An investigation into the take-up and use of TLF digital content for Chinese, Japanese and Indonesian: Projects 1 and 2
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1 Purpose
The purpose of this report is to summarise findings from an investigation between July and December 2006 into the take-up and use of The Le@rning Federation's content for Chinese, Japanese and Indonesian – Projects 1 and 2. This document should be read in conjunction with ‘Evaluating The Le@rning Federation's online curriculum content initiative. Summary of findings from surveys, site visits and a field experiment’ January 2007 by Professor Peter Freebody.

2 Background
An understanding of the difference between TLF Projects 1 and 2 for the priority languages of Chinese, Japanese and Indonesian is necessary for an understanding of issues related to their take-up and use in the classroom.

2.1 Project 1 Cracking the code: The Character Catalogue resource and associated learning objects
The Cracking the code project was designed to support students to learn and use the Chinese and Japanese character-based writing systems. Character-based systems are often hard to learn for students used to alphabet-based systems such as English. Each character usually has to be memorised as a visual object. Based on recent National Asian Languages and Studies for Australian Schools (NALSAS) research, led by Dr Andrew Scrimgeour of the University of South Australia, the TLF online curriculum resources aim to enhance students’ understanding of the Chinese and Japanese writing systems through analysis, interaction and understanding of the component parts rather than simply memorisation. The Cracking the code project has two components:

2.1.1 The Character Catalogue
The Character Catalogue is an interactive Chinese and Japanese character library that enables users to understand the relationships between characters and their component parts. It encourages users to recognise the relationships between form and meaning in a basic character component and to identify the relationships between form, sound and meaning within a compound character. It is a major learning resource designed to be available online accompanied by extensive teacher support materials.

2.1.2 Cracking the code learning objects
Complementary Chinese and Japanese learning objects support the Character catalogue. These learning objects, in game-play format, help develop pre-literacy and early reading skills for Chinese and Japanese in game-like contexts. The focus is on active learning through analysis and interaction rather than simply memorisation.

All TLF digital content for Chinese and Japanese are described in their respective catalogues available on the TLF website at http://www.tlf.edu.au/tlf2/showMe.asp?nodeID=78.

2.2 Project 2: Close encounters: learning objects for Intercultural Language Learning
Framing the design of the second component of the TLF Languages project are the principles of Intercultural Language Learning (IcLL). IcLL “is a dynamic process that engages
the learner in contributing to intellectual interaction, in finding personal ways of negotiating
such interaction, and in reflecting on his/her own intellectual space and identity.”

The set of TLF learning objects known as Close encounters is designed to promote student
engagement in interactive multimedia scenario-based learning experiences, which promote
intercultural learning and communicative competence in the languages and cultures of China,
Japan and Indonesia.

2.3 Issues for investigation
Since release of the TLF digital content for the priority languages commenced in 2004 several
issues have emerged. These include issues related to:

- concerns expressed by some native speakers of both Chinese and Japanese about the
  accuracy of the Character catalogue and characters used in the associated learning objects
  for Chinese and Japanese
- some technical glitches within the Character catalogue
- the first two Freebody data collection periods 2004 and 2005 indicating that there was
  limited use of either Languages Project 1 or 2 learning objects
- the Languages learning objects that were referred to in the Freebody studies were not
  being as favourably received by teachers and students as learning objects from other
  learning domains.

This investigation sought to examine these issues with selected jurisdiction language advisors and
teachers of Chinese, Japanese and Indonesian. The investigation concentrated in the main in
South Australia, Tasmania and Victoria.

3 Approach
A range of approaches were used during the investigation period to assist awareness-raising and
data-gathering. These included:

- Ensuring that a significant number of Chinese, Japanese and Indonesian teachers who
  have used TLF Languages content respond to the Freebody survey for the 2006 collection
  period. This would allow analysis of Languages content alongside the other curriculum area
  content and assist identification of schools for follow-up and discussion about classroom
  use.
- A joint TLF project with the languages section of the Department of Education and
  Children’s Services (DECS), South Australia. Primary and secondary teachers of Chinese,
  Japanese and Indonesian from the three sectors were involved in an all day workshop.
  Participants were introduced to the principles framing the two Languages projects, had time
  for hands-on exploration and time for discussion and collaboration. These teachers were
  also asked to prepare units of work, to trial these with their students showing how TLF
  content might be integrated into classroom language teaching and asked to respond to the
  Freebody survey.
- Presentations and hands-on workshops were conducted by TLF (Olivia Clarke, Anne
  Gugger and Fleur Taylor) at the Modern Language Teachers’ Associations of Victoria and
  Tasmania conferences and at some regional Chinese, Japanese and Indonesian language
  conferences in Victoria. In each of these sessions participants were given a CD containing
  the language content for trialling with their classes and encouraged to complete the
  Freebody survey.
- Distribution of CDs to Chinese, Japanese and Indonesian teachers attending the Northern
  Territory Language Teachers’ Association conference for trial and comment.
- Observation visits to three schools in South Australia and one in Tasmania teaching
  Chinese and Japanese.

