

Creation of an animation component incorporated in the Translation and Writing Japanese Workshop I

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ABSTRACT

This paper describes our project titled “Creation of an animation component incorporated in the JPN261 online unit (Translation and Writing Japanese Workshop I)”. The project’s objective is to address students’ difficulties in choosing the appropriate Japanese prepositions/particles used to describe the relative position of objects. Acknowledging that certain animation has been previously used to assist students to develop language proficiency, the project endeavours to develop the student’s holistic understanding of language by using animation in a way that elicits students’ interactivity through their perceptiveness, sense of language and imagination. It sets out to develop a prototype exercise and implement it in the online unit, to facilitate research of the concept and the effectiveness of this type of animation as an educational tool. This is an initial step towards developing a full-scale exercise program, which will employ animation in E-learning of the Japanese language, and prospectively other languages. The development of the prototype exercise has just completed at the end of October 2002, and an analysis of its performance will be undertaken at the end of the second semester, 2002.

KEYWORDS

Animation, Japanese Particles, Visualisation, E-learning, Interactivity, Computer Literacy, Flash 5 Innovation

INTRODUCTION

This project arose from an awareness of students’ persistent difficulties in using appropriate particles in their writings. The project aims to produce an effective prototype exercise program to reinforce students’ understanding of particles.

The prototype exercise could be used in beginner and/or intermediate levels of Japanese units, however, Translation and Writing Japanese Workshops I has been chosen for the implementation of the prototype for the following reasons;

1. The unit trains students in fundamental and practical Japanese writing skills and the acquisition of particles being the most crucial issue;

2. it has an online unit where the animation exercise can be implemented and
3. the author and project leader, Mio Bryce, has been teaching this unit for several years.

PROJECT BACKGROUND

There are two key issues that focus the development of this project:

- firstly, Japanese particles are very significant in the language use, and the difficulty of their acquisition is well recognised; and
- secondly, animation as a teaching tool has merits and is potentially of use in Japanese language teaching.

The significance of Japanese particles

As noted by Nagata (1997), many students of the Japanese language face difficulties in choosing the appropriate prepositions/particles required to describe the relative position of objects. Particles can at times serve as a preposition, and the correct use of particles is critical to the correct use of the Japanese language. It is often the particles, rather than the word order, that determines the function of words in a sentence, and consequently the meaning of the sentence. This means that, unlike many other languages, the loose structure of Japanese allows the change of word order as long as:

- a sentence ends with the predicate (i.e., verbs and adjectives), and
- particles are used correctly.

This issue stems from the spatial perspective of the Japanese language, and it is not easy, therefore, for students to acquire this awareness from English explanations and translations.

Animation as a teaching tool

The term ‘animation’ is generally used to describe:

- motion pictures - situations in which ‘action’ is used to give motion to still objects, such as photos, cartoons and dolls, and
- animated cartoons - generally comprising stories and detailed backgrounds.

In this paper, ‘animation’ refers to ‘simple, motioned *manga*-style (Japanese cartoons) cartoons’, which are generally highly iconic, with cute, round and simple shapes and normally do not contain political satire (Lin, Nguyen & Pugh, 1996; Schodt, 1996).

Manga-style pictures have been used previously in textbooks, including those for Japanese language learning, and some animations have also been used to assist students to develop language proficiency. However, in both still and animated *manga*, their roles have generally been limited to replacing photos or verbal explanations regarding the appearance of objects and situations. For example, *manga* in *Nakama* (Hatasa, Hatasa, Makino 2000), a comprehensive Japanese learning package, accompanies each chapter’s dialogue in the textbooks and web activities. They are provided for students to listen to conversation and identify the content of the conversation, or to rearrange pictures according to the conversations. Similarly, animations have been used to provide students with visual information about vocabularies, sentences, conversations and/or situations (e.g., *Gengoro* [Macquarie University and Fujitsu Australia]).

