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Japanese Vocabulary Acquisition Among Swedish Natives
A Study Across JLPT Levels and Word Classes

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Abstract

This thesis examines the acquisition of Japanese vocabulary by Swedish L1 speakers learning Japanese as a second language, and how well their proficiency, acquired through formal education in Sweden, aligns with the Japanese Language Proficiency Test (JLPT) standards. The study also compares the recognition rates of different types of word classes such as nouns, adjectives, and verbs across various JLPT levels, and examines the correlation between learning outcomes and duration of study for respectively JLPT and word classes among the groups. A total of 21 Swedish L1 participants at pre-intermediate to advanced level in Japanese were recruited from language cafes and universities. The vocabulary recognition test comprised 90 words, randomly selected from various vocabulary lists used by the JLPT to assess specific proficiency levels. The data was analyzed using an ANOVA (Analysis of Variance) to determine if there were any statistically significant differences among the results.

Keywords:
JLPT, Vocabulary Recognition, Second Language Acquisition, Language Learning Strategies, Swedish L2 Learners, Word Class Recognition, Language Teaching, Nouns, Verbs, Adjectives, Formal Education, Passive Vocabulary, Duration of Study, Language Proficiency, Language Exposure, Educational Practice

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Conventions and Abbreviations

Japanese Language Proficiency Test (JLPT)

A standardized test designed to evaluate and certify the Japanese language proficiency of non-native speakers. The JLPT levels range from N5, indicating beginner proficiency, to N1, which indicates advanced proficiency.

L1 (First Language)

The first language a person has been exposed to from birth, also known as the mother tongue.

L2 (Second Language)

Any language learned after the first language, not necessarily the second in terms of sequence, but in contrast to the native language(s).

Word Classes

Adjectives, Nouns, and Verbs

Symbol and Meaning for Results

*** indicates $P \leq 0.001$
* indicates $P \leq 0.05$
ns indicates $P > 0.05$

Appendix A - Demographic and Survey Questions

General information about the participants and vocabulary recognition test.

Appendix B - Hepburn System

This thesis uses the Hepburn system for with modification for おう (ö),
but for the rest of the romanization of Japanese characters, a complete table of the Hepburn system can be found in Appendix B (see Figure 1).

Appendix C - Special Notes

Symbol and meaning

* Translation | Classification Error | Doubles | Double Meaning | Spelling Mistakes |

** Special note about the word

Appendix D - Vocabulary List

Table of Content

1. Introduction.

The JLPT, founded by the Department of Education in Japan in 1984, is a standardized test designed to assess the Japanese language proficiency of non-native speakers by evaluating their grammar, vocabulary, and listening skills. During the years it has gained international recognition for its comprehensive assessment across five levels, serving as a benchmark for measuring Japanese language proficiency. However, despite its widespread use, there is a need to evaluate whether the JLPT effectively reflects the actual vocabulary competence of learners. Considering individual differences in proficiency such as speaking, writing, and reading. Additionally, the difference in their linguistic and cultural backgrounds, like Swedish natives can influence language acquisition processes and outcomes. This thesis aims to investigate the correlation between passive vocabulary proficiency and the JLPT standards among Swedish L1 learners of Japanese as a second language. It addresses three primary research questions: How well do the JLPT standards correlate with the passive Japanese vocabulary proficiency of Swedish native L2 learners? Which word class (nouns, adjectives, or verbs) is most frequently recognized by Swedish natives learning Japanese as a second language? Are there a statistical significance between learning outcomes and duration of study for specific word classes and JLPT levels?

By answering these questions, the study seeks to validate the effectiveness of the JLPT and to identify potential areas for improvement in vocabulary acquisition, and provide insights into the impact of study duration and learning outcomes for Swedish Natives learning Japanese as a second language.

2. Background

The JLPT's purpose was to design a standardized test for measuring and certifying non-natives Japanese language proficiency across five levels, from N5 (beginner) to (N1) advanced. Established in 1984 by the Japan Foundation and Japan Educational Exchanges and Services, JLPT has grown to become a widely recognized test for Japanese language proficiency worldwide. Which assesses four key language skills: reading, listening, vocabulary, and grammar. Each level of the test is designed to measure the ability to use the Japanese language in practical, everyday situations as well as academic and professional contexts. However, there has been an ongoing discourse regarding its true effectiveness mentioned in Tellols, D., Tokunaga, T., & Yokono, H. (2022), which insinuates that due to JLPT's primary focus on high frequency word alone, it misses a valuable aspect of semantics.

