From Storytelling to the Voice Story App: A Research Translation Project

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Abstract

Many existing language tasks are suitable for a specific language level or contain language that is specific to a particular topic or a particular language or culture, so do not suit all students' levels or account for the language that students know. 'Storytelling' however, is an open-ended task that involves the oral telling of stories constructed with pictures. Students create stories using the language that they know and tell stories about anything that they are interested in. It can be used with all languages at all language levels and provides a platform for students to showcase their language skills. Although very successful in eliciting language from students, it relies on a heavy workload for teachers in preparing large numbers of pictures. The idea to remove the heavy resource development load from teachers and make the Storytelling task scalable with the 'Voice Story' app then evolved. A successful pitch for university Research Translation funding enabled the translation of the physical language elicitation task into an app. The Voice Story app contains categories of pictures and enables photo taking. Students select the pictures and photos that they want by dragging them to the screen and then voice record their story. The ability to save and share the stories makes this app particularly relevant for oral language assessment data in second language teaching and learning contexts. This paper explains the Research Translation Project including the process of creating the Voice Story app from the Storytelling task.

Keywords: language learning, app, Voice Story, technology, Storytelling

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Introduction

An ongoing goal in second language education is to increase the oral language capabilities of students. Many students learn additional languages in schools, however, after many years of learning a new language, still have a limited ability to produce the second language (L2) orally themselves. This identifies a need for second language programs to further support students' production of oral language. Adding to this need, there are limited tasks and resources that are available to support second language oral output of students that can be used across all languages, at all language levels and with all topics. For students to be supported with their production of L2, it is important that tasks appropriately reflect their current language abilities and are open-ended enough so that students can use the language that they know, the language that they are learning and talk about content that is of interest and importance to them. Far too often, second language tasks are limited to only some languages, are too narrow in level, have a pre-determined topic that may or may not be known to students, and limit students' output by having a pre-determined way that students are expected to respond (such as with single words or use of a formulaic sentence pattern).

Storytelling as Pedagogy for Language Teaching and Learning

Mindful of these issues, an open-ended task called Storytelling was created to elicit second language output from students individually. It consists of sets of pictures for language stimulus that are selected by students to create personalised stories. Students select and sequence the pictures which are then attached to large A3 sized whiteboards with magnets to visually represent a story. Pictures include visuals for the language that they have learned in class and the language that students are currently using. A large number of blank cards are included in the sets to be used for any other language that students want that are not already represented with a picture. Students can either leave the cards blank or draw their own pictures on them. A picture may represent one word or be a prompt to elicit an extended utterance. Students rehearse their stories as often as they like until ready to share it orally with others. Such a task was found to successfully elicit oral language from students, provide a platform for students to use any language that they could, and include any content (Wilks-Smith, 2018). These findings identify the effectiveness of images and voice for oral language output through Storytelling.

Storytelling allows students to say what they can in L2 and demonstrate their individual language abilities. Students across a range of year levels produced their own meaningful stories in L2 using Storytelling. Some students in their first year of primary school who had just commenced learning Japanese as an L2, told "stories" that included a few words using a few pictures, whilst others, who had been learning Japanese for years, told long, extended stories, some even using two A3 sized whiteboards full of pictures as prompts for their recall (Wilks-Smith, 2018). Storytelling is particularly effective because it elicits meaningful language from students and they use the language they know in a real context of a story. Stories can be about any topic and include any content. The task has an authentic purpose to share the story with others.

Many post-positivist approaches to education stress the need for 'humans to exercise agency' and for 'individual choice and intention' (Cohen, Manion, & Morrison, 2011,

p. 15) to be valued, as does Storytelling. Students' oral language is elicited by the open-ended telling of stories where students have individual choice to say what they want to say, can say and are empowered to use language that is meaningful and important to them.

The Scenario Framework (Di Pietro, 1981, 1982, 1987) informed the elicitation technique used in Storytelling. Di Pietro's Scenario Framework (1987) has been an influential theoretical framework to view students' oral language through stories. This method encourages students to create their own language, demonstrating their interests, creative abilities and personalities rather than learning pre-determined language. Scenarios generate students' own language performance and are important because they require learners to improvise, create their own language and make choices about the direction of their language. Di Pietro highlights the use of scenarios to enable students to divert from a set role play which requires students to demonstrate and perform pre-determined language where accuracy in recount is important, to asking students to be innovative with their language and expand the possibilities of their output. Scenarios "allow for the widest range of solutions possible" (Di Pietro, 1987, p. 374).

Although Di Pietro's scenario model was designed as an alternate to role plays where the language is pre-determined, the same could be applied to the oral telling of stories. Rather than re-telling *the* story, students will tell *a* story. They are free to be creative, include their interests and demonstrate the language they know. This is an excellent example of an open-ended task to showcase students' optimal oral language output abilities. It is particularly important that students are given the opportunity to show their language abilities beyond the constraints of one pre-determined story or any other language task with a narrow focus regarding language level or topic. This also maximises students' opportunities to demonstrate the language that they know.

