conceptually pertinent details.

While "Business Japanese" is to perhaps one of the most egregious examples of bias for rote style learning that ultimately expects the learner to "cram" an impractical amount of vocabulary into their brain without any sort of insight or background, other kanji text books, though substantially better, are still somewhat incomplete. One of my personal favorites is "Kanji Pict · O · Graphix" by Michael Rowley (1992). The author painstakingly provides a visual mnemonic for most (though unfortunately not nearly all) of the kanji in the "Normal Use" system. Each is carefully arranged by radical (the individual pieces that build kanji), displayed with its meaning, readings, and accompanied by the following mnemonic devices: a graphic visualization of the character and a complementary sentence.

The given mnemonics range from pragmatic and linguistically accurate examples such as the symbol for "East" 東 which is represented by the sun rising from behind a tree, to comically absurd examples such as the amusing image for "little brother" 弟、which the author illustrates as a sneering face with a booger flinging from its nose. To be sure, there are some really humorous and memorable mnemonic devices in this text, such as the

symbol 官(kan) which means "government official" whose graphic is a buttocks under a roof. The shortcoming of this strategy is, however, that while it is creative, it fails to fully universalize the characters with one another, beyond simply grouping them with shared radicals

. For example, on page 90, the author demonstrates a mnemonic device for the character 胴(dou) meaning "torso." At first glance, the symbol 胴 may appear to be a combination of the symbols for "moon" (月) and "same" (同). The mnemonic is presented with the sentence "He has the same fleshy **torso** as always," (Rowley, 1992). While this is to an extent an effective means of committing this character to memory, I find it unfortunate that the text does not at any point address the fact that the part which at first glance appears to be the moon radical (月) was originally written as 肉 meaning "flesh", and is actually a lexical signal called an 意符(ifu) a "meaning sign" that identifies the word as referring to a body part (unless it is a word that actually uses 月 to mean moon, which itself frequently denotes a character that is related to a period of time). Furthermore, it fails to mention that 同 is actually a lexical signal called an 音符(onpu), or "sound sign" which serves no purpose other than to remind the reader how the symbol is pronounced. You can see this pattern in the words 同、銅、胴、which mean "same", "copper" and "torso" respectively, yet are all pronounced "dou" in Japanese.

Again, though the author's brevity is understandable, and his creativity commendable, creating a book which ostensibly encourages complete kanji acquisition but

misses major opportunities for deeper inference and features paltry discourse of the conceptual functioning of these characters is ground zero of a philosophy that promotes superficial recall over long term mastery. Given the playful and engaging content, I confess that this text undoubtedly has a place in every Japanese language learner's library, but my last example will illustrate what sort of engagement I believe to be the most crucial for a more complete faculty of kanji characters.

My last and favorite book of this text review is the prescient "Decoding Kanji: A Practical Approach to Learning Look-Alike Characters," by Yaeko S. Habein (2000). It bears mentioning that her work is a product of the acclaimed Japanese publisher Kodansha, whose resources are the only consistent exception to my aforementioned grievances. Unfortunately their texts are usually only supplemental books which are not designed to be purposed as fully curricular classroom texts. This volume starts out with a heady but accurate explanation of the working parts of kanji, then moves into a rather brilliant battery of exercises where the students are quizzed to precisely distinguish symbols that are easily confused by the casual learner. It starts with simpler characters where the student has to perceive the difference between rudimentary symbols such as 手 meaning "hand versus 毛 meaning "hair," or 区 meaning "ward or district" versus 凶 which means "bad luck".

The complexity of the content progresses at a rapid pace and before long, the learning progresses to very sophisticated explanations like this one:

As pointed out earlier, some semantic compounds of the 常用漢字[normal use kanji] may be a little problematical because one (or both) of their semantic elements may be identical

in form to elements that are otherwise used for phonetics, e.g. 負(イン/エン) [in/en] is used as a phonetic in 韻(イン[in], "resonance") but in 損(ソン[son])it is a sematic component with the meaning of "round tripod kettle. (Habien, 2000, p. 94)

The quiz portions of the book progresses accordingly, asking students to distinguish which character of a pair contains a phonetic and semantic compounds among relatively complex kanji pairings. For example, the student must recognize the commonly occurring phonetic attribute of the character 生(sei) as a phonetic component of the kanji for 姓(sei). Subsequent exercises test the student's capacity to infer meaning by presenting similar characters whose semantic components must be properly identified. An example of this is to distinguish characters similar to the character 農(nou) meaning "agriculture" from easily misidentified identified characters 唇(kuchibiru),振(shin),and 震(shin), which mean "lips", "to wave", and "to quake" respectively.