Canberra: Commonwealth Department of Education, Science and Training, p. 43.

3 Freebody, P. 2006. Early-stage use of The Le@rning Federation’s learning objects in schools. Results of a
4 Summary of findings and recommendations

4.1 The Character Catalogue

4.1.1 Lack of access, awareness and understanding

Lack of awareness, lack of access to and lack of understanding about the Catalogue are major problems. Designed originally to be an online browser-based resource, access to the Character Catalogue has been limited. It was originally made available on the NALSAS site http://www.curriculum.edu.au/nalsas/ but withdrawn in the latter part of 2005. The Catalogue was made available on the LOTE CDs distributed by TLF under trial conditions up until June 2006, but has not been included on the new full content DVD. It has never been made available through jurisdiction repositories. Current information on the TLF website and in the LOTE catalogue acknowledges that this first release of the Character catalogue will require further modification as a result of trialling.

Although associated reference material is available with the Catalogue, there has been little sustained professional development with teachers (outside of a few in South Australia) about the use of this very complex resource. More often than not teachers of Chinese and Japanese have only seen it briefly demonstrated at conferences. Not surprisingly there is little evidence of its use in the classroom.

Nevertheless, one highly competent South Australian teacher of Chinese, Philip Wilson, who accesses the Catalogue from the CD and thoroughly understands its purpose and functionality, uses it enthusiastically as a regular part of his pedagogical practice. He believes it is a valuable adjunct to his teaching resources and for helping student understanding of Chinese script:

I think it is an excellent idea because it allows students to see how Chinese characters work as a system in a way that stimulates their imagination. It provides a basis for follow up activities in class such as discussion of a research activity based around explaining a variety of characters eg to identify elements to construct other Chinese adages through using the character catalogue and or dictionaries.

4.1.2 Concerns

Some native speakers/teachers of Chinese and Japanese believe there are problems with the Catalogue, and indeed with the associated learning objects. Considerable effort will be needed to overcome their concerns. Concerns relate to the use of some traditional rather than simplified characters in the Chinese version; lack of inclusion of the full range of meanings per sound in the Japanese version, quibbles with the pronunciation used; random technical glitches related to further information about the ‘radical’. Andrew Scrimgeour, the subject matter expert who has guided the build of the catalogue for TLF, believes these issues can be addressed without too much difficulty. Perceived errors that relate to personal preference he argues should be addressed with information and explanation. Andrew also believes that 99.9% of the Catalogue is functioning accurately and that it would take little effort to fix the glitches relating to the radical.
Given the investment in this resource, it would seem appropriate to take some positive action to fix the identified problems and errors in the Catalogue, make it more widely available and to provide more teacher support for its use.

**Recommendation 1**
Establish a process to fix the errors. Because of the Catalogue’s complexity these are best discovered during normal use rather than in dedicated sittings. Andrew Scrimgeour has suggested that a small group of Chinese and Japanese users be established (pro bono) to note any errors over the course of a year. Andrew could easily fix the errors progressively if he had access to the Administrator tool.

**Recommendation 2**
Make the Character catalogue, together with its original accompanying support material, available online – on the NALSAS website, in jurisdiction repositories, and on the new TLF Content Repository website, while continuing to make it available on CD as required. The added advantage of it being available on the TLF Content Repository site is that it would then be accessible both to university courses in Chinese and Japanese as well as the pre-service faculties of education.

**Recommendation 3**
Prepare some short, concise supportive information based on Andrew Scrimgeour’s support materials for teachers of Chinese and Japanese which explains why and how the Catalogue was built. In addition, make available some ideas about how the resource can be used in the classroom. Distribute this information widely through the jurisdiction and sector language curriculum sections, through professional language teaching associations and on the TLF website. This information could also become a new Teacher Resource object discoverable through its association with the Catalogue.

**Recommendation 4**
Support and encourage presentations and workshops at all relevant conferences – national and state – by presenters, especially teachers, thoroughly versed in the design and possibilities the Catalogue has to offer.