THE PROJECT: THE CREATION AND IMPLEMENTATION OF ANIMATION EXERCISES

The project comprises three stages:

1. Problem identification and solution development;

2. Creation and implementation of prototype self-learning exercises: three exercises for Translation and Writing Japanese Workshop I); and
3. Evaluation of the results/performance.

For the purpose of this paper, only stages one and two will be discussed, as the development of the prototype exercise has just been completed (late October, 2002), and an evaluation of its performance is still to be undertaken (end of 2002).

1) Identify the problem and solution development

The identified problem emanates from students' difficulty in acquiring mastery of using the Japanese particle. This became evident during our teaching of various Japanese units, especially in Japanese Language units and Translation and Writing Japanese Workshops I & II. Students initially learn particles as part of the basic sentence structure, and generally are able to manage sufficiently well in grammar tests, by learning set expressions. However, when students learn a greater variety of expressions, and deal with more complex sentence structures, they confront a range of uses of the same particle. Students tend to repeatedly make the same basic mistakes, particularly in their creative writing.

From our observation, the problem appears to be that students' understanding of particles remains shallow, as a piece of knowledge, lacking feel and spatial perspectives. This situation suggests the need for reinforcement of their knowledge through their perception, sense of the language and imagination. Visualisation is essential for our perception, as Herskovits noted "much of our reasoning ability relies on visual thinking, on the manipulation of mental image" (1986, p1). In this regard, digital graphics, including animation is an effective supplemental program to the conventional teaching tools, such as textbook and dictionaries (Sonwalkar, 2001; Mones-Hattal, Mandes, 1995). Despite their major strengths, printed materials can be boring and generally lack the capacity for demonstrational presentation of time, space and movements within them, and are unable to promote the students' sense of effective use of the language.

The effectiveness of animation to reinforce students' understanding of particles may be considered as follows. In comparison to other visual presentation techniques for teaching, animation provides a greater choice of styles and/or density of drawings. Simple drawings and photos focus on the study object, and are helpful for students to understand the context. They are, however, incapable of depicting time, direction and the sequence of movements. Movies/videos involving actors are somewhat comparable to animation, as they can be fun and stimulating, close to reality and multi-dimensional. Videos are most suitable for conveying cultural context. While they can be most supportive in teaching culture and spoken language, background details may cause an unnecessary distraction for students learning grammar. Simple animation, on the other hand, can depict non-cultural graphics and focus on the abstract.

The significant features of a *manga*-style animation exercise are as follows.

1. Visualisation: the ability to facilitate visualisation of 'context', in effectively depicting objects in a multi-dimensional sphere, and the spatial relationships between objects.
2. Simplicity: the promotion of focused attention.
3. Humour: the ability to create humour is a significant strength in reinforcing the capacity of online teaching to create an enjoyable, 'non-threatening virtual learning environment' (Schweinhorst, 2002).
4. Interactivity: exercises elicit students' active involvement, increasing their contextual and syntactical understanding.
5. Repeatability: enables students to practice at anytime they wish.

Moreover, animation is particularly beneficial for use by external students, who study in isolation with little or no face-to-face interaction with their lecturer. Online teaching requires students not only to obtain knowledge of the language, but also to engage in the necessary practice to enhance their language skills. The repeatability of online teaching can, to a certain extent, overcome the limitation of time and space of classroom teaching, and further provide an individual and personal relationship between the lecturer and each student (Lam & Lawrence, 2002). Students learning online, tend to lose motivation due to the lack of interactivity, and the presence of immediate and one-off stimulation. Such stimulation is normally provided by face-to-face teaching in the classroom, where teachers are able to set the pace and promote interactivity between the teacher and students, and also between the students themselves. The shortcomings of online teaching can thus be compensated for with interactive animation exercises, and the use of entertainment and humour to promote immediate stimulation.