Gentner's (1982) research about children's L1 typically indicates that children learn nouns before verbs due to their more comprehensible nature, while Viberg's (2002) emphasizes the foundational role of basic verbs in language learning. Nation (2001) also highlights the importance of high-frequency vocabulary, which is learned quickly and retained longer due to repeated exposure in various contexts. Additionally, Andersson and Gullberg (2022) demonstrate that a learner's first language (L1) significantly impacts the acquisition and processing of second language (L2) vocabulary, emphasizing the importance of semantic similarities between L1 and L2. Their study found that German learners of Swedish, whose L1 shares semantic characteristics with Swedish, processed Swedish placement verbs more similarly to native speakers compared to English learners, whose L1 does not share these characteristics. This underscores the importance of semantic similarities between L1 and L2 in facilitating vocabulary acquisition. In summary, integrating the research of Gentner, Nation, Viberg, and Andersson and Gullberg provides a comprehensive view of vocabulary development. Understanding the importance of high-frequency vocabulary and the sequential acquisition of nouns and verbs offers valuable insights into language learning, emphasizing the need to consider cross linguistic influences and semantic alignment between L1 and L2 for effective language education.

Laufer provides insights into the dynamics between passive and active vocabulary development. While passive vocabulary can be expanded through traditional instruction, activating this vocabulary for productive use poses significant challenges, indicating that learning interventions must focus on both acquisition and active usage (Laufer, 1998).
Milton's work further elaborates on the assessment of vocabulary knowledge, noting how vocabulary size significantly influences a learner's ability to perform in a second language. He discusses the importance of both passive recognition and the active use of vocabulary in language proficiency and exam performance. (Milton, 2009)

The Routledge Handbook of Vocabulary (Webb, 2019) connects theoretical knowledge with practical application, indicating the effectiveness of vocabulary acquisition in educational settings and and Nation (2001) study highlight the importance of high-frequency vocabulary, emphasizing that such words are learned quickly and retained longer due to repeated exposure in various contexts strongly suggesting that learning outcomes should align with duration of study, meaning that no significant difference should occur.

Mentioned in "An Overview of Vocabulary Acquisition Studies as a Second Language – From the Perspectives of Learning Forms and Strategies" by Tanuchi (2002) highlighted several key approaches, such as systematic vocabulary learning through structured techniques, word lists and explicit instruction, incidental vocabulary learning through naturalistic exposure and strategic vocabulary learning using targeted techniques like mnemonic devices. emphasizing the importance of various learning methods, indicating that one type of study method alone is not enough.

Objective

This research aims to thoroughly evaluate the correlation between Swedish learners' passive vocabulary proficiency and the JLPT standards, exploring the effectiveness of JLPT as an assessment tool and providing insights into improving vocabulary assessment for L2 learners. Additionally, this study will highlight how word classes affect Swedish natives learning Japanese as a second language by evaluating the learning potential of each word class. Lastly, the study will focus on the correlation between learning outcomes and the duration of study to investigate the impacts of learning outcomes for Swedish natives learning Japanese as a second language.. This study will also integrate theoretical insights from linguistics with empirical evidence to bridge the gap between academic theory and practical language teaching.

3 Research Questions

- How does Swedish native L2 learners' passive Japanese vocabulary proficiency correlate with JLPT Standards?

- Among nouns, adjectives, and verbs, which word class is most recognized by Swedish Native Japanese L2 learners?

- Are there a statistical significance between learning outcomes and the duration of study in JLPT Levels respectively word classes and do they correlate with Swedish Natives learning Japanese as a second language?

4. Methodology

4.1 Demographics

This study involved 21 Swedish native speakers who are between the ages of 20-35 years old learning Japanese as a second language (L2), with proficiency levels ranging from pre-intermediate to advanced. Participants were recruited from language cafes, Lund University, and Gothenburg University in Sweden.

4.2 Format of survey

An online vocabulary recognition test consisted of 90 words, evenly distributed across the three word classes: Nouns, Adjectives, and Verbs, and across the JLPT Levels: N5, N3, and N1. The test aimed to examine the correlation between the duration of study and vocabulary recognition proficiency and the most recognized word class among Swedish learners of Japanese. The vocabulary recognition test uses a Swedish translation, an English translation and a Japanese translation written with both kanji with furigana and hiragana. The vocabulary was randomly selected with a random number generator from words previously used by JLPT for their respective level, evenly distributed across different word classes and the JLPT levels N5, N3, N1. A Forced-choice task (multiple choice) was selected for the words designed to help participants make educated guesses based on their recognition of the words.
For example: What is the equivalent word for 液【えき】(eki)?
Gas (Gas) | Liquid (Vätska) | Solid (Fast ämne) | Plasma (Plasma)

As for the demographic questions for the participants, both a Yes-no task and a voluntarily open text box was used, followed by a demographic questionnaire for age, gender, duration of Japanese studies, language application and the learning resources they used. The data from the vocabulary tests were analyzed by using ANOVA (Analysis of Variance) to determine the statistical significant difference and an average score and percentage comparison of the results will be included.