### 4.2 Project 1 – *Cracking the Code* – learning objects for Chinese and Japanese associated with the Character catalogue

#### 4.2.1 Classroom use
There is now evidence that teachers are using the Chinese and Japanese learning objects associated with the Character Catalogue (see Freebody report, 2007). Compared to the Character catalogue, the *Cracking the code* learning objects are more readily available, either on CD, or discoverable and accessible from jurisdiction or sector repositories. In addition, teachers are more likely to have seen these learning objects demonstrated at Conferences or have been introduced to them in hands-on workshops. Some favourable comments from teachers are included here.³ These teachers not only comment on the characteristics of learning objects, but understand the linguistic principles on which these *Cracking the code* objects were built:

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³ Teacher comments are drawn from interviews, email communication and open-ended items on the Freebody survey. Where possible, teachers are identified by name and state.
It is a relaxed fun and engaging way to come to terms with the differences between western alphabets and Kanji systems based on pictographs. Joe Stanny, Tasmania.

I used Balloon Stampede as an introduction to a SOSE topic on Japan. The aim was to make the students aware of Character writing and the elements. (South Australia)

An excellent idea because it explains concepts with very clear examples … the kids love the game aspect of it. The multiple choice answers are great for supporting kids' learning. Very enjoyable. (Jessica Meyer, Victoria).

I do think this learning object is very useful in learning the language for the beginners. It has better visual effect and is interactive. The instructions are easy for students to follow too. (Bing Xu, Tasmania).

It encourages students to think about proportion of characters and how they need to work to get the character correct. Students have more exposure to more types and complexities of characters. (South Australia)

Great for character recognition with instant feedback and learning opportunity! (John Hilliam, NSW)

It fits in with the ideas about script we have been exploring and presents it in an audio visually stimulating way. It lends itself to discussion and encourages students to make sense of the content for themselves … It assist the students in seeing how Chinese characters operate as morphemes. It has a spin off for developing dictionary skills and also in developing literacy through raising the capacity to predict meaning. It is a good way to encourage collaborative learning. (Philip Wilson, South Australia)

See attached examples of the ways teachers integrate the Cracking the code learning objects into their teaching and learning activities.

4.2.2 Concerns

As with the Character catalogue on which they are based, the major concern from some teachers, especially native speakers, is about the selection of characters used for the activities: that many of the characters selected are too difficult and not ones used in their regular syllabuses.

It is an effective means of incorporating ICT into languages classrooms, particularly for difficult languages such as Chinese and Japanese. Students were very appealled by the display and content of the software. However, there were some errors in Chinese characters. Need neater proof by qualified teachers who are preferably native speakers. (Xiao Fan, Tasmania)

Some of them are pretty good, but most of them are far away from the syllabus content. Many of Japanese Kanji games contain lots of mistakes such as using Chinese kanji. I prefer the games which contents are similar with the syllabus. (Northern Territory)

Such concerns also indicate that teachers may not be aware that there are Chinese and Japanese versions of the same learning object, even though they do have clear distinguishing titles. Moreover the criticisms indicate a lack of understanding about
the nature and purpose of the *Cracking the code* project. Teaching and learning about Asian scripts in the way that Project 1 requires, with its focus on visual awareness and cognitive understanding of the structure of characters, is new and has not been part of pre-service education, except perhaps in the University of South Australia where the subject matter expert works.

Teachers however do ask for lists of characters used in the various learning objects to prepare associated identification, learning and assessment activities.

**Recommendation 5**

Encourage and support professional learning about the theoretical underpinnings of the *Cracking the code* learning objects. This will be necessary if these objects, and the Character catalogue on which they are based, are to realise the claims made for them.

**Recommendation 6**

Make available, as teacher resources, information from existing TLF documentation that would assist teachers e.g. a table showing how each series of *Cracking the code* objects relate to the different aspects of the theory; lists of the characters used in each of the objects.

**Recommendation 7**

Find ways to support a longitudinal study with students about the effect on learning Chinese and Japanese scripts through cognitive understanding of their structure and function compared with traditional memorisation and rote learning approaches.

### 4.3 Project 2 – *Close encounters* – learning objects for Chinese, Japanese and Indonesian

**4.3.1 Classroom use**

Some teachers of Chinese, Japanese and Indonesian are also now starting to use the Project 2 *Close encounters* set of learning objects based on the principles of intercultural language learning. (See Freebody 2007 report). As with the *Cracking the code* learning objects, the *Close encounters* objects are more accessible to teachers and favourable comments about them from both teachers and students are becoming evident.