Interactive animation exercises are capable of providing a most effective and encouraging medium for students to reinforce their perspective understanding of particles, learnt via written texts and/or lectures. Animation enables the minimisation of realistic details and the creation of a simple, focused, non-cultural, possibly humoristic environment. As a supplemental tool to online teaching, it facilitates stimulation of students' interest to repeatedly "experience" the animated multi-dimensional situation, thus promoting their holistic and visual understanding of the focused object, that is, the use of each particle.

2) Creation of prototype exercise and its implementation in three exercises for Translation and Writing Japanese Workshop I

Based on the initial decision to employ animation in the prototype exercise, searches and discussions were carried out, regarding the content, types of animation and the supporting technology, i.e. availability, acceptability and accessibility, both for teachers/creators and students.

Technology

The current technological environment readily provides sufficient support for the creation and facilitation of animation exercises. This situation is attributed to advancements of both the technology and the students' media literacy. Many technical problems were anticipated in the creation process and use of animation. These fears were very real until recently. The situation, however, has improved dramatically with the recent advances in user-friendly software, such as Micromedia Flash 5, which has been used for our project. Flash 5 allows a PC user to readily draw pictures and animate them. This software allows a language teacher full autonomy as the creator of the animation program, including, both the written texts and graphics, and was identified as being the most appropriate technology for achieving our academic (language teaching) objectives. In addition, due to the fact that the animation exercises are created by teachers, and posted into the online unit, the program is cost effective, both in production and the maintenance (i.e. updating).

During the development of this project a fundamental change in the relationship between the 'technical' IT team member and us, the 'language specialists', was highlighted. Thanks to the advent of user-friendly technology, teachers can have greater control of their initiatives. This situation enabled the teachers to work in harmony with the technical personnel, and channel their creative synergies into experiments and innovation.

Students' Multi-media Literacy

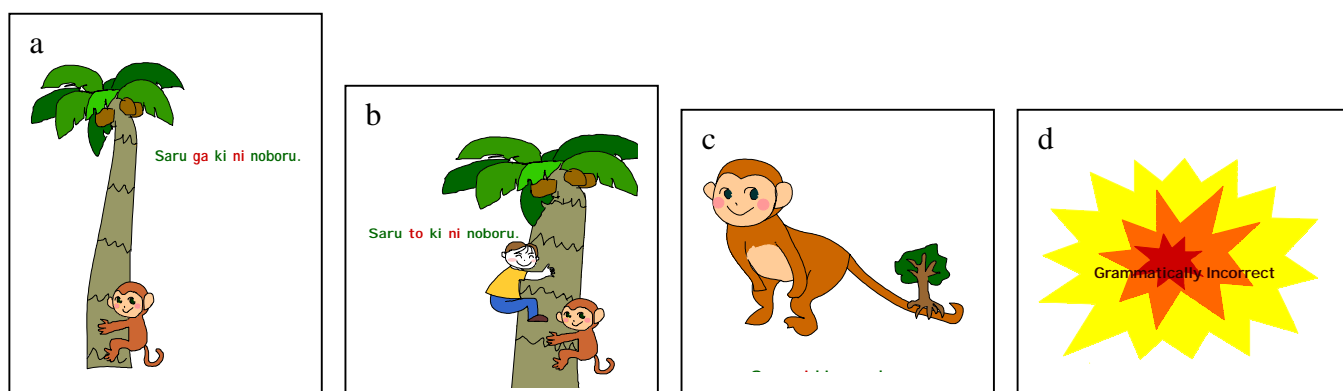
Expanding information technology has raised students' multi-media literacy, particularly their computer use/awareness and capacity for visual communication, via graphics and animation (e.g., Merchant, 2001). This coincides with the increased popularity of *manga* (Japanese cartoons and