Limitations

Limitations should be acknowledged in this study.

In table 1 the sample size of 21 participants is relatively small, which may limit the generalizability of the findings.

Translation and classification errors occurred for five vocabulary items, resulting in 85 words being analyzed instead of the initially 90 intended words, which affected the distribution of words slightly uneven among the word classes and JLPT levels.

Nouns: 32 ,Verbs: 27 , Adjectives: 26, N1: 28 , N3: 27 and N5: 30.

The original intent was to distribute 90 words evenly.

Table 1 - Limitations

English	Japanese	Romanization	Swedish	Cause	Corrections
Clear *	明らか 【あきらか】	akiraka	Klar | Klarsynt	Double meaning Appeared twice	Obvious |Självklart
To tie / fasten *	締める 【しめる】	shimeru	Att binda | Att Fästa	Double meaning Appeared twice	Att spänna
Socializing	社交 【しゃこう】	shakō	Sällskap *	Classification Error	Socialisera
To bear	負う【おう】	ō	Att bära *	Translation Error	Att uthärda
To Apply	応募【おうぼ】	ōbo	Att söka *	Translation error	Application | Ansökan
Drop	雫【しずく】	shizuku	Dropp *	Spelling mistake	Droppe

5. Results

Introduction

This chapter presents the findings of a study on Japanese vocabulary acquisition among Swedish L1 speakers. The study aimed to evaluate the recognition abilities of Japanese vocabulary across different word classes and JLPT levels, involving a total of 21 participants aged 20 to 35 years, with a mean age of 23.94 years. The participants were predominantly male (84%). Participants were assessed using a vocabulary recognition test consisting of 85 words across three word classes (nouns, adjectives, and verbs) and three JLPT levels (N5, N3, and N1). The average recognition rates indicated that verbs were the most recognized word class (91%), followed by adjectives (87%) and nouns (81%), showing significance difference (p-value 0.03*) among word classes in table 5.3. The ANOVA analysis further revealed significant differences in vocabulary recognition between JLPT levels (p-value 0.00***) and Swedish L1, The highest recognition rate was observed for N5 (97%), followed by N3 (86%), and the lowest for N1 (71%) in table 5.2. The study also considered the impact of the duration of Japanese language study on vocabulary recognition in both word classes and JLPT. The average scores out of 85 words varied, with the 1-2 year group scoring 83%, both the 3-4 year and 5-year groups scoring 89%, and the 10-year group scoring 78% for word classes in table 5.4 and for JLPT levels, year 1-2 received 83%, 3-4 and 5 received 80% and 10+ year received 78% in table 5.5. Regarding the practical use of Japanese, 18 participants reported using the language in practice, while 3 did not. Language exposure varied, with participants engaging with various media (72.7%), literature (27%), teaching and cultural activities (45%), news and information (27%), and social and communicative contexts (63.6%). Additionally, the types of learning materials used included formal education (95.5%), multimedia (40.9%), applications (77.3%), and other materials (22%) out of 21 participants voluntarily answering.

Results of the Japanese Vocabulary Recognition Test

The demographic data in Table 5.1 highlights gender distribution, with 17 men (84%) and 4 women (16%), and an average age of 23.94 years. Regarding the practical use of Japanese, 18 participants have been able to use Japanese outside the classroom and 3 have yet been able to use it outside the classroom. Participants who were exposed to Japanese through various media (72.7%), literature (27%), teaching and cultural activities (45%), news and information (27%), and social and communicative contexts (63.6%). The study also noted the types of learning materials used: 95.5% of participants utilized formal education, 40.9% used multimedia, 77.3% used applications, and 22% used other materials.