Decoding Kanji (Habein, 2000) is, in my opinion, a model resource for elucidating the complexities of the ideograms, with concise and insightful explanations that can promote a more profound and lasting comprehension for upper intermediate and advanced learners. Its singular disadvantage is that while it may provide an in depth foundation for knowledge, it is a compact resource totaling less than one hundred and fifty pages, and so does not give ample opportunity to explore these newly gained concepts through a substantial majority of the kanji.

At this point, the reader should note that as for the first two resources, I am not of the opinion that Kanji Box may address those resource's shortcomings directly or entirely, 16 given that the application provides no apparatus for identifying especially pertinent business related kanji, and provides no similar mnemonic system comparable to the one found in Kanji Pict-O-Graphix. However, my experiences suggest that this application may act as a crucial supplement for the first two resources, and more importantly provide a medium to substantially expand upon the knowledge concepts that are not fully realized in "Decoding Kanji." Though it may not be an expedient process, I believe that taking the time to develop a substantially comprehensive understanding that will promote the learner's ability to draw inferences becomes an absolute necessity for high level objectives such as mastering "漢語" ("kango" words of explicitly Chinese origin that are frequently preferred in business and medical settings) that will begin to exponentially increase in their lexicon as their skills progress.

Reflecting upon My Japanese Learning Experience

To return to my own story, I had studied Japanese for years, and in my early twenties, not incidentally during my longest autodidact period, I had plateaued at learning kanji. It was a very long and frustrating period during which I frequently performed an online self-assessment test, yet only consistently demonstrate a knowledge of around 350 or so kanji of the requisite 2,000. While it was not the case that I was at that time able or disciplined enough to dedicate hours a day to kanji study as I did later in Japan, it was nevertheless demoralizing to put in as much effort as I did and, not only see no noticeable result, but to feel progressively more daunted by what I perceived as a gargantuan task. As I would later find out, however, the Japanese writing system is actually much more

manageable than a beginning student's anxieties will allow them to believe. I have come to appreciate that even the most esoteric of languages is ultimately just an exercise in recognizing patterns the way we do both passively and consciously with our mother tongue. The challenge for students comes in coping with the fact that the patterns in Japanese are fundamentally different, highly stylized and esthetic. Though initially confounding to myself, it is my conclusion that the patterns in Japanese are no less idiosyncratic, vague, or abstract than what we regularly encounter in English, and to confuse their lexicon with a cacophonous hodgepodge of inscrutable symbols, as westerners sometimes do, is a heinous misinterpretation. Thankfully my time at university naturally gave me both more resources and motivation to demystify these characters.

In spring of 2012, I began my Japanese language course work at the University of North Texas and made personally satisfactory progress thanks to diligent instructors who taught in the linear and methodical manner that is ubiquitous among Japanese language educators. And yet, it was not until a very challenging elective Business Japanese course that I realized to what extent all facets of Japanese language education had been serialized into a systemic and linear progression of stages that, while promoting vocabulary building and verbal data transmission, would fall well short of developing the unique and personal capacity to express and communicate that is of profound personal importance to me. At first I tried to accept this as the status quo for Japanese language education, but at one point, my disillusionment with this approach became unbearable. But to my great surprise, as time passed, particularly during my time in Kyoto, in spite of my unashamed criticisms of this paradigm, I began to realize that while these methods are perhaps over relied upon,

there is a certain extenuating necessity for these approaches depending largely on the inclinations of the students. Thus, my experiences have become less of a treatise against the Japanese education style, and more an exploration of the elements both missing for a deeply comprehensive master of kanji and their associated meanings.

