1. Introduction

The goal of this project was to create a digital children’s book with images and sound in Blackfoot, an endangered indigenous language of southern Alberta. The story is about a young Blackfoot girl, Aanatsski (“Pretty-face”), and compares her day when she goes to school with when she goes to dance at a pow-wow, a central aspect of Blackfoot culture. The title Naa Aanatsski Aonim Opaitapiiyssin (henceforth Aanatsski) roughly translates as “Aanatsski sees her life.” It reflects her awareness of how these two components of her life, the modern and the traditional, are integrated and part of a whole.

Figure 1. The title image

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Linguists worked together with fluent speakers of Blackfoot to develop and produce an electronic children’s book. This project aimed to achieve applied linguistic goals by documenting important linguistic structures for young learners of Blackfoot, and to do so by producing a children’s book that respected the cultural heritage and storytelling philosophies of the Blackfoot community. The project is thus grounded in the empowerment model of linguistic fieldwork (Rice 2006, Czaykowska-Higgins 2009), enabling a language community to reclaim their indigenous language.

The paper discusses using an electronic children’s book as a collaborative platform to present important aspects of Blackfoot culture in the Blackfoot language (see Gearheard 2005 on advantages of electronic media for oral cultures). We begin by discussing the cultural goals of the project, and then discuss some applied linguistic goals. Next, we outline how we went about developing and recording the children’s book to achieve these goals, and show some sample pages to illustrate our discussion. We conclude by highlighting some unresolved issues, including translations, orthography, and distribution.

2. Cultural Goal 1: Storytelling Philosophy

The first aspect of Blackfoot culture that we will discuss is the storytelling philosophy: Blackfoot storytellers preface a story or speech by identifying who they are and where they come from, so that listeners can know where the speaker(s) got their knowledge from. We begin our paper by discussing this feature of Blackfoot culture to reflect its position in the children’s story we produced: it comes first, and this is contrary to the format of English language children’s books where information about the author(s) is typically on the final page or back cover of a book. In Aanatsski, this aspect of performance philosophy is incorporated into the book by including an oral biography for participating speakers of Blackfoot (see also Aistanskiaki et al. 2013).

The following quote from Aistanskiaki reflects the importance of one’s background as a speaker:

As a child, my mother and my father ... spoke to us in the Blackfoot language and she wanted us to learn. She really worked hard for us to retain our language. And the story that we’ve told, that we’ve shared with the University of Calgary, is an extension of the language that was spoken to us by our mother. So that’s where we got our traditional knowledge from.

– Aistanskiaki Sandra Manyfeathers

3. Goals of the Main Text

In the story itself, we aimed to incorporate a number of other aspects of Blackfoot culture. These included Blackfoot names, and pow-wow related imagery (dance regalia, special foods). Like the Blackfoot authors of this
paper, it is typical to have a traditional Blackfoot name, as well as an Anglophone name. We wanted our story to reflect this reality, so that children could readily identify with it.

Secondly, many aspects of Blackfoot culture are different from modern North American culture, though they might share basic similarities. For example, whether going to school or to the powwow, you would wear footwear, but it might be different (sneakers at school, moccasins at the powwow). Going to the powwow, you might wear your hair differently than when you went to school, and if you were dancing, you’d wear your regalia instead of a shirt and pants. You’d have to eat whether you were going to school or the powwow, but you might be more likely to have traditional foods at the powwow. We wanted to highlight aspects like this of Blackfoot culture, in comparison to modern North American culture.

These cultural goals were tied in to applied linguistic goals of the project. Broadly speaking, we wanted to incorporate Blackfoot language structures that might differ strikingly from English (Frantz 2009). Specifically, we were interested in how, in the Blackfoot language, contrasts are made. Our cultural goals could readily address this linguistic question: contrasting traditional Blackfoot names with Anglophone names, contrasting aspects of the powwow with going to school, and so on.

Related to the concept of making contrasts was the question of how question and answer sequences are structured in the Blackfoot language, and how speakers use the Blackfoot language to express concepts like ‘just/only’ (exclusivity) and ‘also’ (additivity). From the perspective of theoretical linguistics, all of these linguistic structures come under the concept of Focus (e.g. Krifka 2007; see Bliss 2005, 2010 on Blackfoot). Roughly, the Focus is that part of a sentence which a speaker highlights as being new or important in the conversation. Linguistic research has shown that Focus can be expressed in a variety of ways, depending on the language. Some languages, like English, use intonation (speech melody) to indicate the concept of Focus (Hartmann 2007), while others use changes in word order (e.g. Koch 2008). Others yet use some special morpheme (a part of a word that is inserted to indicate the Focus; e.g. Hartmann and Zimmermann 2009 on Gürün tüüm), and many languages might use two or all three of these mechanisms. We wanted to begin to document how the different aspects of a Focus-marking system were expressed in Blackfoot, since we hypothesized that it would be in a different way from English, and it was important to document this unique aspect of the Blackfoot language.