animations), the social phenomenon once limited to Japan, but now spread all over the world. It is possible to enjoy *manga*, particularly animations, even without understanding the Japanese language. Due to this trend, familiarity with the *manga*-style of illustration has become a shared culture, and/or common language of the younger generation, particularly through the Internet. Students are able to quickly and effectively absorb information conveyed visually. It is undeniable that the younger generation has a greater graphic comprehension and less cultural resistance, than the older generation (Smith, 1995). The employment of *manga*-style animation in the prototype exercise, therefore, capitalises on *manga*'s universal popularity. It follows the general *manga*-style of illustration, which involves high levels of stylisation, simple lines without shading, exaggeration and/or omission of features, "cuteness" from roundness of figures, and a sense of humour. Pursuing this established and proven style provides the further advantage of minimising contextual elements and thereby presenting non-cultural settings, to encourage students' concentration on the focused teaching objects.

THE PROTOTYPE EXERCISE

The prototype exercise consisted of three exercises, posted to the online unit, Translation and Writing Japanese Workshop I, in Weeks 4, 8 and 12, in the second semester, 2002. The first exercise requires students to choose an appropriate particle to complete a sentence. The second deals with more complex sentence structures, including verbs with two objects (eg. *give* someone something). In both exercises, multiple choices are provided. The third exercise asks students to unscramble the words in the parenthesis, to create a sentence. Many answers are possible and students are encouraged to try to make as many sentences as they can.

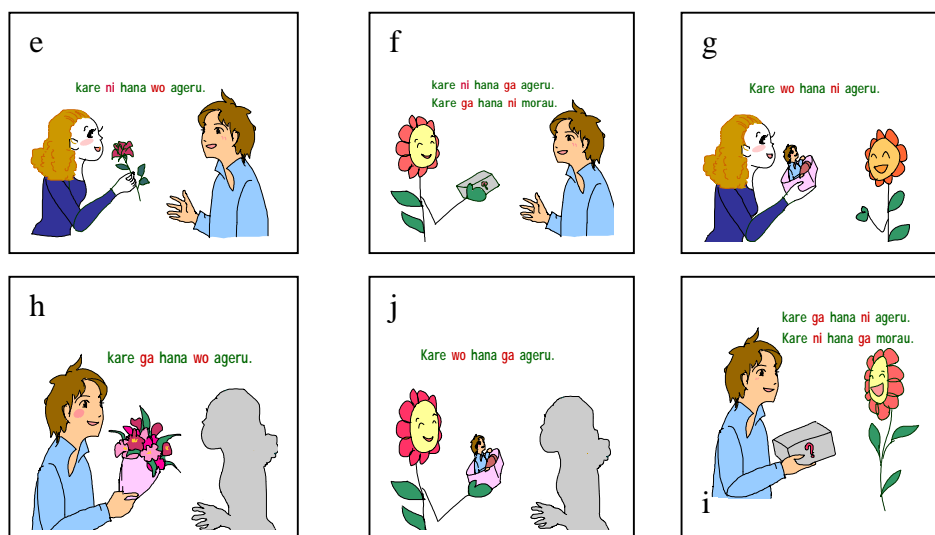
The exercise takes a form of a self test. Each possible answer is linked to our animation, and upon their selection of a correct answer, the student sees the visualisation of their sentences. If their answer is grammatically incorrect, they receive an animation of a bomb explosion. (figure d), which informs them of their incorrect selection.



Figures a, b, c and d are stills taken out of animation clips in the second exercise. They are the visualisation of all possible answers for a question such as: "Fill in each blank with an appropriate particle: *Saru* (monkey) ____ *ki* (tree) ____ *noboru* (climb.)". The most logical answer would be *Saru ga ki ni noboru* (Monkey climbs the tree. figure a). Using two particles in a different order however, it would mean "Tree climbs the monkey" (*Saru ni ki ga noboru*, figure c). The sentence is possible because the particles, not the word order, determine the meaning of the sentence. This is a typical example of a grammatically correct, but contextually inappropriate sentence – or a "silly" situation! Figure b shows another possibility, which means "Climb the tree with the monkey" (*Saru to ki ni noboru*).

While in English a sentence is incomplete without a subject, in Japanese, it is common to omit the subject, particularly when the subject is “I”. The meaning conveyed by this sentence (and emphasised in its animated visualisation) may or may not be considered silly by the students. Instead of the lecturer excluding such sentences from consideration, we let students be the judge. In the scripts attached to the animations, the particles in question are highlighted in red, to reinforce the connection between the particles and the animation. Throughout the exercises, students are exposed to a number of similar situations.

To deal with some problematic expressions, as many examples are presented as possible. For example, regarding the “give and receive” concept, Japanese uses various verbs depending on who is speaking, or from whose point of view. Particles again play a vital role. Figure e, f, g, h, i and j, are the choices provided as possible answers for a verb, *ageru* (to give). By using three particles in different orders, six situations are possible, none being grammatically incorrect.



A major innovation of the exercise is the use of animation to provide the visualisations of students’ responses, either contextually correct or incorrect. As stated before, the use of graphics and animation is fairly common in educational programs, however, their role is often limited to explain a setting, or specific instructions. In other words, they either replace written text, or supplement textual explanation. Even interactive animation is usually used to ensure that students’ respond to the teachers’ pre-conceived ‘correct’ visualisation of the situation. The approach of such an exercise is therefore limited to what is ‘contextually appropriate’, as determined by the instructor. In contrast, our exercise invites students to try out the various possible uses of particles in a sentence, and experience the resultant changes to the meaning. Students choose the answers whilst imagining the visualisation in their mind. The attached animation then allows them to check their expected visualisation against the corresponding animation, which represents the actual meaning of their choice of particles.

It is significant that in designing our exercises, the ‘silly’ situations are capitalised on rather than avoided. This closely reflects the process of learning language in real life. In real life, the embarrassment caused by getting into silly situations, or even the fear of such embarrassment, can serve to create serious inhibitions in the student. In our exercises, ‘silly’ situations are allowed to happen, albeit in a safe, private and artificial environment. Instead of being embarrassed, students can see the humour in the situation, and appreciate the change in meaning caused by the use of the particle in a particular way. This ‘shock’ treatment, softened by humour, creates a sufficient impact

for the students when they use the particles incorrectly. This application of animation serves a similar purpose to that described by Schwienhorst (2002): the high-tech visual reality provides a stress-free environment for language learning, and the low-tech virtual reality is capable of transporting students to a non-threatening virtual learning environment.

CONCLUSION

The project aimed to address students' difficulties in choosing the appropriate Japanese particles used to describe the relative position of objects. The prototype creation of *manga*-style interactive animation exercises, has been chosen to assist students' holistic understanding of particles through their perceptiveness, sense of language and imagination. The successful production of the exercises relied on recent technology, as well as students' multi-media literacy skills, and their familiarity with the Japanese style of 'cute' and 'humorous' cartoons and animations.

The key innovation in the prototype exercise is the visualisation of students' own responses to their learning. The major educational benefit of the program comprises the effective process of students' absorption of the rules of particle use, and the repeatability of the process, which allows them to practice with their initiatives. The cost effectiveness should also be recognised; the project is the result of the teachers' direct involvement in the production. In addition, the teachers' ability to create animations gives them the flexibility to update the exercise whenever needed. The easy updating is possible partially because the exercises are not on CD but are included in an online unit.

This project is our first development and implementation of an animated exercise program, and has benefited from the support provided by Macquarie University Teaching Development Grants. It provides a foundation for further research and development of the use of animation in computer assisted language materials. The prototype exercises were created to attend to our students' immediate difficulties with Japanese particle acquisition, however, its expanded use should be considered for application in other Japanese units, and also for other language teaching situations. Enthusiastic responses have been received from several students, suggesting a positive outcome from our endeavours to promote students' motivation to learn and explore. This has further highlighted the potential efficiency and effectiveness of the use of such animation in E-learning.

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