> Great as it combines skills in ICT, SOSE and LOTE. Gives chance for revision of key words. Seeing language used in a different way to usual was highly motivating. Students responded to colour and activity. Hearing the words encouraged repetition of sounds Useful in Alpine area unit. (Margaret Ellett, Victoria)

> A very good idea – motivates students and keeps them engaged. Also extends the students. Allows the students to be risk takers and move out of their comfort zone. Reinforces vocabulary and language. (Tasmania)

> The students found it motivational. Many of them said it made learning fun. Their oral language skills improved as a result of this LO. (Cecily Wright, South Australia)

> [I like the learning object] because it is very difficult to simulate the Direct a taxi task in a non-digital way. John Trudinger, (South Australia)

> They are a new way to engage students and give them ways to interact with language in forms they are used to in their everyday lives. (Victoria)

> I like the way this learning object connects with an authentic activity outside of school. It is something that students can
apply naturally to the business of enjoying and evaluating Chinese cuisine. It brings linguistic and cultural knowledge into close proximity. (Philip Wilson, South Australia)

I thought it was brilliant. It engaged the children and informed them and motivated them. (Chris Gane, Tasmania)

Some examples of teachers using the materials in well-developed learning units are available (see attached classroom examples).

4.3.2 Concerns

However, as with Project 1, these learning objects too elicit some concern: in particular that the level of language is seen by some to be too complex. To some extent this type of criticism reflects a lack of understanding or acceptance of the underpinning language learning principles. Teachers also suggest that there needs to be some accompanying support materials in the form of vocabulary and grammatical structures to enable teachers to integrate them more effectively into other learning tasks.

My concern is that all of the Indonesian Language learning objects are way too difficult. Most schools only have access to language one or two times a week, and this time is limited. Therefore, the amount of language a student can learn is limited. The language learning objects are far too advanced. My Grade 7 students briefly looked over the Naik Gunung Api exercise and struggled at the Prep level. Even for Sepak Takraw, I had to lead them up to being able to do the task, to teach the content. The language expectations in these tasks are unrealistic. I glanced over the CD-ROM in general. I have studied Indonesian extensively throughout uni, and have studied in Indonesia, and I was struggling with the Vocab in the senior secondary tasks. On the whole, I think the authenticity of the tasks is fantastic. The graphics and sounds are fun and engaging. But, there needs to be a way to make the language content more accessible, without making the tasks too ‘babyish’. Anita Das Gupta, Tasmania

I feel that the learning object is an excellent source of engagement in the learning of a second language. The Photo Album contained authentic images and voices which assisted in immersing students in Indonesian daily life and school life. The age ranges attached to each learning object, I feel, are not accurate in terms of language stages (for Indonesian) Most of the tasks involve fairly complex language demands of the student. My Year 10 students achieved varying levels of success and I could envisage junior students becoming frustrated in completing tasks. The variety of the learning objects was excellent and all students were able to engage with an object from the choices made available. In summary, a useful classroom learning tool to be best used in conjunction with teacher explanations and assistance to maximise student understanding and success at tasks. Victoria

A Victorian writer of curriculum support material also asks for vocabulary and text list/s for each unit in the learning objects:

This will help us include the different types of grammatical activities for teachers. It will also give teachers an idea of what vocabulary & grammar are involved with each of the activity. This will give teachers who are not confident about their language an opportunity to get their heads around the vocab & grammar before the students get to the activities. Also they can learn or have in hand
the meanings so that if students ask them a doozy question they will be prepared.

Both of the TLF LOTE projects are operating in new territory for language teachers. The intercultural language learning principles underpinning Project 2 objects are relatively new for many teachers and there is little evidence nationally that there is a critical mass of teachers who have incorporated the principles of IcLL – with or without digital resources – into their teaching practice. Lack of awareness about and acceptance of IcLL could also have implications for take-up.

Recommendation 8
Make available simple, concise information about the principles of intercultural language learning discoverable with the Close encounters learning objects. Also make available helpful information from TLF documentation about the vocabulary and linguistic structures used. In addition, present more stories of successful use of these IcLL objects on the TLF website as they become available.

4.4 Common issues across Projects 1 and 2

4.4.1 Differing pedagogical beliefs and practices for language learning
Clear (and often very strong) differences of opinion about appropriate pedagogy for teaching languages are commonly found between native and non-native speakers of Chinese and Japanese. These differences are apparent at both the jurisdiction level among native and non-native speaker advisors, and among native and non-native speaker teachers at the school level. These differences will impact on take-up. A jurisdiction native speaker advisor or classroom teacher unsupportive of the principles on which the Character Catalogue and/or the IcLL approach is built will have little interest in promoting TLF content regardless of its quality. Although this may also be true for non-native teachers and language curriculum advisors, the strength of the arguments or beliefs is not so apparent.

4.4.2 School-based factors
Other factors operating at the school level impact considerably on language teacher preparedness to include digital content (of any sort) into their teaching practice. These include lack of easy access to computers; limited overall time allocated for language teaching, especially in Primary schools; limited teacher computer skill, limited technical support available. Furthermore language teachers often seem to have low priority when computing resources – hardware and access – are allocated.