### 4. How We Went About It

To begin, linguists and fluent Blackfoot speakers brainstormed together to come up with characters and a plot line that would meet the objectives outlined in section 2. We decided on a story that compared the basic day of a young Blackfoot girl when she goes to school and when she goes to the powwow. To reinforce the contrast between these two aspects of her life, we used a format of facing pages: the left page always showed her on a school day, and the right side
on a powwow day. Our main character is named Tammy, and her Blackfoot name is Aanatsski, which literally means “Pretty-face.”

We developed a basic plot line: Tammy/Aanatsski wakes up in the morning, gets dressed and ready for her days, goes to school or to the powwow (on the bus versus in the family van), does different things at each place (read and write versus dance), eats different foods at each place, and sleeps in different places (at home versus in a tipi). The final page shows Aanatsski reflecting on how the different aspects of her life are nevertheless parts of a unified whole.

Next, we sketched basic imagery, including moccasins, powwow regalia, tipi structure, and special foods (chokecherry cookie). Where necessary, we also looked at picture references for direction on colours and designs. The first author then drew images for each page using Adobe Photoshop.

The storyline was then translated and recorded in the Blackfoot language, and the recordings were transcribed using the orthography consistent with the existing Blackfoot grammar and dictionary (Frantz 2009, Frantz and Russell 1995). We prepared individual recording files in both .wav and .mp3 formats for each sentence, so that they could be incorporated into an electronic form of the book (an e-book). We reasoned that incorporating recordings that narrate the story facilitates learning pronunciation, especially where orthography differs from actual pronunciation (e.g. Frantz 1978).

Finally, the transcribed text and English translations were added to the story images. The digital images could then be used in an electronic book, but we also had the option of printing them out in hard copy for traditional book versions. In the next section, we show some of the story images, to illustrate how various of the cultural and applied linguistic goals were achieved.

5. Sample Story Images and Text

The first pair of images illustrate the introduction of the main character’s two names, her Anglophone and her Blackfoot name. The facing page format allows us to compare two days in her life, going to school (on the left) and going to the powwow (on the right). In applied linguistic terms, the two sentences record a sequence whereby we contrast the two names.

Figure 2. Anglophone and Blackfoot names
The next pair of pages set up the contrast between going to school and going to the powwow. The character isn’t really doing much different in this pair of pictures, to show that different aspects of her life are unified and part of a whole.

![Figure 3. Two aspects of life](image)

In the next set of pictures, we see Tammy tying her hair back for school, and Aanatsski putting her hair in braids for going to the powwow. The image allows us to introduce culturally important aspects of powwow dress – here, her hair clasps. In applied linguistic terms, the two sentences introduce a contrast between two activities, tying hair back, and braiding hair.

![Figure 4. Tying or braiding hair](image)

The pages in figure 5 contrast footwear: running shoes at school, and moccasins at the powwow. Of applied linguistic interest here is how the concept of ‘only’ is expressed in Blackfoot, and also how the concept of negation is expressed. In languages like English, the meaning of these expressions interacts with Focus, but in different ways (semantically for ‘only’ and pragmatically for negation – Beaver and Clark 2008). By recording the Blackfoot sentences here, we can begin to investigate whether or how these expressions interact with Focus (the contrast between going to school versus the powwow) in Blackfoot.
Figure 5. Moccasins are worn only to the powwow

The next image pairs show the different clothing worn in the two contexts, and allow us to introduce the regalia that Aanatsski wears to the powwow for dancing. Of linguistic interest, the two images show wh-questions and answers. We’ve shown these as larger images, rather than in the facing pages format, to keep the text legible.

Figure 6. What does Tammy wear when she goes to school?

Tammy, maataisstsitsikiwa niitsitsikínssin otoissksínima’tsaahsi.

Tammy doesn’t wear moccasins to school.

Aanatsski, itamaaisstsitsikatooma otsitsikítsí otoípísskaahsi.

Aanatsski only wears her moccasins when she goes to the powwow.

Tsitapiwá asapskaohsii naa Tammy otoissksínima’tsaahsi?

What does Tammy wear when she goes to school?

Asapskaohsiwa isttohksíssoka’sími ki aatsí otoíssksínima’tsaahsi.

She wears a shirt and pants when she goes to school.
Some of the activities that the main character does in both places are the same. For example, she has lunch both at school and at the powwow. However, in the story, she has some special foods of cultural importance at the powwow, like the *pakksinikimaan* ‘chokecherry cookie’ in the next set of pictures (figure 9). Of linguistic interest, the sentences in this pair of images allow us to explore how the different foods are contrasted, and how the concept of ‘also’ is expressed in Blackfoot.
In this section, we have shown some sample pages from the book, to illustrate how we achieved both cultural and applied linguistic goals. We haven’t provided any formal linguistic analysis, something which we are setting aside for further work. However, we hope to have shown how we included important aspects of culture, including aspects of the Blackfoot language, in the storybook.