The use of pictures when Storytelling enables students to divert from the recall of a known story to create their own story with personal adaptations and additions as they wish. This also taps into students' higher order thinking (Anderson, Krathwohl, & Bloom, 2001) as they are encouraged to apply the language they know to create a new story rather than demonstrate knowledge and comprehension, a lower order of thinking.

Storytelling as a pedagogy for teaching and learning (Phillips, 2013) is fundamental to the development of oral language and personal expression. Storytelling maximises students' imaginations, is open to students' own knowledge and meaning, and is a shared experience with an audience. When students create their own stories, they take ownership of them and personalise them, often placing themselves and those close to them in the stories.

Telling stories provides a context for students' language whilst the pictures provide a scaffold and structure. Storytelling elicits language from students where a context is critical, and meaning is attached to the language. Storytelling demonstrates students' oral output capabilities clearly which is in stark contrast with learning isolated aspects of language out of context (such as lists of words) and then recalling them, not necessarily understanding them or being able to apply them in context.

Despite the effectiveness of Storytelling as a task to elicit oral language from students and increase a focus on individual L2 production, this kind of resource relies on hours of teacher preparation time. Picture sets need to capture the language that students already know and use as well as new language as it is learned in class, together with the inclusion of content that students want to have in the stories. Picture sets need to continually evolve and are heavily time consuming to create and update.

Voice Story App Development

The idea to create the Voice Story app came about to translate the analogue concept of the picture card version of the Storytelling task into an app that would remove the teacher preparation time of the sets of pictures and also avoid the scattering and loss of hundreds of little pictures around the classroom. Plans were drawn up on paper to illustrate what the Voice Story app might look like including the special features of the app. The next step was to investigate whether the plans could actually be translated into a functioning app as desired. It was pleasing to learn from experts in technology design that the plans could be transformed into an app. Less pleasing however, were the quotes received to enable this. The plans were not forgotten but were put aside and occasionally added to.

Suddenly one day an e-mail came to all staff within the university advertising "Research Translation Seed Funding". The funding was available to apply for to enable projects which aimed to "translate" their research into practice, such as through the development of a product. This provided the opportunity to pitch the idea for the Voice Story app, based on the Storytelling task, to a panel. After several rounds of pitching, $25,000 was awarded to support the Voice Story research translation project. This was not enough to externally purchase the technology expertise to create a fully functioning app, however, the outcome surpassed that. It was suggested that the project could support the development of a prototype or minimum viable product to be developed which could then demonstrate the goal of the Voice Story app for future development. It was also suggested that technology expertise was sought "in house" at the university. The Research Translation Seed Fund that supported this project saw not only the development of the Voice Story app but brought together two academics from different faculties within the university to collaborate together and share their different areas of expertise across language education and technology design. The Voice Story project is just one of the now many plans for collaboration.

One aspect of the project was to develop a Lean Research Canvas. This helped articulate what was unique about the Voice Story app, the problem it solves and what the competition is. It also identified potential customers and early adopters. The project was supported by RMIT University not only financially, but also with advice and expertise, such as by providing legal and intellectual property advice.

The prototype was primarily developed with the intention of being a proof of concept to test the overall learning effectiveness of Voice Story as a language tool. The development timeframe and budget enabled the prototype to be developed. Rather than being just a wire frame to demonstrate what the app could look like, a working model prototype with many fully functioning features was created. The "Appery" online app development platform was used for the creation of the app.

The development of Voice Story included design considerations such as considering the user experience design so that the app would be intuitive to a wide target audience. It also needed to be engaging and fun for language learning across a range of ages and abilities. One of the main features of Voice Story is the use of emojis, which are universally used and consist of endless categories. Images are also used; photos can be added via the camera function or used from the existing camera roll. This means that students can add selfies, photos of family, friends, pets, or personal items to their stories, or use a collection of photos such as when telling a story after a school excursion using photos taken on the excursion. Pictures are simply selected by dragging them onto the screen. The sequence of pictures can be swapped, dragged to a bin if unwanted and a whole story can be cleared. Picture direction can vary for different language users who may prefer horizontal right to left, left to right, or vertical orientations. Stories can be audio recorded and played back which encourages purposeful language rehearsal until the student is happy with their story to save and then share.

Other apps for languages aim to "teach" some words or phrases in another language, and only in some selected languages, which rarely leads to learners being able to use the language in context. By contrast, Voice Story is an open-ended app where users can create stories and tell them orally in any language, using languages meaningfully. There are unlimited numbers of possibilities of language that can be used in any combination to tell any story. The inclusion of photos personalises the stories, which is an important educational consideration that all learning be connected and relevant to learners' lives (Weinstein, 2006). Where other apps may be 99% about the app "teaching" or "telling" new words or phrases in another language, and 1% about learners responding, which reflects traditional methods of education where learners are mostly passive and knowledge is seen as being transmitted to the learner, Voice Story is 99% about the learner actively producing language through the use of visual cues that the emojis and photos provide, with the app providing the platform for that learning, perhaps 1%.