Table 5.1 Demographics

Participants	10	4	4	3	Total 21	
Duration of Study	1-2 Years	3-4 Years	5 Years	10 Years		
Average score	70,3	76	76	66	Out of 85	
Gender	Men 17 (84%)		Women 4 (16%)	Age span 20-35	Average Age 23,94	
Practice use of Japanese	Yes 18	No 3				
Language Exposure	Various Media 16 (72,7%)		Literature 6 (27%)	Teaching and Cultural 10 (45%)	News and Information 6 (27%)	Social and Communicative 14 (63,6%)
Learning Material	Formal Education 21 (95,5%)		Multimedia 9 (40,9%)	Applications 17 (77,3%)	Others 5 (22%)	

In table 5.2 the Vocabulary recognition results display the average score of 19.9 for N1, 24 for N3, and 29 for N5. The percentages of JLPT vocabulary recognized were 71% for N1, 86% for N3, and 97% for N5, with a highly significant p-value of 0.00***, based on 28 words in N1, 27 words in N3, 30 words in N5.

Table 5.2 - JLPT Vocabulary Recognition Test

JLPT Level	Vocabulary Recognition	No. of characters	%	P-value
N1	19.9	28	71	0,00***
N3	24	27	86	
N5	29	30	97	

In terms of word class in table 5.3 participants received an average score of 26 for nouns, 24 for verbs, and 23 for adjectives. The corresponding number of characters were 32 for nouns, 27 for verbs, and 26 for adjectives. The percentages of vocabulary recognized were 81% for nouns, 91% for verbs, and 87% for adjectives, with the noun recognition showing statistical significance difference (p-value of 0.03) between participants and their proficiency in word classes

Table 5.3 - Word Class - Vocabulary Recognition Test

Word Class	Vocabulary Recognition	No. of characters	%	P-value
Nouns	26	32	81	0,03*
Verbs	24	27	91	
Adjective	23	26	87	

The data in table 5.4 reveals the outcomes of vocabulary recognition and the accuracy of responses over different durations of study. In the first two years, students achieve a vocabulary recognition rate of 71%, with 83% of their responses being correct. From the third to fourth year, vocabulary recognition improves to 76%, and the accuracy of responses increases to 89%. In the fifth year, the vocabulary recognition rate remains at 76%, and the accuracy of responses stays at 89%. After ten years of study, there is a decline in vocabulary recognition to 67% and a decrease in the accuracy of responses to 78% based on 85 words.

Table 5.4 Learning outcome and study duration for Word Classes

Word Class	Vocabulary Recognition	Percentage	P-value
	Total 85 words		
Year 1-2	71	83	0,04*
Year 3-4	76	89	
Year 5	76	89	
Year 10+	67	78	

Table 5.5 provides insights into vocabulary recognition and recognition percentage based on study durations groups for JLPT levels. In the first one to two years, the vocabulary recognition is 70, with a recognition percentage of 83%, and the P-value is 0.2, indicating no statistical significance. For study durations of three to four years, the vocabulary recognition remains constant at 69, but the percentage slightly drops to 80%. This same pattern is observed in the fifth year. After ten or more years, the vocabulary recognition slightly decreases to 67, with the recognition percentage also dropping to 79% based on 85 words.

Table 5.5 Learning outcomes and study duration for JLPT Levels

JLPT	Vocabulary Recognition	Percentage	P-value
	Total 85 Words		
Year 1-2	70	83	0,2 ns
Year 3-4	69	80	
Year 5	69	80	
Year 10+	67	78	

6. Discussion

This study investigated the correlation between passive vocabulary acquisition between Swedish L1 learners of Japanese and the Japanese Language Proficiency Test (JLPT) standards. As well which word class was most recognized between nouns, adjectives and verbs. Lastly, the correlation between learning outcome and study duration for the specific word classes and JLPT Levels.

The study found a statistical significant difference between Swedish L1 and word class recognition due to nouns. Meaning that Swedish L1 learners have high knowledge of vocabulary that are verbs and adjectives compared to nouns (71%) in table 5.3. While this did not align with Genther (1982) that nouns are learned first, it is important to differentiate L1 and L2 vocabulary acquisition due to semantic aspects may be different Viberg (2002). However, what it does tell us is that there is an emphasized focus on both verbs and adjectives while a noticeable gap in nouns are found.

It was also revealed that JLPT levels did not have statistically significant difference between each other, and the results of N1 (70%), N3 (87%) and N5 (97%) is a sufficient representation of JLPTs difference in difficulty levels. What that means is that there was no difference between the levels and the participants had uniform knowledge about the vocabulary which could indicate that their course literature used for studying Japanese may lack the sufficient method of teaching nouns.