6. Unresolved Issues

We will briefly outline some problems that we encountered during the development and completion of this storybook project.

First, as with any work involving two or more languages, we ran into some Blackfoot sentences which were hard to translate into English. One was the concept of unity expressed at the end of the story, when Aanatsski sees how the different aspects of her life fit together as a unified whole (figure 10). While the Blackfoot language expresses this quite succinctly as *iitonimwa opaitapiiyssin*, we had a hard time translating it into English (and as you can see, settled on something quite a bit more wordy). On the other hand, we were happy that the story included such culturally and linguistically unique expressions. One possibility is to include further discussion of concepts like these in an appendix to the book, to further cultural learning.
Figure 10. Aanatsski sees the connectedness of her life

Another example of an expression that doesn’t translate directly into English is ‘the end,’ whose Blackfoot form Kainnimayi iihakotsiiwa means ‘the story boils.’ We resolved this by including the more literal translation along with ‘the end.’ This is a fun expression though, and great to include at the end of a children’s story.

Figure 11. The story boils

A second set of problems that we encountered had to do with the orthography and how we wrote the Blackfoot language forms. First, linguist readers familiar with Blackfoot and the orthography of Frantz (1978, 2009) will
notice that we have not marked pitch accent. This was because we (the linguist transcribers) were not always certain where to mark it. However, since the e-book contains sound recordings, this does not present a problem to a learner, who is best off to listen to the way a fluent speaker pronounces each sentence in any case.

Readers may also have noticed that we often put commas after noun phrase that came at the start of sentences, such as after Aanatsski on the page below. This was to reflect a perceived comma intonation (topic intonation – a rise in pitch and a pause, e.g. Koch 2011) after the first noun phrase, and again is something that the reader of the digital book would be able to hear for themselves by listening to the audio recording of the sentence.

![Figure 12. Using commas](image)

A more serious issue with how we wrote the Blackfoot sentences concerns final vowels. Many of the Blackfoot forms end in -(w)a or -(y)i, such as Aikkimaaniwa ‘she is wearing a feather’ in figure 12 above. In writing them this way we followed the grammar and dictionary of the language (Frantz 2009, Frantz and Russell 1995). However, the writing system doesn’t reflect actual pronunciation: Blackfoot speakers don’t actually say “-wa” or “-yi” at the ends of these words. This has been explained by linguists as well as speakers as a rule in the Blackfoot language whereby final vowels undergo a devoicing or deletion process, which means you can’t usually hear them at all. A special part of this process is that, even though there is nothing audible at the ends of the words, the
mouth might still be moving “silently,” making some sort of silent vowel (Frantz 2009, Gick et al. 2012, Louis Soop p.c.). That is why Frantz (1978, 2009) wrote -(w)a and -(y)i at the ends of these words, to reflect that there is something psychologically real happening there. The danger for learners of Blackfoot is that, when they see “-wa” or “-yi” written, they will actually pronounce it that way. For this reason, writing all these “silent” -(w)a and -(y)i forms is confusing for language learners (Windsor and Cobler 2013). On the other hand, they reflect a special pronunciation process that is a unique part of the Blackfoot language, and should be learned by students of the language. Apart from specific instruction to language learners, we are not sure how to address this problem, and we remain unsure whether the written text in the storybook should include these silent -(w)a and -(y)i forms. Nevertheless, by including audio recordings in the e-book, we hope to enable the reader to learn the language by listening rather than reading, and in this way learn the correct pronunciations.

7. Conclusion

In this paper, we have told our story about how we, a small group of fluent Blackfoot speakers and linguists, collaborated to produce an electronic children’s book. We developed a story aiming to achieve both cultural and linguistic goals, documenting important aspects of modern Blackfoot life as well as important aspects of the Blackfoot language. The project therefore intended to conduct linguistic fieldwork in the empowerment model (Rice 2006, Czaykowska-Higgins 2009), by having fluent speakers of the language guide the project, and producing something valuable to the Blackfoot community.

Future directions and questions to be dealt with on this project include the following. We are considering developing and including an appendix as part of the storybook, with relevant grammatical information about the Blackfoot language for teachers. Secondly, when the e-book is finalized, we need to consider what the best platforms for distribution are. These could range from sharing via email, to hosting the e-book on one or more websites for download. The advantages of the e-book are that it is cheap and easy to share. Thirdly, along with the e-book, we are interested in pursuing options to print hard copies of the book, accompanied with an audio CD; however, hard copies are expensive, and we would need to find a source of funding and a publisher. Finally, while we have developed, told and recorded a story in the Blackfoot language, the images could potentially be re-used by speaker/linguist groups for other indigenous languages, who could record a version of the story in their own language. This would require finding a platform from which to host and share the images and plotline (e.g. Totem Fields Storyboards).

We hope that others can learn and benefit from our experience in this storybook project.
References