At this point, an element I would like to address is the stance of some educators who seem to object to my educational paradigm which emphasizes conceptual understanding and universal mastery, in favor of the unfortunately pervasive ideology that language courses need not, and probably should not, include attempts at developing "etymological comprehension" or "mastery" as these are not appropriate goals for most learners, but I would object to that statement on two points:

Firstly, while the language learning process does demand a certain amount of focus on what are considered "fundamental" practices such as rote vocabulary and grammar acquisition, focusing exclusively on such broad and too frequently shallow elements, in my experience, fails to proactively equip students with capacities to engage with Japanese speakers beyond quotidian interactions. Thanks to the phenomenon of passive language acquisition, students, particularly ones on exchanges, do indeed manage to acquire massive amounts of vocabulary, etc., but are frequently at a loss to connect the dots of the linguistic universe surrounding them so as to make useful inferences to enhance their speech. I recall quite well the frustration of seeing recurring symbols and patterns that I began to use in a perfunctory manner without actually understanding what they mean or how they work.

A great example of where this phenomenon occurs outside of kanji is in the teaching of onomatopoeic words. Sound words are ubiquitous in Japanese, and words like "boro-boro" which means "shabby, or run down" and "subeh-subeh" which means "slick or smooth" seem like total nonsense until you realize that "boro" (perhaps by coincidence) means "rags" and "suberu" (not coincidentally) means "to slide". To ignore the simple and efficient capacity of etymology to enhance the efforts of the learner is simply misguided and must be corrected if the Japanese language educational complex is truly invested in creating artful, intelligent Western speakers, as opposed to automatons regurgitating inferior imitations of the people around them

Secondly, I look back at my education and often feel quite disheartened. So much of the time my peers and I sat in front of teachers listless and disengaged. One should note that to simply be in the classes I was present in required a significant amount of content mastery. I am confident that we had appropriate backgrounds to engage in this content at a more engaging and conceptual level, yet regrettably so much of that time was wasted staring out of windows, trying our hardest not to give into the overwhelming stagnation permeating the classroom. Mercifully there were a handful of engaging teachers, who simply by virtue of their passion and charisma made the learning experience a uniquely enjoyable one, at times even incorporating their wisdom and insight about the Japanese language in a way that pleasantly diverged from the often stodgy and bland curricula. I feel almost certain that most of my peers would agree that such teachers who challenged us to think deeply, and learn more broadly this fantastically complex and beautiful language, were the ones who left a lasting a meaningful desire that amounted to a hunger to learn

Japanese all our lives. The simplistically rote way of doing things is at best dismal, and tedious incremental gains may be convenient and quantifiable, but excessively relying on them is a quick way to extinguish the passions inspiration of one's pupils.

I believe that the future of Japanese language education lies with these teachers who approach language learning in powerful, and meaningful ways. I am aware that there are factions of the old guard who are either unaware, unmoved, or at a loss as to how to move forward in evolving education. I would surmise that there is quite probably a sizeable minority who oppose any curricular changes for any number of personal or ideological reasons. In any event, these are political ruminations that are not within the scope of this work, but I would like to conclude this segment with the following thought: foreign students would do well to demand a thoughtful (though no less challenging), comprehensive curriculum from their universities. Likewise the Japanese state would benefit by meeting those demands. As the cultural gap widens between Japan and the rest of the world, and as a generalized disinterest in sex and parenthood ravages the native Japanese population, saving the essence (if not the racial homogeny) of Japanese culture may lie in creating tools to demystify it for the great many foreign people who dearly wish to uphold Japan's laudable traditions. A source of inspiration for this writing is the hope that educators both Japanese and Western would produce thoughtful and engaging resources that would permit Japanese language learners to become not mere actors the stage of Japanese society, but fully integrated nipponophones.

Stumbling on Kanji Box

And so it was, prompted by hints of inspiration by truly thoughtful instructors, while so deeply unfulfilled by other circumstances that I began to searching for new resources that could help begin filling in the gaps of knowledge I had encountered. In the fall semester of 2011, I fortuitously stumbled upon the Kanji Box application, which would prove to be a keystone to my continuing education. While Kanji box is not able to provide by itself a comprehensive understanding of kanji (as of course, no singular resource is), it was to me profoundly instrumental in that, in contrast to most of the print sources I have ever used, it requires the user to observe and recall particular details about shapes and forms of the kanji, which with time turned into a capacity to observe patterns and create inference. Therefore, I can attest personally that the application in my case greatly promoted kanji retention, as well as foraged a path to more deeply understanding them at a conceptual level.