However, this investigation also shows that some language teachers do successfully integrate digital content into teaching and learning activities and are positive about the experience. Success reflected administrative and technical support, judicious use of the school file structure, Intranet or Learning Management System, and for some, availability of infrastructure such as interactive whiteboards.

This Indonesian teacher comments on how she structured her class for using the learning object:

The activity worked really well in my class as I had 3 groups working at one time as I only have access to 4 PC's in the classroom. I had one group working in pairs on the learning object (as reinforcement of learning), one group working in small groups on an Indonesian card game and the third group working

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5 Harbon, L & Browett, J; 2006 Intercultural Languages Education. Babel. Volume 41, Number 1, July p 28
See also Examples of classroom use attached.

4.4.3 Integrating learning objects

Teachers who have used the objects believe that they are best integrated with other language learning activities.

Students can work at their own pace; they can revisit it at will, they are engaged, even lesser able students were able to find a feeling of success BUT it forms just one part of the overall concept being taught, class discussion and reflections via a personal journal are also important. (Joe Stanny, Tasmania)

Good Idea because it fits in with applying language knowledge in a real setting. I will use this again and we will extract a variety of menu items and then use these to make an order at a restaurant. Also will collect menus and asks students to use in role playing ordering meals. (Philip Wilson, South Australia)

4.4.4 Browse, search and discoverability

Being able to find relevant digital content is fundamental. Those teachers relying on the CD for access now, only use a Browse function (which mirrors the Languages catalogues) to discover items. The descriptive content catalogues and the CD clearly locate the learning objects in each of the two projects – Cracking the code and Close encounters – and provide some information about the difference. One teacher uses the browsable visual interface of the CD both to make it easy for students to find the Cracking the code objects and to act as a checklist against progressive completion of the activities.

With increasing opportunities to search and discover through jurisdiction repositories and the new TLF DVD, relying on the metadata to distinguish between the content of the two quite different projects may be problematic. Without an understanding of the different theoretical frameworks underpinning Projects 1 and 2, there is a risk that teachers may not understand, or may misinterpret, the purpose of TLF learning objects. Moreover, the addition of Languages content from other sources, none of which are based on theoretical approaches that are similar to the TLF learning objects, may further put at risk successful take-up of TLF-built content. Provision of teacher related objects, discoverable by their association with the objects, as indicated in Recommendations 2, 6 and 8 becomes even more important.

4.4.5 Involvement of jurisdiction language personnel

Close TLF collaboration with system language personnel during the investigation period was invaluable. They shared their deep understanding of the various issues language teachers face, structured workshops and meetings with targeted teachers and provided entrée to the schools. These people, the system language personnel, are the ones who will be critical to successful take-up of TLF content in their schools.

Recommendation 9
Arrange for discussions/ communication with jurisdiction language personnel not represented in this investigation about the findings and issues raised regarding take-up and use of TLF content for Chinese, Japanese and Indonesian.
4.5 Content from other sources and repurposing of existing content for Languages

Now that TLF has started to license-in and repurpose existing content for new languages, many of the issues raised above may persist, especially misunderstanding of the different nature and purpose of the different types of content. Moreover, within the licensed-in content for Chinese, there is a considerable difference in scope and purpose (e.g., set of learning objects extracted from Zou ba! compared with those from Tao hai II!). To encourage take-up, these issues will need to be addressed through awareness-raising and through targeted creation of discoverable Collection items and Teacher resource objects.

Using a Science learning object (Mixing colours) for teaching Japanese colour vocabulary was a highly successful activity for the South Australian primary teacher (see Examples of classroom use attached). She used this learning object with all levels in the primary school and indicated how useful it would be to have this learning object, and other early year’s examples from Maths and Science, available in languages other than English. This would enable specialist teachers to more closely support the regular curriculum.

5 Conclusion

A multi-pronged approach is needed to advance both the uptake of TLF Languages content by teachers and the support for its use for student learning. Continuation of the type of awareness-raising, professional development and data-gathering undertaken during this investigation by The Le@rning Federation is neither desirable nor sustainable. Given that language teachers are now responding on the whole favourably to the availability of the new content, it is essential that system personnel, language teachers’ associations and school language coordinators should all be encouraged to continue awareness-raising and to provide professional learning and social networking opportunities to enable language teachers to learn, share and collaborate about their use of the digital content. Language teachers need opportunities both to understand the principles which frame both the TLF-built Languages content and the digital language content from other sources, and to have opportunities to explore it hands on, with time to discuss with colleagues ways in which it might be successfully integrated with other language teaching and learning activities.