The correlation between duration of study and learning outcomes in word classes and JLPT levels showed some statistical significant difference, but the difference was not high which could be shown looking at the average scores in table 5.4 and 5.5. Meaning that while alignment of learning outcomes and duration of study did not fully align, it could imply that there are factors on the individual level and room for improvement regarding the use of high frequency vocabulary.

7. Conclusion

This study aimed to contribute to the theoretical understanding of vocabulary acquisition in second language learning, specifically within the context of Japanese as a second language for Swedish learners. The result revealed useful information for both teachers and learners learning Japanese.

Firstly, Gentner's (1982) theory that nouns are learned more easily than verbs among L1, due to their tangible nature did not completely align with this study focusing on L2. The study actually found that verbs were the most recognized word class (91%), while adjectives (87%) and nouns (71%) came in second and third place. This could support Viberg's (2002)'s study that an emphasis on the foundational role of basic verbs in second language acquisition is essential and might already be in use. Nation's (2001) focus on high-frequency vocabulary, suggesting that teaching methods and materials in Swedish educational contexts might benefit from balancing nouns. Additionally, Andersson and Gullberg (2022) research on crosslinguistic influence (CLI) highlights the importance of considering the semantic similarities between a learner's first language (L1) and second language (L2) in developing effective educational strategies, which could further explain the nuanced recognition rates observed in the study.

The study's results showed a significant correlation between the duration of study and learning outcomes for word classes and JLPT. However, it's important the low difference presented, which can be easier understood by looking at average scores and percentages in table 5.4 and 5.5. The results revealed that those who studied for 1-2 years achieved a slightly higher average (70) than those who studied for 3-4 years, 5 years (69) and longer than 10 years (67) indicating a minimal dip among vocabulary proficiency across all groups.

Laufer's (1997) research on the dynamics between passive and active vocabulary development indicates that while passive vocabulary can be expanded through traditional instruction, activating this vocabulary for productive use poses significant challenges.

The study also found a significant correlation between Swedish L1's passive vocabulary proficiency and JLPT standards, suggesting that traditional educational methods in Sweden are efficient but regards for word classes it lacks for nouns. Which highlights also the importance of balanced educational practices in word classes. Milton's (2009) work on the assessment of vocabulary knowledge complements these findings by emphasizing the importance of both passive recognition and active use of vocabulary in language proficiency and exam performance.

Tellols, Tokunaga, and Yokono (2022) discuss the limitations of the JLPT, noting that it primarily focuses on word difficulty based on frequency of use and lacks a comprehensive semantic assessment. However, the test results revealed high marks in N5 (97%), N3(87%) and a moderate mark for N1 (70%) seem to indicate that educational settings in Sweden have found sufficient methods supplementing this limitation, maybe to well or could it be that Swedish L1 learning Japanese as a second language are in general more receptive to verbs and adjectives in Japanese? We can only find out with further research.

A couple of considerations need to be implemented before setting these results in stone. Due to the small sample size of 21 participants giving answers, a larger and more diverse sample size would increase the generalizability of these findings. Investigating further on word classes for Swedish natives learning Japanese as a second language and last, the impact of informal language exposure for swedish natives learning japanese as a second language, such as media and social interactions could yield valuable information on how language learning influences the vocabulary acquisition as active vocabulary use is a part of an important role of vocabulary knowledge in real-life scenarios.

References

Andersson, Annika & Marianne Gullberg 2022. First language matters: event-related potentials show crosslinguistic influence on the processing of placement verb semantics. Frontiers in Psychology 13 (https://doi.org/10.3389/fpsyg.2022.815801).

Gentner, D. (1982). Why nouns are learned before verbs: Linguistic relativity versus natural partitioning. BBN report; no. 4854.

Laufer, B. (1998). The development of passive and active vocabulary in a second language: Same or different?. Applied linguistics, 19(2), 255-271.

Mayfield, B. (n.d.). Hepburn system chart [Image]. Wikimedia Commons. https://commons.wikimedia.org/w/index.php?curid=10975864

Nation, I. S. P. (2022). The Cambridge Applied Linguistics Series. In Learning Vocabulary in Another Language (pp. ii–iv). series-page, Cambridge: Cambridge University Press.

Pulido, D. (2011). MEASURING SECOND LANGUAGE VOCABULARY ACQUISITION. James Milton. Clevedon, UK: Multilingual Matters, 2009. Pp. v + 278. Studies in Second Language Acquisition, 33(3), 471–472.

Tanuchi. (2002). An Overview of Vocabulary Acquisition Studies as a Second Language: From the Perspectives of Learning Forms and Strategies (Chapter 2: Vocabulary Acquisition). Language Culture and Japanese Language Education. Special Issue: The Forefront of Research in Second Language Acquisition and Education, 2002, pp. 155-169.

Tellols, D., Tokunaga, T., & Yokono, H. (2022). Vocabulary Volume: A New Metric for Assessing Vocabulary Knowledge. In CSEDU 2022 - Proceedings of the 14th International Conference on Computer Supported Education (Vol. 2, pp. 56-65). SCITEPRESS. https://doi.org/10.5220/0010922600003114

Viberg, Åke. 2002. Basic verbs in second language acquisition. Revue Francaise de Linguistique Appliquée VII, 61-79. (https://www.cairn.info/revue-francaise-de-linguistique-appliquee-2002-2-page-61.htm);

Waller, J. (2019). Home page. Jonathan Waller's Web Site. https://www.tanos.co.uk

Webb, S., & Webb, S. A. (Eds.). (2020). The Routledge handbook of vocabulary studies (Vol. 2). London: Routledge.

Appendix

Swedish L1 speakers. Appendix A details the demographic and survey questions, offering insights into the participants' backgrounds and their exposure to the Japanese language. Appendix B includes the Hepburn system chart for consistent romanization of Japanese characters, ensuring clarity in language representation. Appendix C presents special notes on specific vocabulary items, addressing translation nuances and classification errors to provide a clearer understanding of the terms used in the vocabulary test.

Appendix D lists the vocabulary items used in the study along with their translations and the percentage of correct responses, offering a comprehensive view of the participants' recognition abilities. The appendices (1.1 to 1.4) contain detailed ANOVA results and statistical analyses, highlighting the correlation between study duration, word class recognition, and JLPT levels. These statistical insights underscore the study's conclusions about vocabulary acquisition patterns and the effectiveness of the JLPT as an assessment tool for Swedish learners of Japanese.Swedish L1 speakers. Appendix A details the demographic and survey questions, offering insights into the participants' backgrounds and their exposure to the Japanese language. Appendix B includes the Hepburn system chart for consistent romanization of Japanese characters, ensuring clarity in language representation. Appendix C presents special notes on specific vocabulary items, addressing translation nuances and classification errors to provide a clearer understanding of the terms used in the vocabulary test. Appendix D lists the vocabulary items used in the study along with their translations and the percentage of correct responses, offering a comprehensive view of the participants' recognition abilities.

The appendices (1.1 to 1.4) contain detailed ANOVA results and statistical analyses, highlighting the correlation between study duration, word class recognition, and JLPT levels. These statistical insights underscore the study's conclusions about vocabulary acquisition patterns and the effectiveness of the JLPT as an assessment tool for Swedish learners of Japanese.

Appendix A - Demographic and Survey Questions

- Gender?
- Age?
- How long have you been studying Japanese?
- What resources (textbooks, online courses, apps, etc.) have you used?
- Have you had the opportunity to use Japanese in real life scenarios?
- What kind of experience do you have when it comes to Japanese?
  (e.g manga, movies, series, friends, news, articles, novels, living in japan)
- What is the Equivalent word for?

Appendix B - Hepburn System Chart

Figure 1: The Hepburn system for romanization of Japanese characters (Mayfield, n.d.).

Mayfield, B. (n.d.). Hepburn system chart [Image]. Wikimedia Commons. https://commons.wikimedia.org/w/index.php?curid=10975864

Appendix C - Special Notes

Dropp (Drop) 雫【しずく】- 100%*
Note: The term "Dropp" in Swedish refers specifically to small droplets, such as those of water.**

Att bära (To bear/responsibility) 負う【おう】- 45.5%*
Note: This term includes the meaning of bearing a load as well as taking on responsibility.**

Att söka (Application) 応募【おうぼ】- 47.4%*
Note: "Att söka" is used in the context of applying for something, such as a job or a permit.**

Att binda/Att fästa (To tie / To fasten *) 締める【しめる】- 75%*
Note: The term covers both the action of tying something (like a knot) and fastening something securely.**

Klarsynt / Klart (Clear) 明らか【あきらか】- 100%*
Note: "Klarsynt" refers to being perceptive or clear-sighted, while "Klart" simply means clear or obvious.**

Appendix D - Vocabulary List

Vocabulary List

Svenska	Engelska	Japanese	Responses in percentages
Ljus	Light	明かり【あかり】	95,5
Frukost	Breakfast	朝御飯【あさごはん】	100
Vätska	Liquid	液【えき】	85
Byte	Prey	獲物【えもの】	75
Bokstäver	Roman letters	英字【えいじ】	68,2
Video	Image/Video	映像【えいぞう】	47,6
Beundra	Admire	慕う【したう】	15
Son	Son	子息【しそく】	86,4
Broderi	Embroidery	刺繍【ししゅう】	78,9
Dropp*	Drop	雫【しずく】	100
Skada	Damage	破損【はそん】	50
Utgrävning	Excavation	発掘【はっくつ】	83,3
Att spela	play	演じる【えんじる】	81,8
Att Bära *	Bear/responsibility	負う【おう】	45,5
Att Söka *	Application	応募【おうぼ】	47,4
Att utvisa	Expel	追い出す【おいだす】	66,7
Stabilt	Firm/steady	確り【しっかり】	71,4
Diskvalifikation	Disqualification	失格【しっかく】	81
Att sjunka	Sink/submerge	沈める【しずめる】	80
Att påpeka	Point out	指摘【してき】	90,9
Att fullgöra	fulfill	果たす【はたす】	90,5
Diskussion	Discussion	話し合い【はなしあい】	95,5
Betydande	significant	大幅【おおはば】	95,2
Feg	Cowardly	臆病【おくびょう】	85
Lustig	Funny	可笑しい【おかしい】	95,2
Uttråkad	Bored	うんざり	65

Enkel	Simple	質素【しっそ】	45
Ihärdig	Persistent	しぶとい	35
Fett	Fat	脂肪【しぼう】	71,4
Sällskap*	Socializing	社交【しゃこう】	66,7
Välmående	Prosperity	繁盛【はんじょう】	52,6
Svullna	Swell	腫れる【はれる】	66,7
Skor	Shoe	靴【くつ】	100
Regn	Rain	雨【あめ】	100
Hund	Dog	犬【いぬ】	100
Bil	Car	自動車【じどうしゃ】	72,7
Ordbok	Dictionary	字引【じびき】	55
Fotografi	Photograph	写真【しゃしん】	100
Läxa	Homework	宿題【しゅくだい】	100
Fläskkött	Pork	豚肉【ぶたにく】	100
Kuvert	Envelope	封筒【ふうとう】	85
Att leka	To Play	遊ぶ【あそぶ】	100
Att simma	To Swim	泳ぐ【およぐ】	100
Att sjunga	To Sing	歌う【うたう】	100
Att springa	To run	走る【はしる】	100
Att dö	To Die	死ぬ【しぬ】	100
Att stänga	To Close	閉める【しめる】	100
Att binda / Att Fästa *	To tie / To fasten *	締める【しめる】	75
Att känna	To know	知る【しる】	72,7
Att sluta	To finish	終る【おわる】	100
Att klistra	To paste	貼る【はる】	86,4
Blå	Blue	青い【あおい】	100
Röd	Red	赤い【あかい】	100
Söt	Cute	可愛い【かわいい】	90,9
Het	Hot	暑い【あつい】	63,6
Ny	New	新しい【あたらしい】	100
Få	Few	少ない【すくない】	100
Ärlig	Honest	正直【しょうじき】	86,4
Sval	Cool	涼しい【すずしい】	95,5

Upptagen	Busy	忙しい【いそがしい】	100
Tunn	Thin	薄い【うすい】	90,5
Bräda	Board	板【いた】	80
Svett	Sweat	汗【あせ】	90
Ledig	Vacant	空き【あき】	100
Död	Death	死亡【しぼう】	95,5
Stat	State	州【しゅう】	95,5
Administration	Administration	事務【じむ】	95
Produkt	Product	品【しな】	95,5
Skilsmässa	Divorce	離婚【りこん】	95,5
Veckodag	Day of the week	曜日【ようび】	100
Att duscha	To shower	浴びる【あびる】	95,5
Att ge	To give	与える【あたえる】	76,2
Att samlas	To gather	集まる【あつまる】	100
Att träffa	To hit	当たる【あたる】	100
Att följa	To follow	従う【したがう】	54,5
Att koncentrera sig	To concentrate	集中する【しゅうちゅうする】	95,2
Att avresa	To depart	出発する【しゅっぱつする】	90,9
Att förbereda	To prepare	支度する【したくする】	40
Att släppa	To release	離す【はなす】	90,5
Att bryta	To break	割る【わる】	52,4
Överraskande	Surprising	意外【いがい】	81
Storslagen	Grand	偉大【いだい】	95,2
Söt	Sweet	甘い【あまい】	90,9
Bra	Good	いい【いい/よい】	100
Varm	Warm	暖かい【あたたかい】	100
Viktig	Important	重要【じゅうよう】	90,9
Allvarlig	Serious	重大【じゅうだい】	100
Klarsynt / Klart *	Clear	明らか【あきらか】	100
Självisk	Selfish	わがまま	85,7

These Vocabularies are based of previous JLPT standardization tests and acquired from https://www.tanos.co.uk/jlpt/skills/vocab/ Created by Waller, J. (2019)

Appendix 1.1 - ANOVA Results

Fig 1.1 - JLPT

SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
N1	21	1485,714286	70,74829932	197,218173		
N3	21	1859,259259	88,5361552	152,1327324		
N5	21	2053,333333	97,77777778	1-16		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	7926,856773	2	3963,428387	32,4527196	0,0000000002799606102	3,150411311
Within Groups	7327,758848	60	122,1293141			
Total	15254,61562	62				

*Note**

*Significance difference in P-value will be marked with a asterisk **
N/A - Indicating Results Not Available
SS (Sum of Squares) Measures the total variation within and between groups.
df Indicates the number of independent values that can vary in the data set.
MS - Represents the average variance within each group and between groups.
F - Compares the variances between groups to variances within groups to determine statistical significance.
P-Value - Shows the probability that the observed results occurred by chance under the null hypothesis.
F-Crit - The threshold value needed to reject the null hypothesis at a specific significance level.

Appendix 1.2

Fig 1.2 - Word Class

Anova: Single Factor						
SUMMARY			Från Nedan			
Groups	*Count*	*Sum*	*Average*	*Variance*		
Nouns	21	1718,75	81,8452381	117,7920387		
Verbs	21	1903,703704	90,65255732	127,049448		
Adjectives	21	1834,615385	87,36263736	106,7202029		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	831,8389794	2	415,9194897	3,549187827	0,03492828888	3,150411311
Within Groups	7031,233792	60	117,1872299			
Total	7863,072771	62				

*Note**

*Significance difference in P-value will be marked with a asterisk **
N/A - Indicating Results Not Available
SS (Sum of Squares) Measures the total variation within and between groups.
df Indicates the number of independent values that can vary in the data set.
MS - Represents the average variance within each group and between groups.
F - Compares the variances between groups to variances within groups to determine statistical significance.
P-Value - Shows the probability that the observed results occurred by chance under the null hypothesis.
F-Crit - The threshold value needed to reject the null hypothesis at a specific significance level.

Appendix 1.3

Fig 3. Word Class - Learning outcomes

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
1-2 Years	30	834,1176471	27,80392157	14,93696059		
3-4 Years	12	357,6470588	29,80392157	5,871867464		
5 Years	12	357,6470588	29,80392157	10,65324526		
10+ Years	9	235,2941176	26,14379085	13,76393695		
ANOVA						
ource of Variati	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	103,4569122	3	34,48563739	2,806186729	0,047372738 69	2,76076706
Within Groups	725,0595925	59	12,28914563			
Total	828,5165046	62				

*Note**

*Significance difference in P-value will be marked with a asterisk **
N/A - Indicating Results Not Available
SS (Sum of Squares) Measures the total variation within and between groups.
df Indicates the number of independent values that can vary in the data set.
MS - Represents the average variance within each group and between groups.
F - Compares the variances between groups to variances within groups to determine statistical significance.
P-Value - Shows the probability that the observed results occurred by chance under the null hypothesis.
F-Crit - The threshold value needed to reject the null hypothesis at a specific significance level.

Appendix 1.4

Fig 4. JLPT - Learning outcomes

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
1-2 Years	30	828,2352941	27,60784314	28,61074653		
3-4 Years	12	323,5294118	26,96078431	6,909929747		
5 Years	12	322,3529412	26,8627451	17,32200902		
10+ Years	9	235,2941176	26,14379085	61,16878124		
ANOVA						
urce of Variati	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	16,80342725	3	5,601142418	0,208416149 2	0,890181071 5	2,76076706
Within Groups	1585,613226	59	26,87480044			
Total	1602,416653	62				

*Note**

*Significance difference in P-value will be marked with a asterisk **
N/A - Indicating Results Not Available
SS (Sum of Squares) Measures the total variation within and between groups.
df Indicates the number of independent values that can vary in the data set.
MS - Represents the average variance within each group and between groups.
F - Compares the variances between groups to variances within groups to determine statistical significance.
P-Value - Shows the probability that the observed results occurred by chance under the null hypothesis.
F-Crit - The threshold value needed to reject the null hypothesis at a specific significance level.