Kanji Box Analysis

Anyone who has imputed "kanji" and "learn" into the search bar of the Apple app store has seen the myriad of results that pop up. Everything from dictionaries, to flash cards, even an application version of the classic Heisig method appears. There is no shortage on selection for kanji related apps, and yet to the consternation of myself and surely many other learners, they all seem to be carbon copies of one another. This is partly by design. The utility of flash cards has been heralded within language learning circles since time immemorial, and to make matters worse, the Ministry of Education in Japan has codified the contents of Japanese Language Proficiency Exam so precisely as to make most

educational applications little more than cramming agents, designed to satisfy student's desires to memorize vast amounts of content, yet in a relative sense actually master very little. And so it was that Kanji Box immediately caught my eye.

In addition to my personal experiences, I think that research provides compelling evidence for its efficacy for the following reasons.

I. It enhances perceptual learning while priming for conceptual learning.

To understand the first reason we must understand the term "memory priming"; "memory priming refers to measurable facilitation in task performance that is attributable to a prior processing event" (Ackerman et al, 1999). This particular selection defines four types of priming:

Direct or repetition priming refers to performance facilitation (i.e., shorter processing time or fewer errors) observed on a target processing event that is identical, or nearly identical, to a previous processing event. In contrast to this, the term "indirect priming" or "semantic priming" refers to a performance facilitation on a target processing event that is only conceptually or semantically related to a previous priming event. The other two priming categories are "perceptual (data-driven) priming", and "conceptual priming".

Perceptual in this case would refer to the kanji characters themselves, versus conceptual priming which would emphasize being able to infer meaning based on previously acquired information. Based on these definitions, I have determined that while flash cards and similar resources do indeed engage perceptual priming, there is not usually

any component which is designed to link data to previously acquired information, or require the learner to infer differences among them, and so, for all intents and purposes, most applications reduce kanji learning to a very long list of isolated linguistic phenomena to be acquired in isolation from one another. In my own learning, such methods have proven to be best terribly inefficient, at worst, impossible. For me, it was hopelessly futile to attempt to memorize two thousand distinct characters with which one can create tens of thousands of words, so I feel confident stating that priming for conceptual learning (which can be fully realized with the assistance of other texts or ideally an instructor), is an often ignored but necessary part of learning kanji. Therefore, although kanji box is still primarily rooted in retention of perceptual data, by its very structure it transmits perceptual data in a more sophisticated way, which in turn creates a rudimentary foundation for conceptual understanding. It accomplishes this as a consequence of the next reason.

II. It facilitates passive learning.

Passive learning for the purposes of this research will be defined as the transmission of kanji related data without an explicit presentation of content related details to the learner, who instead uses logical inferences that produce passive reinforcement of content that may or may not be consciously recognized by the student. Because the app frequently requires the user to distinguish among characters without demonstrating precisely what those differences are, the application, according to the above parameters, promotes passive learning. While it may seem unlikely that a student could learn something as expansive as kanji in a passive manner, since the app quizzes users on symbols that can easily be

mistaken for one another, it is keenly crafted to make sure students acknowledge the minute difference in detail. A good example of this are easily confused symbols such as 微-"small/minute" versus 徵-"sign/attribute" or 駅-"train station" and 験-"testing."

It may seem generous to conclude that the definition of "passive" could reach a point to where the student is not even cognizant of taking in such sophisticated data, and yet it has long been established that even when demonstrating "null sensitivity" (i.e. complete unawareness of a given stimulus), it is still possible for the subject to unknowingly absorb the target information. Shohov, et al. in "Trends in Cognitive Psychology" (2002, p. 21) cite an historical example:

...consider the classic experiment reported by Sidis (1898). He presented observers a series of cards containing single printed letters or digits. Participants saw the cards at a distance such that they informed all that they could see on each card was a dim, blurred spot or nothing at all. Yet, despite participants' reports indicated that they were unaware of perceiving either letter or digits, they were able to guess both the category (i.e. letter vs digit) and the identity of the stimulus at a considerable better than chance level of performance. (67% correct responses" (pg. 20) While the implications may not be obvious, even dubious given the nature of self-reporting, subsequent research confirmed that "simple visual stimuli such as horizontal, vertical and diagonal lines (e.g. Baker, 1937; Dunlap, 1900)"... and letter and digits (e.g. Sidis, 1898; Stroh, Shaw & Washburn, 1908) can be perceived even when there is no awareness of perceiving.