TLF should support the work of teachers nationally by providing further information discoverable through the Exchange and through various means on the website e.g. presentations, stories of classroom use.
6 Examples of classroom use

6.1 Exploring Chinese characters at Salisbury Heights Primary, South Australia

At Salisbury Heights Primary School, South Australia, Chinese is taught by two specialist teachers – Lynn Davis and Aun Hock Leow – to all 700 students in grades P–7. The students have two 45 minute periods per week and are brought to the Chinese specialist rooms for their classes. Lynn is new to the school this year and has been encouraged by the school to pursue her interest in the place of ICT for learning Chinese. Lynn, a very experienced teacher of Chinese at the primary level, has recently started to include Chinese digital content alongside a rich range of other resources she uses for teaching and learning. Previously Lynn held a role with the Chinese Language Professional Learning Service located at the University of South Australia. This service was a joint project with the Department of Education and Community Services offering two-way professional learning opportunities for university staff and teachers.

In her position with the university she has worked closely with Andrew Scrimgeour and his team, which developed the principles on which TLF LOTE project 1 Cracking the code was built. She also has a thorough understanding of the Intercultural Language Learning approach which underpins TLF LOTE project 2 Close encounters.

Accessing the learning objects

For access to digital content, students use two stand-alone networked computers in the specialist classroom or a computer laboratory with a 1:1 configuration that Lynn books as required.

With the help of Wendy Bailey, the school’s ICT Coordinator, Lynn has established a space on the school network where students can easily find and use the digital content extracted from the TLF-provided LOTE CD. Each learning object has been linked from the Chinese class page.
Learning purpose

Student exploration of the game-like learning objects in the *Cracking the code* project was Lynn’s purpose in the two weeks prior to and during the day of the observation visit. In this early exploration of the learning objects she was not expecting a systematic progression through the learning objects at designated levels of difficulty. She was more interested in how the students in Grades 3 to 7 would manage the range of mostly unfamiliar characters contained in these interactive, engaging contexts.

Lynn is aware that some criticisms of the *Cracking the code* project have been based on the view that the amount and difficulty of the characters are inappropriate for these young second language learners. In fact it became apparent to her, and to this observer, while the various grade levels of students were exploring the objects, that these concerns were not concerns for the students. In fact the game-like contexts encouraged ‘reading’ and thinking about character structures, components and meaning that would not have occurred otherwise without considerable input from the teacher in an instructionist manner. For example, when some Grade 3 students were asked the ‘rule’ behind the *Dragon temple* learning object they said ‘you write characters left before right and top over bottom’. They did not know the meaning of the character, and were not expected to be able to write it clearly identify and articulate the rules governing the writing of character components.

In another example, when using the *Quiz Show* learning objects in pairs, much discussion was prompted in English about not only the meaning of individual components, but how interesting it is that new, related words could be formed when components are joined together. In this case, the learning object served literacy learning in both English and Chinese.

These students, consistent with findings in other studies, find the learning objects fun and helpful to learning:

- *When I played the emerald lake it helps me with learning about Chinese characters.*
- *They are fun and interesting too.*
- *I like them. They rock!*

Lynn is of the firm belief that by using the *Cracking the code* learning objects, her students – even the younger students – have more exposure to more types of characters with more complexities than she could possibly enable in the limited time she has available in the non-digital learning environment, and that this will have positive long term outcomes for their learning of Chinese.

Next year Lynn is looking forward to benefiting from the support ICT is being given by the school by having immediate access to another six computers adjacent to her specialist classroom. She plans...
to rotate her students more frequently through digital and other activities which will allow self-paced learning for them, and provide her more concurrent time to work with smaller groups.
6.2 Using TLF learning objects in a Japanese Moodle online course, Huonville, Tasmania

Joe Stanny, Year 8 Japanese teacher at Huonville High School in Tasmania, firmly believes that organising his Japanese curriculum in a learning management system has had a positive effect on his teaching and his students' learning of the language. With only one double period per week, through the use of his Moodle online course, Joe provides a flexible, student-centred learning space which overcomes many of the difficulties associated with the limited time allocation for Japanese. Each week Joe holds one face-to-face period in a standard classroom and for the second, the students move to the school laboratory with one-to-one computer access. The Moodle online environment has also enabled him to take advantage of the new interactive digital content made available by The Le@rning Federation.

Student access to all activities for a semester is a feature of the learning space Joe has created. This space is not just for the lab session however. It is available to students anytime anywhere – even from home. From his Year 8 Moodle space, students can view all the course instructions, learning activities, interactive digital resources, internet links and the assessment tasks required. Students can make ongoing notes and reflections on their learning; submit completed tasks for assessment online, use the voting tools to express their individual views and immediately see the whole class response. The course management tools include ongoing recording of student on-task activity and assessment tasks and the ability to have one-to-one communication with students following electronic submission of work. This enables Joe to better monitor the learning progress of all the students while making his recording and reporting responsibilities less onerous. Not only does his online course extend the classroom walls, but in Joe’s opinion it enables a more engaging and satisfying learning experience for the students.

In his early exploration of the content for Japanese available from The Le@rning Federation, Joe has concentrated on using the Cracking the code learning objects with their focus on supporting students to understand the Japanese writing system. In the future however, he plans to incorporate objects from the Close encounters project which provide immersive communicative language experiences in aspects of Japanese culture.

Learning about Japanese script: an example of a unit of work in a Moodle environment

In a unit on understanding the Japanese writing system, all associated learning and assessment tasks and resources are linked from the course space.

Students are provided with the framing assignment questions and can work through the many and varied learning tasks at their own pace, submitting tasks for assessment when completed. Teacher-led whole-class discussion and student reflection on learning tasks are also embedded in the course design.

Figure 1 Framing questions

Try out the learning activities about using Kanji, then make comments on the following questions:

1. How did the Japanese/Chinese writing system originate?

2. What are the main differences in writing method between the Japanese system and our own?

3. Are there any ways in which writing in kanji (Japanese or Chinese system) is better than our own system? Explain.

4. Are there any ways that our own writing system is better than using kanji? Explain.
Learning objects
Among the varied range of teaching and learning resources Joe uses are a selection of learning objects from The Le@rning Federation’s Japanese Cracking the code project. These multimedia interactive resources in game-like format enable students to explore aspects of Japanese writing including character formation, stroke order, sound and meaning. Some examples of TLF learning objects used:
The Stampede learning objects demonstrate that characters have either a basic or a compound structure and that compound characters have a range of structures.

In the Match it students match characters in sets of similar characters by identifying subtle stroke differences.

The Stroke dig series introduces stroke types and their role in defining the order of writing strokes in Japanese characters.

The Dragon temple series helps students understand that each character is different and has its own meaning; that basic characters can be joined to make components; and that components must be joined in a particular order.

The Quiz show series of learning objects assists students to deduce the meaning of compound words from the meanings of the individual characters.

Joe believes these learning objects offer engaging learning experiences about Japanese writing in ways not normally possible with traditional resources and that they work particularly well when students can access them in flexible ways:
My main interest is in allowing students to work at their own pace, the objects are great for this … They engage students; I find my students are able to work more productively when they can complement their learning with access to these resources. It is easier to provide individual attention when students work at their own pace.

Students indicate they like the game formats for learning; finding them fun and engaging even though they may not continue to study Japanese. Some boys in particular, although saying they were just clicking through the task, still believed they were learning something about the Japanese form of writing: different types of strokes; stroke order; character structure.

Future plans
Joe indicates that an interactive whiteboard (IWB) would be a valuable addition to his face-to-face class and would complement the online learning space he has created. Some of the reasons he cites for this are:

- An IWB would be very helpful in making learning dynamically more explicit especially with more difficult concepts and language. For example, The Le@rning Federation object Moshi moshi, a language immersion task using a virtual mobile phone, would lend itself well to a whole class approach for some of the time due to the complexity of the language and the language support necessary to use it effectively, particularly as these students are only in their second year of language learning and only have two periods per week.

- It would allow for active adolescents to legitimately move around classroom to participate in learning tasks.

Joe has demonstrated that creative flexible use of ICT infrastructure, incorporating quality digital content in tandem with face-to-face class time, has enabled him to offer a richer teaching and learning space than otherwise would be possible.
6.3 Using an Interactive whiteboard, the Intranet and a Moodle online learning space for teaching Japanese at Woodcroft Primary school, South Australia

Cecily Wright is a specialist Japanese teacher at Woodcroft Primary School in South Australia where she teaches P-7 classes. Her classroom is alive with books, pictures, artefacts and student work representing the language and culture of Japan. Cecily has also been a long-term, keen user of ICT in her classes – drawing on CDs containing learning activities, games and songs, and the internet, to engage her students. Until now these activities have been projected from her desktop computer to a screen.

This year Cecily has been one of the teachers selected at Woodcroft to have an interactive whiteboard (IWB) for her classroom. Throughout the year she has been trialling different ways of using it as a teaching tool, and as a vehicle for student learning.

The interactive whiteboard is the only permanent computer access in Cecily’s classroom. When more computer access is needed she arranges for the bank of 20 mobile laptops to be brought to the classroom. According to Cecily, using the IWB for teacher introduction of new ideas and concepts, and more importantly for students using it individually, in pairs or small groups and demonstrating and talking about their learning to the rest of the class, has proven to be a real asset to her Japanese curriculum.

Specially selected TLF learning objects are among the digital resources integrated into comprehensive units of work designed for appropriate learner levels.

Learning objects include the Japanese versions of Kite kit, Dressing up and Train a sumo wrestler. Moreover, when exploring the range of TLF content, Cecily discovered a Science learning object - *Mixing colours* – which she was easily able to adapt for teaching colours in Japanese.
Organising curriculum materials online

With the assistance of the school technical support, Cecily has organised all of her digital teaching and learning materials for Japanese by year level or topic into her class page on Woodcroft’s school Intranet. On one site she has organised her teaching resources for ready access in class when using the interactive whiteboard.

In addition, Cecily has an ever growing comprehensive list of links about Japan and Japanese language and culture that students can access anywhere. These include TLF learning objects; links to websites; video clips; puzzles, songs, pictures and worksheets.
This year too Cecily has also been experimenting with the use of the Moodle learning management system for the presentation of resources and activities to support particular year levels and topics. For example a site has been established for a Sumo wrestling topic for Grade 6. These students have ready access to all resources, instructions and worksheets from the Moodle site associated with the topic. The students find it easy and enjoyable to locate the activities and to work through them at their own pace.

Organising materials in this way enables both Cecily and the students to easily locate and use what is needed for a particular lesson or activity. Technology is a seamless part of everyday teaching and learning in these classes, supporting all the other more traditional activities familiar to a language learning environment.

Cecily believes the combination of the IWB, the Intranet, and now the opportunities Moodle provides, enables her to use the digital environment for presenting more flexible, engaging, and accessible learning activities and to better cater for the varied needs and abilities of the students in her Japanese classes.
6.4 Integrating digital content into the Chinese curriculum at Marryatville High School, South Australia

Philip Wilson is a highly experienced teacher of Chinese language since 1982 and has been teaching Chinese for the past four years at Marryatville High School in South Australia. Philip enthusiastically supports the notion that introducing students to the principles which underpin the construction of Chinese characters leads to improved recognition, sensitivity to and understanding of the language. He believes that introducing these principles is fundamental to engaging learners in the concept of a non-alphabetic script, and that good learning arises from challenges to their thinking. He is determined that his students understand that Chinese is a logical writing system, not just writing with pictures; that rote practice of stroke order and form are not enough to engender an understanding that characters are a valid writing system. For him, the functions embedded in the interactive Character catalogue and the related TLF learning objects, which put these principles into game-like interactive learning tasks, are a real asset in supporting his pedagogical practice and student learning. Each learning object stimulates the students to think about form, function and internal structure and they are excellent sources for further teaching and learning. Philip does not leave recognition and practice of the ideographic features of Chinese writing solely to the new digital activities however. He actively teaches and constantly asks his students to reflect on the form, shape, structure, stroke order, sound and meaning of the characters they see – both online and off line. The use of Chinese print dictionaries where students explore and practice these principles are also a regular part of Philip’s classroom pedagogical practice.

The walls of Philip’s classroom hold pictures, language charts and other cultural artefacts from China. Class sets of dictionaries and other texts are available for students and Philip uses a standard whiteboard and pen for writing directions, explanations, examples, etc. He also uses the whiteboard as a screen when he hooks up his laptop to the digital projector safely mounted on the ceiling. From his laptop he can access and screen relevant Chinese websites on the Internet, and, as of this year, the Character catalogue and the TLF Chinese learning objects stored on the school Intranet. He uses the classroom projection facilities for whole class demonstration of and discussion about online content, switching seamlessly to the whiteboard for further illustration in writing if necessary.

Philip also books one of the school computer labs with 1:1 computer access when needed. In the lab environment, students either work individually or in pairs on a range of learning tasks – both using well chosen Internet sites for learning Chinese, and doing the learning tasks embedded in the TLF digital content. In 2007 students also will be able to access the digital content from their wireless-connected laptops in the classroom.
All of the TLF Chinese ‘Cracking the code’ series of learning objects have been loaded onto the school Intranet and Philip has asked his Year 8 students to work through them all at their own pace.

The new material has given a soundly structured context within which students can develop as independent learners and can access the resources for their own purposes in accomplishing the aims of a range of tasks. The students recognise the complementarity of the content of the learning objects to the teacher-directed instruction in class. They enjoy doing the tasks, but as Philip warns, although the activities are relevant and fun, fun should not be the end game. The acquisition of new knowledge and understanding must remain fundamental when ICTs are used for teaching and learning. In this sense, the use of ICTs must be integrated into a planned sequence of learning and teaching.