Voice Story can provide a measure of students' individual oral productive capabilities. Students' oral telling of stories provides excellent evidence of their oral language skills and language development and can be valuable data to use for assessment and reporting purposes. Using a task such as Voice Story retains a focus on the task and reduces students' anxiety compared with external tests of oral proficiency. The save and share function of the app means that recordings of students' stories can be shared with teachers for a variety of purposes including assessment of learning and provides diagnostic information to teachers to inform future teaching and learning.

Digital portfolios are becoming a popular way to showcase student learning in Australian schools which includes a digital collection of evidence of student learning. In contrast with a traditional method of collecting physical paper work samples from students which limits evidence to written work that is observable, digital portfolios can capture evidence of learning that may include audio and video, thereby expanding the range of evidence of learning that can be collected. Voice Story can contribute to this by providing audio of students' oral language output. Students can take responsibility for developing their own digital portfolios to showcase their work and include Voice Story recordings as evidence of their second language oral development.

A one-to-one device program whereby each student has their own technology device for use at school (Harper & Milman, 2016; Larkin & Finger, 2011; Selwyn, Nemorin, Bulfin, & Johnson, 2017) is increasingly common in Australia. There is particularly widespread use of iPads and laptops across schools, so Voice Story will be developed to be used on each of these platforms.

Field Trials

Part of the project included trials of Voice Story. Trials were carried out across each primary school year level in two schools and was used with ten different languages. These trials confirmed that the prototype of Voice Story worked as expected. Trials identified the educational impact and functional impact of the app. Observations of students using the app together with student feedback informed early findings.

It was important that student voices were heard because they are the target users of the app. Students shared what they liked about Voice Story, with one Year 4 student sharing *"I like that you can use emojis and make your own story"*. Others reflected on the purpose of Voice Story in their L2 learning context, with one Year 4 student commenting that *"It got us to think about the language"*. Students used Voice Story with the new languages they were learning at school as well as in English for those students learning English as an additional language at school.

Voice Story was effective for L2 oral language use in one of the schools where students were learning Japanese as an additional language. Students at this school were able to create individual stories to tell in Japanese. Voice Story was particularly effective for Japanese because many emojis include Japanese themes, such as Japanese landmarks and food, making them particularly good for use in Japanese classes.

Particularly interesting were the strong and emotive responses from students with language backgrounds that were not the dominant language of the school or the language taught in the school's language program. Four students each asked *"Can it do it in my language?"* Each of these students speak minority languages that are not usually represented in apps. This question identified that some students with minority languages were already aware that many apps were available in "common" languages and not all languages. One student shared *"I have only ever spoken (my language) in my house"*. Voice Story represented the first time for each of these students to use their languages at school and have their language skills recognised by the teacher and their peers. This important finding from the trials of Voice Story highlight the important need for students' languages to be recognised at school. Teachers don't need to speak other languages to bring those languages into the classroom (Wilks-Smith, 2017) and there doesn't need to be a core number of students to validate particular languages. Voice Story can be a classroom tool that can be used in any language. Although a useful tool for second languages, a great outcome would be for students in all classes to have access to Voice Story to showcase their language resources across all languages and not only the focus languages of the school. Often languages do not coexist in classrooms because teachers do not know how to provide for languages that they do not know personally. Voice Story provides a tool that can be used by students across all languages and therefore bring a diversity of languages into the classroom to be shared and celebrated.

Trials of Voice Story also identified benefits for first language use in junior primary classrooms. In this context, students in their first year of primary school, many of whom were at a pre-writing stage, used Voice Story to orally tell their stories in English (most students' first language). The selection of pictures and planning of the story as well as conventions of print (for English, left to right return sweep) were all important first language development skills enforced with the app.

The Voice Story project highlighted the variety of benefits of the app in a range of language contexts. Observations and student feedback from trials have informed further development of the app with the aim towards future availability of Voice Story on the Apple i Store and on Google Play for broad use.

Conclusion

This paper described the process of "research translation" from the analogue Storytelling task to the development of the Voice Story app. It identified the key benefits of Storytelling and Voice Story as being able to be used with all languages at all language levels and include any topic or content. The open-ended nature of such a task positions it as learner-centred (Nunan, 1988) where the learner has choice and is in control of their language with many options to personalise stories. Use with any language means that Voice Story can be equally beneficial for early first language development (of any language), the learning of a new second (or further) language (in any language) and to maintain and use (any) home languages. Voice Story can be used anytime, anywhere, expanding language rehearsal time and reaching beyond the allocated language learning time within a school timetable. It was shown to be particularly beneficial as evidence of learners' oral language development and can be used for assessment of learning and as diagnostic information to inform teaching and learning.

Acknowledgements

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