While somewhat more complex than simple horizontal or vertical lines, this data can be cited to argue that even without pointing out explicitly the subtle variations among kanji, the application quite probably facilitates a capacity to discriminate among characters for learners. The above two reasons by themselves would perhaps still be tenuous if they were by themselves, but let us look at another element that improves upon these factors even further.

III. It is based on pretesting.

In comparison to the more complex reasons stated above, these features are reinforced by a relatively straightforward principle. Benedict Carey, in his book "How We Learn" (2014, pp. 93-94) cites the research created by UCLA Psychologist Robert Bjork, and paraphrases his worth with the following:

If self-examination is more effective than straight studying (once we're familiar with the material), there must be reasons for it. One follows directly from Bjork's desirable difficulty principle. When the brain is retrieving studied text, names, formulas, skills, or anything else, it's doing something different, and *harder*, than when it sees the information again, or restudies. That extra effort deepens the resulting storage and retrieved strength.

At this point, to the extent the pretesting feature of the application may facilitate conceptual priming is unclear, however, at the very least, the above conclusion strongly suggests that minimally, perceptual data retention is improved simply by the structure of

the application itself. The last two features I would like to address do not relate to content, but rather to the advantages of smart phone application based study aids.

IV. Application learning is portable.

A very exciting feature of application learning is that, thanks to the advent of smart phones, learning can take place anywhere. Benedict Carey's text cites a long history of experiments and personal experiences, some rather outré, others very conventional, that argue against conventional wisdom and suggest that regularly changing up one's study environment is at least useful, and quite possibly crucial for retention. While the author himself admits that the proofs for his assertion are "meandering", they none the less create a convincing illustration in regards to learning.

Since we cannot predict the context in which we'll have to perform, we are better off varying the circumstances in which we will prepare. We need to handle life's pop quizzes, its spontaneous pickup games and jam sessions, and the traditional advice to establish a strict practice routine is no way to do so. On the contrary, try another room altogether. Another time of day. Take the guitar outside, into the park, into the woods. Change cafés. Switch practice courts. Put on blues instead of classical. Each alteration of the routine further enriches the skills being rehearsed.

In the context of kanji learning, this manifested in my own life as me using kanji box both in Japan and in the U.S. in cars, on trains, in waiting rooms, in classrooms, in cafeterias, and while kanji box was so effective as to be surprising in the U.S. it was

exhilarating to go to Japan and find what I had studied for so long facing me on almost every sign, package and doorway. Comparing my experiences in both countries, I this feature is invaluable, because thanks to kanji box, in the U.S. I was able to practice kanji almost constantly in a million little unfilled corners of my day, effectively priming me for my experiences in Japan. When I got to Japan, patterns I had until then only caught hints and glimpses of opened up and became concrete language tools. I don't think this would have necessarily happened so rapidly, but for this application priming my learning.

The last reason I will mention is cultural and I hope will wrap up this portion addressing perhaps the broadest reason as to why I believe this application serves as an indispensable resource for kanji learners.

V. Students are ready to adapt to smart phone applications.

Critical readers may have by this point noticed a fundamental characteristic of student behavior that I have neglected to address. Human endeavors of all sorts, whether the goal be losing 20 pounds or winning the Van Cliburn Competition are deeply correlated to one overarching factor: effort. The reason that this application is such an important tool is that in my opinion it can significantly reduce the amount of effort required to gain critical exposure to the content. Research shows that student perception of smartphone based learning is very positive. Even back in 2007 (light-years in terms of technological advances have since progressed), researchers Milrad and Spikol tested how likely students were to use smart phone based learning applications by students from a range of academic backgrounds and the results were clear:

If learners on a personal level, or even ideally instructors more universally can encourage the adoption of the Kanji box (or other thoughtfully developed smart phone applications), I think there is reason to believe that the success rates of Japanese learners, student retention rates, and overall success stands to increase substantially. The highly pedagogical advantages aside, insightfully created smart phone applications that meet the learner where they are at, both physically and educationally, can make the difference between students who are overwhelmed and discouraged, and a students who are confident, excited about learning and prepared to succeed. (Milrod and Spikal, 2007, p. 69)

Suggested Methodology

In the interest of full disclosure it important for me to discuss the parts of my methodology I attempted at the University of Nagasaki of Foreign Studies, which were for various reasons ultimately not viable resources for this research study. My hope is that this level of transparency can, if nothing else, both emphasize the amount of time, effort and resources I have expended for the purposes of acquiring the information I have secured thus far, as well as to provide guidance for research that may take place at a later time by either myself or others. My initial research approach included a modest amount of surveys, copies of which are provided and relatively intense levels of student observation as compared to the level that actually took place so as to produce quantitative data to gird my qualitative assertions.

This strategy was comprised of the following documentation, actual copies of which will be contained in the appendix. Firstly, a consent form and accompanying background survey that would have been used to determine the educational and cultural background of the subjects. It also includes a survey that may be employed at the discretion of the researcher to test the attitudes of the students. Also the purposes of this study, I would have acknowledged cultural background as an attribute of prime importance in creating data consistent with a majority of western students, and therefore, I would have excluded students that spoke Chinese or Japanese in their household as their attitudes may not have reflected the typical attitudes of a western student.

Secondly, I would have divided up students into a test group and control group, the test group being required to use (and to the extent possible) document the amount they studied each week. Sporadic interviews would be conducted throughout the semester, and the students would be encouraged to personally document the amount of time they spend studying kanji, by personal documentation. I propose the above methodology as a mean of not only compiling objective account of how much the students actually did study, but to create an understanding of their moods and attitudes, which are in my estimation, equally crucial to understand in the development of engaging and compelling curricula.

Two special commentaries I would like to mention about this proposed methodology is that the environment I attempted to perform it in was primarily novice learners. Looking back, I realize that many had not yet faced critical struggles against the material, so in this regard, even I had been able to present results at this writing, I feel they

would be at best premature, and at worst totally inaccurate. Consequently, this research should also be undertaken somewhere outside of Japan, as it seemed it would have been difficult to account for passive learning that occurred outside of the classroom, and so students would find documenting their studies especially challenging.

The second addendum I would like to mention is that this experiment is by design the fusing of two types of knowledge, subjective and objective. I have come to appreciate that this is an extraordinary amount of data to produce for an individual researcher, and so I would encourage a prospective researcher working as an individual to work on it either in partnership or otherwise acquire a team of researchers.

Conclusions

While this research has broadly chronicled parts of my journey, there is so much more that I wish I could describe in detail. Given that I first started learning Japanese in junior high school, the truth is I scarcely remember a time when I was not studying Japanese. It has been such a fulfilling journey for me, I can hardly imagine my life without it. Still, it saddens and disheartens me to see students so often struggle, to see people trying and failing and quitting, and otherwise competent students become listless and disengaged. This case study, more than anything else is an exploration to address this dynamic

I do not think it is fair to ask Japanese language students, who are befriending, working with, living with, loving, and marrying within the Japanese population at a greater rate than ever before to accept educational practices that fail by design in creating a meaningful capacity to engage in the world around them. Therefore, I propose that the

leveraging of this and other such technologies in order to practically and experientially promote engagement and content mastery among students outside of the classroom, is of paramount importance. There must be greater efforts within the Japanese pedagogical community to fully initiate learners into the linguistic realities of Japanese

Please allow me to end, stating that this is not an opus of contempt or abject disdain to any party. While I have critically examined the role Japanese educators and their resources primarily, the responsibility, for both Western and Japanese university bureaucracies to thoughtfully examine their pedagogical standards, for christened educators producing thoughtful and engaging resources and curricula, and not least of all, for students showing up, excited and engaged with the learning process. I feel this dynamic will be crucial as a means of coping with Japan's inevitable future as a progressively more diverse populace.

I know it is beyond naïve to expect such a trifecta to come quickly or easily, but Japan has taught me that such small harmonies, while seemingly insignificant, are both incredibly valuable and worth working towards, even if at first they seem impossible. The things that seem impossible today, with hard work, become realities. A final clichéd, though no less endearing, Japanese idiom to ponder upon about the nature of the work lying before Japanese language educators and learners goes as follows: ちりも積もれば山となる, which is can be paraphrased as "even dust accumulates to form mountains."

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Appendices

Appendix A. Example Research Participant Consent Form

Thank you for choosing to participate in this research project! This document will outline the terms of participation. Please keep a copy for your records as a reference.

Timeline-this project will take place from XX

Participation Participation in the experiment is contingent on the consent of the participant and as such participation maybe canceled at any time by the participant.

Data Conservation- The data acquired from this project will be kept confidential and shared only for data analysis purposes. The data will be maintained for potential research considerations for 2 years after which it may be discarded.

Data disclosure- Data pertaining to the specific participant may be released to that participant at the conclusion of the project

Consent:

Please (x) if you would like your data at the end of the project

By electronically signing this document with my ID number I am agreeing to the above terms:

Name

Signature

Student ID

Appendix B. Example Participant Background Survey

Name:
Tvanic.
Age:
Gender:
Number of years studying Japanese:
Please go to this link and follow the prompt, when you are done, please write how many
kanji you know below.
http://www.mlcjapanese.co.jp/Level_Check_Kanji.html
I know approximately Kanji
Please answer the following questions: (*note: kanji are of Chinese origin, the word kanj
will be used interchangeably with the word "Chinese character")
1. I have parents or relatives that can read Chinese characters Y/N
2. I have lived in a country the uses Chinese characters Y/N
3. I have regular access to a desktop computer Y/N
4. I have regular access to an iPhone Y/N
5. I spend approximately studying kanji exclusively
6. I live with a host family Y/N

Appendix C. Example Test Group Instructions

Thank you for participating in this study! The following are instructions for your participation in the research.

Please continue to study normally, however, any time you study kanji exclusively by yourself or with your homestay (excluding the class room) please do your best to document how you studied and how long you studied. It can be as simple as the following example:

"10/15/2014, flash cards, 15min."

It is also acceptable to include any impressions or feelings you may have, for example "I felt confident in my studies" or "I felt frustrated with these kanji" in your notes. These are not necessary every time, but please do not hesitate to include them at your discretion. You may keep these records electronically or a notebook can be provided to you free of charge at your request. The most important thing is that you document your method and time as accurately as possible.

In addition to your regular study habits, you will be asked to use an application called Kanjibox.net for a minimum of 20 minutes to an hour each week. You are free to use it more if so desired, but it is requested that you log all times that you use it as accurately as possible. Please let me know if you have difficulty accessing a computer. There is also an app available for iPhone available for purchase in the app store for 4.99. You can search for it with "kanji box" Should you decide to purchase it, you may request a reimbursement for

your fee. Please note that impressions of your study experience with kanji box are

especially encouraged.

When you start the application, *PLEASE DO NOT LOG ON WITH YOUR FACEBOOK

ACCOUNT*, please log on with the email address you have provided me, and use the

following password:

Password: 12345

Please submit either by email or by hand the report of your studies every Friday.

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Appendix D. Example Control Group Instructions

Thank you for participating in this study! The following are instructions for your participation in the research.

Please continue to study normally, however, any time you study kanji exclusively by yourself or with your homestay (excluding the class room) please do your best to document how you studied and how long you studied. It can be as simple as the following example:

"10/15/2014, flash cards, 15min."

It is also acceptable to include any impressions or feelings you may have, for example "I felt confident in my studies" or "I felt frustrated with these kanji" in your notes. These are not necessary every time, but please do not hesitate to include them at your discretion.

You may keep these records electronically or a notebook can be provided to you free of charge at your request. The most important thing is that you document your method and time as accurately as possible.

Please submit either by email or by hand the report of your studies every Friday.

Appendix E. Example Research Survey

Name:

The following questions are about your experience studying Kanji. Please Do Not over think your answers. There is no right or wrong answer. The goal of this exercise is to measure your perceptions. However the longer you consider a question, the more your biases may come into play. With that in mind, please answer the following questions. At the end there will be space to provide any commentary you would like to add regarding the questions and any portion of the experiment.

Please answer the questions using a scale of 1-10.

1 2 3 4 5 6 7 8 9 10 I strongly disagree I strongly agree

- 1. I believe a person of Western (or otherwise non-east Asian decent) can master a language that uses Chinese characters (i.e. Kanji).
- 2. I believe I can master a language that uses Chinese Characters.
- 3. I feel that the teaching instruction I have received has adequately prepared me to master kanji
- 4. I feel that the tools I have access to are adequate for mastering kanji
- 5. I am highly motivated to learn the Japanese language
- 6. I am highly motivated to learn as many kanji as possible.

Comments: