# Starting World Languages in Elementary Schools 

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## STARTING WORLD LANGUAGES IN ELEMENTARY SCHOOLS

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Starting World Languages in Elementary School
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This study addresses the position in which elementary school teachers find themselves when they recognize the benefits of bilingualism but are limited in being able to provide second language (L2) instruction. It seeks to answer the following questions: How many elementary school teachers in Montana have added a L2 component to their instruction? How likely are those teachers to turn to the Internet for materials and resources in order to add a L2 component to their instruction? What do elementary school teachers expect from those online materials? What L2 materials are available online and how can they be used? What should online L2 materials/resources be like based on the principles and best practices in the field of L2 teaching as established by the American Council on the Teaching of Foreign Languages (ACTFL)? In this study, I review the research on additive bilingualism in elementary school children and find that learning a second language has inherent cognitive, academic, and affective benefits. Also, I review how language can be taught effectively through various perspectives to language and language learning. I conducted a survey of public Kindergarten, $1^{\text {st }}$ grade, and $2^{\text {nd }}$ grade teachers in Montana and found that almost half of them were already trying to include a L2 component in their teaching. A very limited number of these teachers had a trained second language educator at their school, and because of this, many turn to online resources to help them. Almost all the participants were receptive to the idea of a free, online resource that would teach one or more world languages in an engaging, relevant way. Therefore, I analyzed online second language resources available for teachers who do not already speak the language and found that all of them lacked the discursive feature that characterizes classroom dynamics. The resources, both for free and for a price, had a lack of focus on instructing students how to ask the questions themselves. I finish this paper by addressing this need. I propose a new resource that seeks to address the shortcomings of the resources reviewed. The proposal for the proposed resource takes into consideration the feedback received from the teachers during the survey and is directly tailored to the Montana Elementary K-2 context.

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## Preface

Language has had a remarkable impact on my life. I started studying French in high school, and when I went to the University of Montana for a B.A. in Elementary Education, I decided to continue my studies in French. This interest in language led me to study three other languages: Spanish, Russian, and Irish. I followed this passion and worked abroad in France. And I returned to the university to earn a Master's of Arts in Language and Literature. However, language has not just influenced me as a person; it has impacted me as an elementary school teacher as well.

From the beginning of my formation as an elementary school teacher, language has played a major role. I incorporated French into my student teaching, and when I taught $1^{\text {st }}$ grade in a rural Montana school, I began teaching basic French and Spanish to my class. It was at that school that I noticed the lack of exposure that those students had to other world languages. To most of my students in rural Montana, English was the only important language in the world, and people either spoke English or not-English. That is why I began to introduce French to the other classes around me to increase awareness of linguistic diversity.

These experiences made me begin to question why I studied foreign languages in the first place and to question when I was first exposed to an L2. Upon further reflection, I realized that my language experience far preceded my studies in high school. It was in $2^{\text {nd }}$ grade, at the age of 7, that I was first exposed to another language. Before that year, my teacher had lived abroad in Japan, and she decided to share some of the Japanese culture and language with us. We learned basic phrases such as "Thank You," "Hello," and "Goodbye". As a child, I just assumed everyone studied the same thing in $2^{\text {nd }}$ grade, never realizing that this was a unique experience. I encountered different world languages again in middle school. Everyone at the school was
required to take a one-trimester class called "Communications" in which we were introduced to basic German, Spanish, and French. Although this was in $6^{\text {th }}$ grade, I did not begin earnestly studying French until $9^{\text {th }}$ grade, and when I did begin, I had no conscious recollection of the French we were taught three years prior.

The purpose of this preface is not to boast about my early exposure to various world languages as a child, but rather to point out the life-changing effects it has had on my attitude, my choices, and my education. This early exposure did not make me fluent in any of the languages to which I was briefly exposed. It did, however, make me cognizant of the fact that my native language was not the only one in the world. It led me to consider other cultures and languages as equally valuable as my own. Later, my studies in French helped me understand far more about my own native English grammar than I had known before.

For me, exposure to world languages in the elementary school setting helped make me a better global citizen.

## Chapter 1: Introduction

This study is primarily concerned with the teaching of foreign languages in the early grades (K-2) of public elementary schools in Montana. This topic is relevant given the growing research on the benefits of bilingualism (Caccavale, 2007; Campbell, 2007; Chang, 2011; Marcoux, 2004; Moloney, 2009; Rubio, 2007) and the proposal by specialists to provide students in the U.S. with L2 education (Commission on Language Learning, 2017).

In the context of this paper, I will use the terms "second languages" (L2s) or "foreign languages" to refer to world languages that are learned after the first language (L1). Many linguists and educators consider people who study or speak an L2 to be "bilingual". However, there is a distinction to be made between simultaneous bilinguals and additive bilinguals. Whereas simultaneous bilinguals are people who began learning the L1 and L2 simultaneously before the age of three, additive bilinguals are individuals who learn an L2 after their knowledge of the L1 is well established (around age three). For most of this paper, I will focus on additive bilinguals because that is the situation that is most relevant to many early elementary students in Montana who grow up with only one language in their environment-a fact confirmed by the Census report showing that $96 \%$ of Montanans age five or older speak only English at home (U.S. Census Bureau, 2015).

There is a lot of research on the teaching of foreign languages in early elementary education (Taylor-Ward, 2003), however, most of that research approaches the topic from the perspective of language educators and appears in language educators' professional publications (e.g., ACTFL Foreign Language Annals, Language Learning Journal, TESOL Journal, Hispania, etc.). What that research usually leaves aside (with a few exceptions such as Koolstra,
C. M., \& Beentjes, J. W., $1999^{1}$ and Riestra \& Johnson, 1964) is the issue that most public elementary schools in the U.S. do not have funding to hire foreign language teachers that would provide L2 instruction or do not consider L2 instruction a financial priority. The Commission on Language Learning (2017) reported that over $50 \%$ of private elementary schools in the U.S. included foreign language instruction as part of their curriculum and only $15 \%$ of public elementary schools included it (p. 8-9). Further still, out of the 17 schools whose K-2 teachers responded to my survey (see Chapter 3), only one of them had elementary teachers specifically trained in an L2. Also, in Missoula County Public Schools where there are nine elementary schools, there is only one public school where subjects are taught through L2 immersion, and that school became the first public school with immersion program in the whole state of Montana in 2013 (Davis, C., 2016). In several studies (Taylor-Ward, 2003), students from schools without L2 programs performed worse on certain standardized tests when compared to schools with L2 programs with similar socioeconomic standings.

Keeping in mind this limitation in the access to formal L2 instruction in early public education, the present study addresses the tension that elementary school teachers face between research on the benefits of bilingualism and the limitations to provide L2 instruction. Despite the tension, the results of a survey study reveal that many elementary school teachers are attempting to add an L2 component to their teaching in order to expose their students to L2s. Given the lack of knowledge about L2 teaching methodology, these teachers seek support for this enterprise from online materials available. This study not only describes this scenario using Montana teachers as a case study, but it also reviews some of the online materials available. As a result of the review of materials, the present study sheds light on the need for free online materials that

[^0]would aid elementary school teachers in their efforts to add a language component to their instruction. Thus, a proposal of what such material would look like is offered at the end of this study.

In chapter 2, I will provide an overview of the research which demonstrates the benefits (cognitive, academic, and attitudinal) elementary students receive when they study an L2. I then discuss the concept of language according to different psychological perspectives and briefly review major theories of language acquisition associated with each. In chapter 3, I present my original research on the state of L2 teaching in elementary schools in Montana. I will use this to point out the desire of K-2 teachers to add an L2 component to their classrooms even if they are not L2 teachers themselves. I also conduct a review of the various materials available to K-2 teachers who do not speak an L2 but who wish to incorporate one into their classroom. I will use this review to pinpoint the need for resources designed specifically for use in $\mathrm{K}-2$ classrooms in public elementary schools (especially in a state like Montana wherein many families are from a lower socioeconomic class). In chapter 4, I will describe the elements that I consider would help elementary school teachers in adding an L2 component to their instruction, and I propose an online resource. The resource proposed seeks to overcome the limitations in the resources currently available. Chapter 5 concludes the paper with a brief summary of this work.

## Chapter 2: Literature Review

This section of the study will first discuss the relevance of world language learning in the elementary school setting due to its numerous benefits across domains. Second, this section will review psychological theories that have impacted our conceptualization of language and of L2 learning and teaching.

### 2.1. Benefits of Learning an L2 in Elementary School

An elementary teacher whose students do not have frequent contact with non-English speakers might raise the following question, why include world languages in elementary education when the majority of people in the U.S. speak English? I am going to address this question by reviewing research that suggests that learning an L2 as a child has positive cognitive, academic, and attitudinal effects.

### 2.1.1 What are the cognitive benefits of learning an L2 as a child?

The cognitive benefits of bilingualism have been shown in a variety of cognitive domains, such as the suggestion that bilinguals may think more flexibly (Tochen, 2009: 654). However, here I will focus solely on the effects of L2 learning in elementary school on the cognitive domain of memory. Several studies attribute learning an L2 with improved performance on memory tasks (Kormi-Nouri, Moniri, \& Nilsson, 2003; Marcoux, 2004). Kourmi-Nouri et al. (2003) compared the performance of 60 monolingual Swedish children with that of 60 additive Iranian-Swedish bilingual children $\left(7 ; 9-13 ; 3^{2}\right)$ living in Stockholm on both semantic and episodic memory tasks. All the participants grew up in Sweden. The bilinguals were raised by Persian-speaking parents and were receiving formal instruction in Swedish,

[^1]except for one hour of Persian instruction every week. Koumi-Nouri's findings noted better recall and overall performance by the bilingual group compared to the monolingual group. This study suggests that learning an L2 improves children's memory functions. The researchers interpret the bilingual advantage in memory as a result of the integration of the two languages in bilinguals.

Asadollahpour, F., Baghban, K., Mirbalochzehi, P., Naderifar, E., and Tahmasebi, B. (2015) confirmed this idea that bilingual children demonstrate an advantage in memory tasks, but instead of testing semantic and episodic memory, they tested working memory. Asadollahpour et al. compared the performance of 70 monolingual Persian-speaking children with that of 70 Baluchi-speaking children (all in second grade and between the ages of 7 and 8 ) who were sequential learners of Persian immersed in a Persian-speaking school in Iran. They compared the children's performance on four different working memory tasks: The Forward Digit Span Test, the Backward Digit Span Test, the Non-Word Repetition Test, and the Maze Memory Test. In their study, they found that the additive bilingual children significantly outperformed the monolingual children on every task except for the maze memory task, which is associated with spatial memory as opposed to the other tasks that involve phonology (Non-Word repetition and Forward Digit Span) and the central executive (Backward Digit Span). This study reinforces the idea that learning an L2 improves children's memory functions

### 2.1.2. What are the academic benefits of learning an L2 as a child?

Numerous studies have found that elementary students learning an L2 often outperform their peers in the areas of language arts and mathematics - two subjects that are heavily assessed on high stakes testing and other standardized tests. In language arts (a subject area often
classified as involving the skills of reading, writing, and comprehending language), students who study an L2 often outperform monolingual students in L1 tasks (Turnbull, Lapkin, \& Hart, 2001; Taylor-Ward, 2003; Vialettes-Basmoreau, 2012). Lambert, Genesee, Holobow, \& Chartrand (1993) compared the performance of 18 English monolingual children (between the ages of 11 and 12) with the performance of 22 English-speaking learners of French on English language tasks (Reading Comprehension, Spelling, Language Expression, and Vocabulary as part of the Canadian Achievement Test). The additive bilingual children came from English-speaking homes and had continuously attended a French medium school, in which they spoke only French and only began weekly English lessons at ages 9-10. Lambert et al. found that the bilingual children significantly outperformed the English monolinguals in all tasks but the Reading Comprehension. In this latter section, the bilingual students scored better on average, but the difference in scores with the monolingual students did not reach significance. Also, all the participants were given 30 minutes to write an English composition about one of three prompts. This composition was then ranked anonymously for accuracy and style by anglophone Grade 5 and 6 teachers on a scale from 1 to 5 (with 5 being the highest score). On average, the bilingual children had a lower ratio of spelling errors to total words used, and although they tended to use fewer words on average, the L2 students' compositions were ranked higher.

Similar effects have been reported for learners with less exposure to the L2. For example, Taylor-Ward (2003) compared the English language skills of additive bilinguals ( $\mathrm{n}=849$ ) in FLES (Foreign Language in the Elementary School) schools to that of English monolinguals ( $\mathrm{n}=635$ ) in comparable non-FLES schools. The children in the FLES institutions took 30 minutes a day of instruction in either Spanish or French starting in $3^{\text {rd }}$ grade. Taylor-Ward compared the results of two different state tests of the same group of students as they went from $3^{\text {rd }}$ grade to $5^{\text {th }}$
grade. On the $4^{\text {th }}$ grade Louisiana Educational Assessment Program (LEAP) test of language skills including reading, comprehension, writing, and literary analysis, the bilingual students significantly outperformed their monolingual peers. Taylor-Ward then compared the $5^{\text {th }}$ graders results on the Iowa Test of Basic Skills in relation to their prior LEAP results and found that the students continued to demonstrate significantly higher performance in the areas of reading and (English) language. ${ }^{3}$ These studies indicate that there is an inherent (L1) language benefit in learning an L2.

In the area of mathematics, whereas some studies have found no effect of additive bilingualism (Turnbull et al., 2001), there is growing evidence that learning an L2 has a positive impact on mathematical skills (Armstrong \& Rogers, 1997; Lambert, 1993; Taylor-Ward, 2003). Armstrong \& Rogers (1997) found positive effects of Spanish (L2) instruction with only 90 minutes of instruction a week and after only one semester. They had a group of 100 Englishspeaking children (ages 8-9) take the Metropolitan Achievement Test (MAT) as a pre- and posttest. This test assessed skills for mathematical problem-solving, procedures, language, symbols, operations, and concepts. Half the group received three 30-minute Spanish learning sessions a week while the other half did not. The students learning the L2 performed significantly better on the math component of the MAT (as well as in the language component) than their monolingual peers in the same school who were not learning the L2. What is most remarkable about these results is that half of the L2 group had 90 minutes less of direct math instruction a week to make time for the Spanish instruction, and this half still had significantly better scores on the MAT than the non-L2 group. In the Lambert et al. (1993) study mentioned previously, additive English-French bilingual students learning mathematics through the L2 significantly

[^2]outperformed their peers who were studying math in their L1 on the Canadian Achievement Test. These studies indicate that the learning of mathematics is not impeded by an L2, but on the contrary, can be enhanced by it.

The learning of an L2 positively correlates with the increase in problem-solving and creative thinking skills, which are often associated with mathematics and language arts performance. Caccavale (2007) in her meta-analysis of research on the effects of learning an L2 emphasizes this point:

Although many research studies indicate that second language instruction results in higher achievement in both literacy and mathematics, it is important to remember that researchers find the highest correlation between second language development and critical thinking, or problem solving skills. While the application of better problem solving skills may result in increased language arts achievement, this correlation may not be entirely direct, and may be the secondary result of increased cognitive ability (p. 32).

### 2.1.3. What are the attitudinal benefits of learning an L2 as a child?

There is a breadth of research related to cultural understanding and language acquisition in older L2 learners, however, there are still few studies directly on the attitudinal effects of L2 learning on elementary school students. Unlike the research reviewed in the first two sections, the studies that I will summarize in this section are all qualitative, being based on surveys completed by the participants. Nevertheless, the existing research has shown a positive relationship between L2 learning and students' attitudes towards other cultures (Riestra \& Johnson, 1964; Corbaz, 2005; Moloney, 2009; Chang, 2011). English-speaking elementary students learning an L2 have been found to demonstrate a more positive attitude towards other
cultures in that language (Riestra \& Johnson, 1964) as well as a greater comfort with and appreciation of cultural differences (Moloney, 2009), compared to their peers who were not studying an L2. L2 students often adopt an ethnorelative attitude toward other cultures instead of an ethnocentric one. In the study conducted by Corbaz (2005), the group of English-speaking elementary students, who were learning Spanish or French and were predominantly from Caucasian, less diverse backgrounds, reported being more at ease with other cultures than their non-L2 counterparts who were exclusively from minority cultures.

Speaking more than one language expands individuals' view of the world and "primes them for greater intercultural understanding and tolerance" (Genesee \& Cloud, 1998, p. 63) Linguistic and cultural differences can create conflict between human beings, but they also enrich our lives.

### 2.1.4. Section Summary

In the beginning of this section, I raised the question, why include world languages in elementary schools when the majority of people in the U.S. speak English? Learning an L2 has been linked with positive cognitive, academic, and attitudinal effects on elementary school children. Many of these benefits of L2 learning are reaffirmed in the Commission on Language Learning (2017) report:

The study of a second language has been linked to improved learning outcomes in other subjects, enhanced cognitive ability, and the development of empathy and effective interpretive skills. The use of a second language has been linked to a delay in certain manifestations of aging (p. viii).

### 2.2. Theories of Learning and Language Acquisition

An educator interested in L2 learning could raise several questions. What is language and how do we learn it? Is language learned without direct instruction or is it something that we must be taught directly? How does the way we learn other things impact how we learn language (and vice versa)? In this section, I will address some of these questions by discussing different psychological theories and how they apply to learning, language, language acquisition, and language instruction. I will focus specifically on behaviorist psychology, cognitive psychology (both innatist and constructivist), and sociocultural theory.

### 2.2.1 Behaviorism

### 2.2.1.1. General Tenets

As a psychological theory that stemmed from Pavlov's (1927) classical conditioning, behaviorism was largely developed by John B. Watson (1924) and B.F. Skinner (1957). Overall, the theory implies that people are constantly reacting to our environment in the form of behavior. This reaction can be a conditioned response or a reflex to given stimuli. In Skinner's (1957) version of behaviorism, known as "Operant Conditioning", the chosen behaviors are rewarded in order that the person will exhibit those behaviors again. The behaviors not chosen are ignored or punished in order to reduce their reoccurrence. According to this view, the mind is a tabula rasa that is molded from conditioning, and people learn as the result of habit formation through reinforcement. The "Operant" behavior is different from a reflex because it is a voluntary choice of the person who exhibits it. Day (1983) summarizes this Operant Conditioning as "the attempt to account for behavior solely in terms of natural contingencies: contingencies of survival,
contingencies of reinforcement, or contingencies of social evolution," (p.101) and unlike prior psychological theory, this theory takes thoughts and feelings into account.

### 2.2.1.2. Concept of language

According to behaviorism, language consists of a series of habits for communication. Skinner (1957) regards it as "verbal behavior." He states:

Men act upon the world, and change it, and are changed in turn by the consequences of their action [...] Much of the time, however, a man acts only indirectly upon the environment from which the ultimate consequences of his behavior emerge. His first effect is upon other men. Instead of going to a drinking fountain, a thirsty man may simply 'ask for a glass of water' - that is, may engage in behavior which produces a certain pattern of sounds which in turn induces someone to bring him a glass of water (p. 1).

These behaviors, according to behaviorist theorists, emerge from the need to communicate in a community that uses verbal language (Barnes \& Holmes, 1991). When mothers or fathers ask infants, "Are you hungry?", the parents create this "social contingency" wherein infants will soon associate the meaning of "hungry" with their feeling when it is time to eat. Skinner speaks of a mand to describe the operant behavior that learners exhibit to invoke a behavioral consequence of another. This mand is reinforced when that consequence occurs, and language learners are more likely to give a mand after a deprivation of the consequence (Skinner, 1957, p. 35). As Skinner exemplifies, learners can associate the mand "QUIET!" with the effect or reinforcement that occurs afterward (i.e., the quieting of others around them). In the presence of
a noisy environment, which deprives the learners of the intended silence, the learners are more likely to repeat the mand themselves.

Additionally, according to behavioral theory, the relationship between the behavioral consequence and a particular mand (or written and spoken behavior) is purely symbolic, since "symbols are the products of written and spoken behavior, and the concepts and relationships of which they are symbols are in the environment." (Skinner, 1974, p. 130).

### 2.2.1.3. Concept of L2 learning

In the area of L2 acquisition, behaviorist theory posits that language is learned because it was positively stimulated or rewarded; it is the creation of fluent-like habits through reinforcement (Macaro, 2005, p. 23). According to this theory, students of French learn to conjugate the verb être because their French teachers reward them for doing it right or negatively reinforce incorrect conjugations. This requires more conditioning and practice when the structure of the L2 differs drastically from the one used in the L1, and therefore, the behavior needs to be rewarded even more. Macaro (2012) states, "Dissimilar structures needed a lot [of stimulusresponse practice]. By repeatedly stimulating the right response in a situation where the 'L1-L2 match-up' was not obvious, the learner was gradually weaned off 'thinking in the L1'" (p. 23). With this theory of psychology, L2 learning can be described as "imitation, practice, [...] and habit formation" (Lightbrown \& Spada, 2000, p. 35)

### 2.2.1.4. Applications to L2 teaching:

L2 teaching that adheres to behaviorist ideas places a great amount of emphasis on mechanical practice, reinforcement, and feedback that would lead to habit formation
(Lightbrown \& Spada, 2000, p. 35). According to this theory of learning, L2 teachers must model good language behavior which can then be imitated, and they must allow for opportunities to practice and reinforce those good behaviors in order for them to become habits. Along with this, teachers must avoid errors themselves so as not to be imitated, and they must address the bad language behaviors of their students before they become habits.

In L2 teaching, one approach in particular became prominent in the United States shortly after Skinner's theories came out: Audiolingualism. Celce-Murcia (1991) defines the approach with the following attributes:
a. Lessons begin with dialogs.
b. Mimicry and memorization are used, based on the assumption that language is habit formation.
c. Grammatical structures are sequenced and rules are taught inductively.
d. Skills are sequenced: listening, speaking-reading, writing postponed.
e. Pronunciation is stressed from the beginning.
f. Vocabulary is severely limited in initial stages.
g. A great effort is made to prevent learner errors.
h. Language is often manipulated without regard to meaning or context.
i. [T]eacher must be proficient only in the structures, vocabulary, etc. that [they are] teaching since learning activities and materials are carefully controlled (p. 7).

With this approach, there is not a lot of consideration put on conversation in an organic and communicative manner. Students are not necessarily taught to ask follow-up questions to continue a conversation, nor are they taught to listen for specific context clues to follow a conversation with vocabulary beyond their grasp. Furthermore, Lightbrown and Spada (2000)
insist, "the behaviourist account has proven to be at best an incomplete explanation for language learning" (p. 36).

### 2.2.2. Cognitivism: Innatist view

### 2.2.2.1. General Tenets

Cognitive psychology was developed by Donald Broadbent (1958), George A. Miller (1956), and Allen Newel (1958) as a reaction to behaviorism. Whereas behaviorist theory focuses on the outward responses to stimuli, cognitive psychology focuses on innate processes of cognition, or thinking. According to behaviorism, thinking itself is a behavior. Yet according to the cognitivist theory, it is the contrary: thinking not only precedes behavior; it shapes it.

Cognitive psychologists initially focused their attention on the kinds of innate mechanisms of the brain that allow humans to learn, and therefore, to change their behavior as a result of their learning. This contrasts sharply with the conception of the mind as a tabula rasa put forward by behaviorists. As a criticism to behaviorist ideas, cognitivists have highlighted the fact that
[e]arly simple views of conditioning [...] became unsatisfactory when detailed study of behaviour showed that the response finally appearing in any situation was not necessarily the most frequently or the most recently associated with the stimulus: rather it was a biologically useful one (Broadbent, 1958, p. 130).

Broadbent makes reference to some innate, biological system that supersedes conditioned behaviors and which is central to cognitivism. Within the cognitivist theorists, however, there is a distinction between innatist and constructivist theories of how language is acquired (or the
debate between nature and nurture). In this first subsection, I will address the innatist perspective.

### 2.2.2.2. Concept of language

The innatist perspective assumes that the human being is naturally endowed with a language organ or a faculty of language (Chomsky, 1959). This organ is an innate Universal Grammar (UG) that is ready to learn the grammar of any particular language. It consists of underlying characteristics that are true, not just for a specific language like French, but for all languages-such as how to make sentences negative, how to ask questions, how to make subjects or objects singular and plural, and how to express tenses or time.

Given such a rich innate knowledge of language (UG), children can learn the language by exposure to limited input (what Chomsky referred to as "poverty of the stimulus"). However, given such impoverished input, children try to discover the rules of their language by resorting to generalizations. When children say, "I goed outside to play," they are unlikely to be echoing a verbal behavior of an adult in their life. This utterance is unique to the children's brain and is their creation. What is remarkable about this sentence is that it points to how children have picked up on a general grammatical rule in the English language: to make a verb in the past tense, we add the sound [d] or [t] to the end. It is only when the children learn about irregular past tense verbs like "went," "came," "ate," etc. that they correct themselves.

### 2.2.2.3. Concept of $L 2$ learning

From the innatist perspective, L2 learners already have access to an innate language organ or Universal Grammar (UG) that helps them learn their L1 because it contains all the
information for language to develop (White, 1989). It also contains all the principles and parameters that make up the grammar of language. Nevertheless, there seem to be two alternatives as to how UG affects L2 learning. First, UG may help a learner to acquire the L2 grammar the same way as it helps the learner acquire the L1. Second, the learner may acquire the L2 grammar only through recourse to the L1 grammar. In this second case, the learner has already acquired, or is in the process of acquiring, the L1 by means of this language organ, so indirectly, UG aids in the process of L2 acquisition (White, 1989, p. 38). Therefore, depending on each particular view of the role of UG in L2 learning, this process could mirror L1 acquisition to a greater or lesser extent.

### 2.2.2.4. Applications to $L 2$ teaching

Krashen's (1982) Input Hypothesis insists that the teacher's input should be just beyond the level of the learners. If a teacher is speaking in forms and vocabulary that are too complex for the learners, the learners will have difficulty incorporating the new information into their established language knowledge. However, if the teacher speaks just above the L2 level of the students-both using the forms and vocabulary familiar to the students as well as sparingly adding new simple forms and vocabulary-the learners are more likely to recognize the new information and to comprehend.

In L2 teaching, the cognitive approach is characterized by the following attributes:
a. Language learning is viewed as rule acquisition, not habit formation.
b. Instruction is often individualized; learners are responsible for their own learning.
c. Grammar must be taught but it can be taught deductively (rules first, practice later) and/or inductively (rules can either be stated after practice or left as implicit
information for the learners to process on their own).
d. Pronunciation is de-emphasized; perfection is viewed as unrealistic and unattainable.
e. Reading and writing are once again as important as listening and speaking.
f. Vocabulary instruction is once again important, especially at intermediate and advanced levels.
g. Errors are viewed as inevitable, to be used constructively in the learning process.
h. The teacher is expected to have good general proficiency in the target language as well as an ability to analyze the target language (Celce-Murcia, 1991, p. 7).

The deductive model (line c) presented by Celce-Murcia corresponds the most with the innatist perspective. If learners appeal to UG in order to acquire their L 2 , teachers do not need to provide an exhaustive amount of input, rather, they provide minimal input that corresponds with the L2 rules that they want the students to acquire. The Presentation, Practice, Production approach (PPP) could be applied using either behaviorist (Evans, 1999) or innatist learning principles depending on the role the teacher assigns to rule learning. A teacher following this approach may for example, present a rule of the L2. Then, the students would engage in several kinds of practice activities, ranging from mechanical ones, such as repetition (similar to the activities used in the Audiolingual method), to freer ones, which would involve further use of the rule, such as filling blanks with the right conjugation. This manipulation follows the idea that "practice leads to mastery" (Evan, 1999, p. 2). Lastly, the students decide how to use the language items and in what contexts, in the production phase. According to the PPP approach, the L2 teacher's task is to break the language into these "language items" and to structure a presentation and practice around this item. It holds "the belief that 'grammar' of the target language can be adequately described, and taught" (Evans, 1999, p. 3). The more that the teacher
relies on students' innate knowledge of UG (e.g., by relating the L2 rule to an existing L1 rule), the more the PPP approach incorporates innatist principles.

### 2.2.3. Cognitivism: Constructivist view

2.2.3.1. General Tenets:

Concurrent with the development of innatism, a constructivist perspective of cognition also developed. In relation to meaning-making and child development, Piaget's (1954) theory emphasized how "Intelligence organizes the world by organizing itself" (p. 354-5). A central concept in his theory is that of schema (Piaget, 1923), which are mental representations or frameworks used to make sense of the world. In his view, when learners encounter new information, they must incorporate that information with their schema, or organization of thinking. If the new information is contrary to the schema, the learners must create a new schema that "accommodates" the information with the past information. The former process of including new information into an existing schema is called assimilation, and the latter process of forming a new schema that accounts for all the information is called accommodation (Piaget, 1954, p. 56).

### 2.2.3.2. Concept of language:

According to constructivism, language is a mental construct or schema. Learners inherently create utterance schema based upon the linguistic input they receive (Tomasello, 2000). The verbal behavior exhibited in speech is an external indicator of the utterance schema which the learners have formed in their mind. As learners progress, they must either assimilate new information into the existing utterance schema or accommodate for the new schema by creating a more advanced utterance schema. To do this, the learners add slots to these utterances
to make them more complex (see figure 1). Such an example of a slot could be "Give $x$ to $y$." After being exposed to more utterances, the learner could modify this utterance schema to "Would you please give $x$ to $y$ ?" Tomasello (2000) points out that initially language learning begins as behaviorist theorists would believe but then rapidly changes:
[T]he main point is that young children begin by imitatively learning specific pieces of language in order to express their communicative intentions, for example [...] As they attempt to comprehend and reproduce the utterances produced by mature speakersalong with the internal constituents of those utterances-they come to discern certain patterns of language use (including patterns of token and type frequency), and these patterns lead them to construct a number of different kinds of (at first very local) linguistic categories and schemas (p. 73).


Figure 1. Constructivist growing of language

### 2.2.3.3. Concept of L2 learning:

From a constructivist perspective, learners need to construct the L2 by slowly accumulating evidence from input and constructing utterance schema based on that input. The learners, proficient in one language already, must either assimilate new language structures into their understanding of their L1, or they must accommodate for the differences by creating new language schema (Macaro, 2003). Learners create constructions which Ellis (2012) describes as "the symbolic units of language relating the defining properties of their morphological, syntactic, and lexical form with particular semantic, pragmatic, and discourse functions" (p. 197). Because additive bilingual learners have already started and continue to make constructions in their L1, the process of L2 acquisition is both construction and reconstruction due to biases of usage in the L1 (Ellis, 2012).

### 2.2.3.4. Applications to L2 teaching:

The ideas of constructivism are best applied to L2 teaching in the inductive approach (Celce-Murcia, 1991) where "rules can either be stated after practice or left as implicit information for the learners to process on their own" (p. 7). With this constructivist, inductive model, instead of teaching grammar "rules", a teacher would present several specific examples and allow the learners to construct patterns from an input-rich environment. The learners would then either incorporate that idea into their already-formed schema or have to (re)create a schema that would accommodate the new information. Teachers can design "consciousness-raising
exercises" which allow for students to focus on particular lacks in their language abilities instead of focusing on a grammar unit chosen by the teacher.

The Task-Based Learning (TBL) approach focuses on a goal-oriented activity in which L2 learners can use the language skills they already possess to work together (Willis, 1996). The stages of the Willis' model of TBL are pre-task, task, planning the report, reporting the task, and language focus. During the first two stages, the students use the language skills they have without worrying about form. In planning the report, the students focus on the form of the language in their report, and while reporting the task, they focus on the verbal language. During these stages, students can actively adjust their language schema based on feedback from their peers and from their teacher. In the final stage, students listen to the same task but completed by fluent speakers. This allows them the opportunity to compare the language of the fluent speakers with their own level of language and to look for grammatical or lexical differences. It is from these differences that students can assimilate or accommodate the new information into their language constructions.

Also, constructivist teaching often occurs in context of other content areas. Kaufman and Brooks (1996) state:

Teachers structure lessons around important concepts and ideas, not facts and skills. Learning occurs in context. Focusing on discrete information or specific skills makes sense only when the student has a context in which to learn the skills and consider the information (p. 234).

This idea of L2 learning in context reflects the notion of assimilation and accommodation: new information (the L2) is best learned when incorporated into existing mental schema or when incorporated with other relevant information into new schema.

### 2.2.4. Sociocultural Theory

2.2.4.1. General Tenets:

The sociocultural theory attributes learning and other mental processes to functions related to social and cultural contexts. According to this theory, students learn partly when they are alone and further when they are put in social interaction with others. (Vygotsky, 1978; Wood, Bruner, \& Ross, 1976). This idea materialized in the notion of a "Zone of Proximal Development" (ZPD), which corresponds to the level of learning students can reach with the social interaction of a more proficient "expert" compared to what they can achieve on their own. In order for learners to bridge this zone, the "expert" needs to "scaffold" information in a way that empowers students "to complete new, more complex task requirements" (Wood et al., 1976, p. 89). Vygotsky (1978) states:

Learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and with his peers... learning is not development; however, properly organized learning results in mental development and sets in motion a variety of developmental processes that would be impossible apart from learning. Thus learning is a necessary and universal aspect of the process of developing culturally organized, specifically human, psychological functions (p. 90).

### 2.2.4.2. Concept of language:

According to this theory, consciousness arises due to mediation with self and others (Lantolf, Thorne, \& Poehner, 2015). Language is a type of mediation which connects abstract thoughts with written and spoken words. It is through this symbolic mediation that people learn to communicate thoughts and ideas with other people in their lives. Lantolf (1994) explains:

Symbolically mediated mental functions are appropriated by children as they carry out specific culturally defined tasks under the guidance (i.e., mediation) of other individuals (e.g., parents, older siblings, teachers, etc.), who initially assume most of the responsibility for carrying out the tasks. [..] Thus, at the outset of ontogenesis, conscious mental activity is distributed and jointly constructed in the dialogic interactions that arise between children and representatives of the culture." (p. 419).

People, especially children, use another type of language called "private speech". This type of language allows children to talk through situations out loud in order to reach higher forms of understanding-whereas, adults usually internalize this process of talking through a problem. In this sense, language is more than just a communicative tool: it is a means to understanding which is situated in a language-rich culture.

### 2.2.4.3. Concept of L2 learning:

Sociocultural theory assumes that the learning of an L2 occurs in interaction between the learner and the "expert" whereas cognitive theories credit the language learning as an internal process based on the input received (Lightbrown \& Spada, 2000). In the language learning setting, learners need to interact with their peers or teacher to construct meaning about what they are learning. Learners cannot easily learn a language when they are trying to memorize lists of phrases or words, but instead, learners must use and construct meaningful sentences and engage with others to communicate these ideas. In the Zone of Proximal Development, learners engage in linguistic interaction or collaboration with a speaker who is at a more advanced level of language performance. The learners can then progress to a higher level than they could have done alone (Donato, 1994).

### 2.2.4.4. Applications to $L 2$ teaching:

Lightbrown and Spada (2000) emphasize the important role of the teacher in an L2 learning environment: "to create supportive conditions for the L2 learner to comprehend and produce language (for example, repetition, simplification, and modeling)" (p. 44). For language teachers who have studied their language of instruction for much longer than their students and who have reached proficiency in that language, the ZPD implies that the teachers need to purposefully limit their word choice and verb structures when instructing students. The language of the teachers should be just above the level of what the students' can create by themselves, but not so elevated that the students could not understand even with the teachers' help.

Further still, in order to foster peer interactions that create learning, language teachers need to construct situations in which students interact with other students at a slightly higher level of performance.

Of the L2 approaches addressed by Celce-Murcia (1991), the Communicative approach encapsulates many of the main tenets of the socio-cultural perspective on language learning. Celce-Murcia (1991) defines the approach with the following attributes:
a. It is assumed that the goal of language teaching is learner ability to communicate in the target language.
b. It is assumed that the content of a language course will include semantic notions and social functions, not just linguistic structures.
c. Students regularly work in groups or pairs to transfer (and, if necessary, negotiate) meaning in situations in which one person has information that the other(s) lack(s).
d. Students often engage in role play or dramatization to adjust their use of the target language to different social contexts.
e. Classroom materials and activities are often authentic to reflect real-life situations and demands.
f. Skills are integrated from the beginning; a given activity might involve reading, speaking, listening, and also writing (this assumes the learners are educated and literate).
g. The teacher's role is primarily to facilitate communication and only secondarily to correct errors.
h. The teacher should be able to use the target language fluently and appropriately (p. 8).

### 2.2.5. Section Summary

In this section, I reviewed theories of learning from four major perspectives: behaviorist, cognitive innatist, cognitive constructivist, and sociocultural. The latter two perspectives hold that language learners are actively constructing meaning. Also, the sociocultural theory implies that this language learning will not emerge isolated from their everyday lives, but rather that it needs to be situated in a sociocultural context. L2s, from this perspective, need to be linked with interaction in the language between the students' peers, teacher, and the culture of the target language.

## Chapter 3: Present Study

### 3.1. Motivation and Research questions

In my experience in different elementary schools in Montana, I have observed that teachers are becoming increasingly aware of the importance of L2 learning or of its benefits. However, due to a lack of time or a lack of L2 training as well as training in L2 teaching, these teachers often attempt to add only a language component into their classrooms. This means that these teachers often look for online resources to help them accomplish this. Given teachers' limited pedagogical knowledge of L2 learning/teaching, the availability of good quality materials that are appropriate for the children's age and abilities and that provide guidance as to classroom implementation becomes critical.

These observations and this anecdotal evidence led me to ask several questions. I will focus on three of these questions in the next section (3.2):

1. How many Elementary School teachers in Montana have added a L2 component to their instruction?
2. How likely are those teachers to turn to the Internet for materials and resources in order to add an L2 component to their instruction?
3. What do elementary school teachers expect from those online materials?
4. What L 2 materials are available online and how can they be used?
5. What should online L2 materials/resources be like based on the principles and best practices in the field of L2 teaching as established by the American Council on the Teaching of Foreign Languages (ACTFL)?

In order to answer Questions 1-3, I administered a survey to K-2 teachers across the state of Montana (Section 3.2). Question 4 was addressed through a review of available online resources for L2 teaching (Section 3.3). Finally, this study ends by addressing Question 5 through a review of important principles of L2 teaching and the presentation of proposed resources to teach foreign languages in $\mathrm{K}-2$ in Montana (Section 4.3).

### 3.2. State of the Art in Montana Elementary Schools: A survey study

### 3.2.1. Objectives of Survey:

I conducted this survey study in order to find out the extent to which Montana K-2 teachers value world language learning in their classroom by gathering information about whether teachers have added an L2 component to their instruction at some point. Additionally, the survey sought to find out how valuable those teachers find online resources for L2 instruction to be and what an ideal online resource would be like (see Questions 1-3 above).

### 3.2.2. Materials:

A survey was created in Google forms ${ }^{\mathrm{TM}}$. The survey, called "World Language Inquiry Form" consisted of the six items listed below (or see Appendix A for a screenshot of the survey).
(1) School where you teach: $\qquad$
(2) Grade you teach: $\qquad$
(3) Have you ever added a world language component to any of your lessons/units?: Yes / No
(4) Would you be interested in a FREE ONLINE, INTERACTIVE RESOURCE to incorporate a world language into the content areas you currently teach with minimum class time involvement (e.g. 15-min. sessions weekly or monthly)? Yes/No
(5) If you were to take 15 min . of your class time, what would the resource need to have?
(6) About which world language(s) would you like this to be? $\qquad$

Items 1 and 2 sought to provide some background information on the participants. School was added in order to better describe which area/s of the state ended up being represented in the
sample. Grade was included to make sure I only include K-2 teachers. This decision was motivated by the fact that teachers in these grades currently have a greater focus on language arts and mathematics than teachers of other grades (who place a lot of emphasis on social studies and sciences, as well). Item 3 of the survey sought to answer my research question 1, namely how many Elementary School teachers have already engaged in some L2 teaching in their classes. Item 4 asked whether teachers would be interested in some online program/online materials to aid in adding an L2 component to their teaching. Finally, items 5-6 of the survey were openended and sought to elicit keywords that would reveal teachers' expectations of online materials for L2 teaching and thus help me answer my research question 2 (item 5) and information about which world language teachers were mostly interested in incorporating to their instruction (item 6).

### 3.2.3. Procedure:

I sent the survey via email to K-2 teachers in Montana. The email addresses were obtained from elementary school websites primarily in Missoula (and Missoula County) but also in St. Regis, Great Falls, and Helena. The survey was sent to the institutional email addresses of K-2 teachers only if they appeared in the school's website. If the school website did not identify the teacher as K-2, the survey was not sent. As compensation for their time, the teachers were entered into a raffle to win a $\$ 50$ Amazon gift card. The email was sent out in the first week of May of 2016 before the summer break began, and teachers were given three weeks to complete the survey.

### 3.2.4. Participants:

I sent the survey in an email to 205 teachers in total, most of them from Missoula County. Based on their responses to Item 1 ("School where you teach"), we know that in Missoula County, 102 were sent back from the Missoula County Public School district, 27 from the Hellgate School District, 10 from the Target Range School District, 6 from the Bonner School District, 11 from the Lolo School District, 2 from the Clinton School District, and 4 from DeSmet School. All the schools in these districts provided clear contact information for their teachers as well as the teaching positions they held.

Outside of Missoula County, 4 teachers from St. Regis in Mineral County were sent the survey as well as 6 from Broadwater School in Helena Public Schools. Broadwater Elementary School was the only elementary school in Helena which specified which teachers were teaching grades K-2. The second largest pool of participants came from the Great Falls Public School District in Cascade County where 33 teachers were emailed. Only four of the schools in Great Falls clearly provided information on how to email their K-2 teachers. In all, $80 \%$ of the surveys were sent to teachers in Missoula County and the other 20\% were sent to teachers in Cascade County (16\%), Lewis and Clark County (3\%), and Mineral County (1\%). The teachers were early elementary educators in kindergarten, first grade, or second grade. K-2 teachers were the primary focus, but Title IX, Special Education, and mixed grade teachers were included if they worked specifically with students in the target age range.

Forty-two teachers responded in the given time limit. The data from three teachers had to be excluded from the quantitative analysis because they were not K-2 teachers specifically. Based on participants' answers to Item 2 ("Grade you teach"), of the 39 entered into the analysis, there were 12 kindergarten teachers, 12 second grade teachers, and 15 first grade teachers (see Figure 2). As it can be seen, the sample was almost homogeneously distributed across grades.


Figure 2. Chart of Grades Taught by Survey Participants

### 3.2.5. Results:

More than half the participants self-reported that they had not previously incorporated world languages into their classroom (see Figure 3). The teachers who did already try to include world languages were at the following schools: Hellgate Elementary, Lowell School, Paxson Elementary, Russell Elementary, Lolo Elementary, Target Range Elementary, St. Regis Elementary, Loy Elementary, and Bonner School. Of these nine schools, only Hellgate, Paxson,

Target Range, St. Regis, and Bonner School have trained world language teachers listed on their 2016-2017 staff roster. Yet, the schools that do have language teachers do not necessarily have language teachers focused on elementary students: the language teachers at Hellgate, Target Range, St. Regis, and Bonner school focus their instruction primarily on middle school students-high school students in the case of St. Regis. Overall, only one of the schools offered support through staffing to the teacher who was already trying to incorporate world language.


Figure 3. Teachers Incorporating World Languages Already Incorporating L2s into Instruction

This number is significant because it demonstrates that roughly $44 \%$ of the teachers who responded not only recognize the importance of learning an L2 but are trying to incorporate it into their teaching. Also, most of these teachers are doing this without specifically being trained in L2 pedagogy and instruction.

Although 56 \% of the teachers reported not having tried to incorporate an L2 into their teaching, almost all of them reported that they would be interested in a free online, interactive L2 resource. 37 out of 39 teachers responded affirmatively when asked about such a resource (see figure 4).


Figure 4. Teachers' Response to Desire for a New Resource
This data indicates that many K-2 teachers are interested in incorporating L2s in the classroom. Yet, when elementary teachers want to incorporate a world language into their classroom, they must rely on resources that are not provided by the administration or hired language teachers as demonstrated by the number of participants from schools without elementary L2 teachers. They must therefore rely on other resources that they find on their own. I will discuss what teachers are looking for in programs on the following page.

When asked: "If you were to take 15 minutes of your class time, what would the resource need to have?" (Item 5) the respondents could either answer with a couple words or a paragraph.

In Figure 5, I have grouped their responses into categories based on keywords and charted them by the frequency which they were mentioned by different respondents.


Figure 5. Aspects that Teachers Requested
The aspects most mentioned by the respondents (mentioned $20 \%$ or more) were level of interaction, ease-of use, and age relevancy. $37 \%$ of the respondents $(15 / 41)^{4}$ said they would need the resource to be "interactive," "engaging," "fun," or "lively. 27\% (11/41) cited the idea of simplicity using words such as "simple," "ready to roll," or "easy to use". $22 \%$ (9/41) mentioned the idea of age relevancy with words like "age appropriate," "relevant," "kid-friendly," or "appropriate for [grade]".

[^3]The next most mentioned aspects (cited more than $10 \%$ but less than 20\%) were physical elements, prepared lessons, visual elements, connections, and auditory elements. $19 \%$ of the respondents (8/41) specifically stated that the resources would have to include a physical element with comments such as a " piece for the students to get involved, up and moving" or "incorporate a variety of ways that kiddos learn using music, dance, movement, etc." $17 \%(7 / 41)$ asked for the resources to come with some sort of "ready-to-teach lessons," or "lesson plan". 17\% (7/41) requested that the resources include visual elements such as "videos," "pictures," "written translations," or "posters". $17 \%$ (7/41) of the respondents mentioned the integration of the resources with outside content such as "language in context," "cultural background," or "spans multiple subjects". Almost as important as the visual element, the auditory element was brought up by $12 \%(5 / 41)$ of the respondents with key words such as "music," or "voice prompted".

The aspects that were mentioned with the lowest frequency (cited more than $2 \%$ but less than $10 \%$ of the time) were containing an element that teaches teachers, being standards-based, including basic daily vocabulary, and including an online or technical component. $9 \%$ of the participants (4/41) asked that the resources would simultaneously teach the teacher and the students with phrases such as "teaching either the teacher, or the teacher and the students the language". Another $9 \%$ (4/41) requested that the resources be linked to standards specifically those of Montana Common Core. $9 \%$ also requested that the resources be broken into smaller vocabulary components using key phrases such as "daily activities," "common questions/phrases," or "thematic units". Finally, another 9\% (4/41) specifically stated that there needs to be an online or technical component with words such as "website resources," "interactive technology," or "technology piece". Only one respondent stated that the L2 resource needs to have "a component for practice and assessment".

Overall, the results from this item of the survey seem to indicate that teachers would like a world language resource which is interactive physically, visually, and auditorily, is easy for the teachers to use, is relevant to their students' age group, and is connected to other content areas and standards.


Figure 6. Languages Suggested by Teachers
The last question on the survey (Item 6) asked the teachers, "About which world language(s) would you like this [resource] to be?" 19 of the 41 respondents specifically suggested one language, and the exact same number suggested "Any" (7/41) or multiple languages (12/41). 2 of the respondents marked "unsure" or "no preference". When a language was specified, I organized them into groups and charted them by frequency (see Figure 6). Languages of European origin (Spanish, French, Portuguese, Italian, Russian, and German) were suggested the most frequently by participants. Other languages not included in this category were [American] Sign Language, Japanese, Mandarin Chinese, and Arabic.

When broken up into specific languages among the European languages, Spanish was mentioned by $60 \%$ of these participants with French mentioned by $23 \%$. Italian, German, Russian, and Portuguese appeared less than $6 \%$ of the time (see Figure 7).


- Spanish ■ French - Italian a German $\quad$ Russian $\approx$ Portuguese

Figure 7. Incidence of European Language(s) Suggested by Teachers
Overall, when asked which world language or languages should be included in a free online resource, most teachers suggested a European language with preference first for Spanish and then for French.

### 3.3. Review of L2 Teaching Materials Available

### 3.3.1. Objective of Review:

I conducted this review to find out what L2 teaching materials were available to elementary school teachers (K-5) who did not speak the L2 themselves. I also wanted to find out what materials were available for free. However, after the initial review of the materials, I decided to focus on the ones that were available for K-2 teachers. This section seeks to answer research question 4 discussed at the beginning of this chapter (What L2 materials are available online and how can they be used?).

### 3.3.2. Materials and Procedures:

I used Google ${ }^{\mathrm{TM}}$ as my primary search engine when researching what kind of L2 materials were available in March 2016. For all my searches, I only used teaching materials that provided explanations in English—assuming this is what a teacher who spoke no other L2 would desire. Initially, my search was limited to materials for French. I used the key search words "learn French for free," "French for kids," "French programs for kids," "French resources for teaching children," "Elementary French Programs," and several variations with the same key words. If a resource was targeted for use by L2 teachers, I did not include this in the results. I also excluded any materials that did not have a sense of being a program-that is to say that I looked for materials that had lessons that built on or added to previous lessons; I excluded materials that appeared to be isolated learning videos.

I later expanded the search for Spanish materials as well and obtained the same principal materials (as many of the materials that I had chosen were also designed to teach several other L2s). Once materials were found, I reviewed them based on the following criteria:

1. how appropriate they were for a K-2 audience
2. how much they cost
3. if they contained online resources associated with the materials
4. if they had an interactive component or an engaging nature
5. if they were targeted for those who had never learned a L2 before
6. how much content was communicated through the L2
7. if they prompted communication in the L 2 in the learning setting

From my own experience in the classroom, I had already heard these criteria communicated to me about available materials. The survey results from the teachers (see the former section) only confirmed the need for them. Criteria numbers 6 and 7 came from my own training as an L2 teacher. For an L2 teacher, the goal is often to stay in the L2 as much as possible and not to rely solely on translation between the L1 and L2. Also, I looked for materials that prompted communication based on the sociocultural approach to language learning previously discussed (Section 1 Part 2).

I compiled my review of the materials in Table 1. Although there were several materials available for free, not all of them targeted K-2 students. To determine if a resource was relevant for K-2 aged children, I used information about the targeted age group provided by the companies' websites. I also looked at how much of the L2 was in written form. K-2 children are still working on mastering the written form of their L1, so if half or more of the language in the materials was written, I did not consider it to be K-2 appropriate.

To determine whether materials could be classified as online materials, they needed to have a significant component or resource that was downloadable in a digital form or available directly in an online form. Materials comprising only physical components such as DVDs and
printed lesson plans were not considered online. The objective of this criterion is accessibility for teachers and for freeing up classroom space from physical materials.

To determine if material could be classified as interactive, the material in question needed to elicit a response from the learner. This may include games or a site with objects to click for audio output. I did not include flashcards as interactive on their own, and this does not include materials that are only videos for students to watch.

Lastly, to determine if the materials prompted communication in the L2 in the learning setting (be it at home or in the classroom), I looked specifically for questions being taught. If materials only taught learners how to answer questions, but did not encourage students to ask questions in the L2, I did not consider them as having this key component. I included this component because in a K-2 classroom, students can interact with their peers in the L2 which is not a possibility when using these materials individually.

### 3.3.3. Limitations:

My review of the materials is limited by the access to the full materials. The reviews that I make are based entirely on partial samples that I could obtain (for any materials that were not free) and on information provided on the website of the companies that produce the materials. For any material that was free, I set up an account for myself and explored it as if I were a K-2 teacher who wanted to use it in class.

### 3.3.4. Cursory Review:

There are several online materials available for L2 learning. While some are more traditional (e.g. sets of flash cards with an accompanying audio files, printable worksheets), others allow learners to interact directly with the content. Some of these materials are designed like a single player game in which learners individually try to meet their own goals. Other materials have been designed for (or entertain the possibility of) classroom use, as they include suggested activities for the classroom teacher (e.g. Little Pim) or they allow teachers to track the progress of their students (e.g. DuoLingo). The available materials also target different audiences in terms of the age of the learners/users. Some materials, such as Fluenz, are completely free but are targeted to learners in middle school and up. Other programs, such as Little Pim, are targeted at pre-school age and kindergarten children only. Many others could still be used for a wide range of learners depending on how well they read and write in their L1. Of all the materials reviewed here, there are few designed for classroom use with K-2 learners that are free. The rest of this section will take a closer look at some of the materials available (both for free and not for free) for K-2 learners and at what kind of limitations they might present for classroom use. Table 1 shows the cursory view of the materials that I reviewed ${ }^{5}$. In the following section, I will start with a more detailed review of Busy Beavers, Little Pim, and Duolingo because these materials met at least half of the criteria I set for this review. I will end with a focus on Muzzy, and DinoLingo because these two materials both seemed the most age appropriate for K-2 students and met at least four out of seven of my review criteria.

[^4]| Resource | K-2 | Free | Online | Interactive | Novice Level | $\begin{aligned} & >50 \% \\ & \text { in L2 } \end{aligned}$ | Prompts Peer <br> Interaction |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Easy Peasy French for Kids | + | - | + | - | + | - | - |
| Babbel | - | + | + | + | + | - | - |
| Fluenz | - | - | + | + | + | - | - |
| Busy Beavers | + | - | - | - | + | + | - |
| Little Pim | - | - | - | - | + | + | - |
| DuoLingo | - | + | + | + | + | - | - |
| Muzzy | + | - | - | + | + | + | - |
| DinoLingo | + | - | + | + | + | + | - |
| $+=$ Yes $\quad-=$ No |  |  |  |  |  |  |  |

Table 1. Summary of select materials available for L2 learning and their characteristics

### 3.3.5. Detailed Review:

Busy Beavers (http://busybeavers.com) is described as "a fun and unique method of learning the English language using interactive media" (as stated in their home webpage). It is targeted to homeschool parents, preschool and kindergarten teachers, ESL teachers, and parents of children with disabilities. However, it is primarily targeted at very young children as it states that "Toddlers, preschoolers and students from all over the world love our catchy songs, colorful videos and learning materials" and it contains bright images and a design styled to be appealing to that age group. Foreign language learning videos are advertised as a "big bonus" to the program and consist of 30 -minute DVDs, but there is no special classroom version or addition.

The language component can be purchased online for a minimum rate (approximately $\$ 20$ per DVD). The languages offered as of March 2016 were French, Chinese, and Korean. In this study, I reviewed portions of the French language videos available on their website ${ }^{6}$ and on Youtube ${ }^{7}$. The video basically teaches a series of words or phrases and then asks questions. Each phrase is associated with a specific image. Assuming all the videos in Busy Beavers to be like the one reviewed here, Busy Beavers puts the vocabulary into a conversational context, but only after a long string of new vocabulary. With these videos alone, it does not tell teachers what they could do if they wanted to use this program in a classroom context; therefore, the whole class (teacher included) is presumably just sitting and echoing. According to the communicative approach, language learning needs to be situated in a social, communicative context, such as interacting with peers.

Little Pim (https://www.littlepim.com/) is advertised as an "Entertainment Immersion Method" which captures the learners' attention and engages them in language. It is targeted at parents and teachers of children under 6 years of age. It is "designed to promote language learning for children from ages 0-6-the time when their brains are hard-wired to learn up to 3 languages with ease". The whimsical little panda named Pim and the videos portraying other children attract the attention of small children. The complete set comes with DVDs, flash cards, books, a music album, a plush animal, and a poster. There are also interactive apps available for Apple and android devices. Additionally, there is a teacher's kit available which comes with a Teacher's Guide including lesson plans (in English) and worksheets. The least expensive kits include only one volume of videos, the teacher's guide, the plush panda, and the poster. The

[^5]teacher learns the same phrases and vocabulary as the students and follows afterwards with other questions and activities. Many of the videos are available for free online ${ }^{8}$ but the teaching kit has a more significant, but one-time cost (between $\$ 98$ and $\$ 219$ depending on the language selected). The teacher kits are available for Spanish, French, Mandarin, Japanese, Hebrew, and Portuguese.

Although the Little Pim program "immerses" the learner in the language through video, audio, and text, it does not encourage the learner to ask questions and interact with other people besides the teacher in the language as encouraged by the communicative approach. The lessons in the teacher's kit have the teacher facilitating some practice of the language in the classroom, but it is still the teacher who asks all the questions.

The Duolingo program (https://www.schools.duolingo.com) is an online resource to teach individual learners a language. The Duolingo Schools program is a version of the original program which provides feedback/support to the teacher. The program aims at providing a "personalized education," "making learning fun," and making language "universally accessible." The creators assert that they "made Duolingo so fun that people would prefer picking up new skills over playing a game", a statement which highlights the ludic approach of this program. It can be used by people of any age, but it is largely aimed at language-proficient speakers and writers. To use this resource, a person must be proficient in at least the L1. With the classroom version, the teacher can assign tasks which take the learner through a series of translations to win "points" to meet a daily "goal"-making it more like a game than a grammar lesson". Unlike the

[^6]materials previously listed, this program is completely free. Currently, there are 19 languages for the classroom version.

Although this resource is great for teaching learners how to construct sentences in other languages, it does not teach learners the skills necessary to have a conversation. Many of the practice sentences although they are grammatically correct would not be used in a real-life situation i.e. "The horse is in the fridge" and "The man drinks the wine before the cat". According to the sociocultural theory, the language learning needs to be relevant to the students' lives if they are to learn and retain it. Also, there are few considerations for beginning language learners, especially those who are just learning to type. Because of this, if the learner types in more than one word incorrectly, the program sees it as mistranslated. Also, except for a few pictures with vocabulary words at the beginning of the sections, this resource is almost entirely written and translation-based from one language to another, isolating meaning from context.

### 3.3.5. Focused Review:

Muzzy (http://www.early-advantage.com/) is designed with "animated stories and engaging music [that] surround the viewer with a second language". Unlike many of the other programs, it focuses on the functional use of language through "spiraling" ${ }^{10}$. Their website points out how "words and concepts are first introduced and then introduced again and again in many new contexts". It is geared toward children from toddlers to teenagers, but the animations appear more targeted toward K-5 children. It is available as a set for use at home or for use in the classroom by teachers. The classroom editions include 3 Story DVDS, 2 Vocabulary Builder

The testimonials appear to be from trained language teachers who, although they already teach a language, use DuoLingo to reinforce language content they cover in class.).
${ }^{10}$ One of the story videos is available here: https://www.muzzy123.com/learn-spanish-kids/

DVDs, an audio CD, and a curriculum binder with lessons and activities. The classroom edition is available in Spanish, French, Italian, Chinese, and English (ESL). However, the "complete elementary program" is only available for Spanish and French and costs $\$ 449.95$. For an additional access to online games relating to the content, there is also a $\$ 9.95$ monthly fee.

DinoLingo ${ }^{11}$ (http://dinolingo.com/) is designed as an immersive experience that "incorporates play and storytelling" into language learning. It teaches the learner a language through animated videos and songs and then it "employs an interactive teaching method which encourages [the] child to immerse themsel[f] in the language learning process, right away." It is aimed at learners up to 8 years of age and is advertised for use at home and use at school. The least expensive package grants the user access to online lessons, interactive videos ${ }^{12}$, games, and worksheets. The school version does not, however, include any lesson plans or teacher's instruction manual. There are materials available for over 50 languages, but the least expensive package is a yearly subscription (\$99.95 a year).

Of the materials available that I reviewed, the most comprehensive for K-2 learners are Muzzy and Dino Lingo. Unlike many of the other resources, both materials are "immersive," interactive, and more communication- and learner-oriented. Both use the L2 almost exclusively, hence their reference to "immersion". Earlier in this section, I defined interactive materials as those that elicit a response from the learner. This may include games or a site with objects to click for audio output. By communication-oriented, I mean that they do not simply present a list

[^7]of vocabulary, but introduce words in a related context. Also, both regularly pause to ask clarifying questions to the learner, which makes them learner-oriented.

### 3.3.6. Summation:

Even though the target age and the costs of the programs are very different, there is a major commonality among them: few of them really seem geared toward a whole elementary classroom, especially a K-2 classroom. Programs geared toward elementary classrooms usually prompt the teacher to do certain tasks and most importantly, prompt the students to interact with each other. This interaction is the great strength of the elementary education setting; it is an opportunity to help and learn from each other. When researching the different programs available for teachers who do not already speak an L2, it became apparent that while the programs available do encourage the learners to speak, they do not encourage the learners to speak to each other. Also, some of the materials appear to ask questions with the apparent intention that the learner will answer, but they do not encourage the learner to ask questions in the L2.

## Chapter 4: A Proposal for New Free Online Resources for L2 Teaching

In the first part of this chapter, I will discuss some principles of language teaching as established by the American Council on the Teaching of Foreign Languages (ACTFL) and by best practices in language teaching that will serve as general guidelines in the design of online materials. In the second part of this chapter, I will propose an organization of the content for new resources designed to add an L2 component to Montana K-2 education.

### 4.1. Principles of ACTFL

The American Council on the Teaching of Foreign Languages (ACTFL) in collaboration with 16 other national language organizations (including the Modern Language Association and the National Council of Less Commonly Taught Languages) created the "World-Readiness Standards for Learning Languages". These standards focus on the following aspects of language teaching: Communication, Cultures, Connections, Comparisons, and Communities (ACTFL, n.d.). These standards are meant to be "a roadmap to guide learners to develop competence to communicate effectively and interact with cultural understanding" (ACTFL, n.d.). They are a revision of the earlier standards (Standards for Foreign Language Learning) based on a decade of implementation in classrooms nationwide. The new standards focus on literacy development, real-world application, and $21^{\text {st }}$ century skills. With a scope from pre-K to secondary education, these standards guide L2 teachers on how to prepare their learners to not only be college and career-ready but also world-ready. The goal is for students to be "prepared to add the necessary knowledge, skills, and dispositions to their résumés for entering postsecondary study or a career" (ACTFL, n.d.). In the following section, I will give a brief overview of the five principle areas of these standards.

## Communication:

This implies all forms of communication whether written, signed, or spoken. People do not just communicate information but feelings and opinions as well. The goal for L 2 students is to learn how to use the L2 for many different purposes and in a variety of situations. Learners need to interpret what they hear or see as well as communicate their own thoughts, feelings, and opinions.

## Cultures:

The goal for L2 students is to think critically about differences and similarities between their own culture(s) and the one(s) they are studying. This includes reflecting on cultural practices, cultural product, and cultural perspectives. Ideally, the goal is for students to do this in the L2.

## Connections:

This area is focused on connecting to non-language-based subjects such as mathematics, social studies, and science. L2 students are encouraged to build and reinforce learning from other content areas in the L2. This could imply that K-2 students review concepts they already learned in the L1 or that they learn for the first time through the L 2 .

## Comparisons:

The goal of this area is to have L2 students reflect on the nature of their language and culture in relation with those of the L2. The students are encouraged to seek out differences as well as similarities between the languages and reflect upon them. Also, learners are encouraged to investigate their culture(s) and compare it/them with the culture(s) of the L2. The learners should investigate how language reflects the culture in the L1 and L2.

## Communities:

This area focuses on communication between the L2 students and 1) their peers, 2) their community, and 3) the world. The learners are encouraged to use the language outside of class time for their own enjoyment and enrichment. Lifelong language learners set goals for using the language outside of a classroom.


Figure 7. Visual representation of the Five Cs as depicted in ACTFL's Website ${ }^{13}$.

Several of the methods of L2 teaching have provided evidence of best practices in L2 instruction, and so, they can also illuminate the design of online materials. Below I mention some of the elements that could be incorporated into these free online materials based on wellknown methods.

### 4.2. Best Practices in L2 Methodology

As psychological theories have developed over the last century, approaches to teaching L2s have changed as well. Celce-Murcia (1991) discusses how there are several specific teaching methods developed by a specific person for each of these approaches. These methods have their own procedures and materials, and teachers who would like to use these methods require special

[^8]training. Richards \& Rodgers (2014) and Diller (1978) give an overview of the many different methods and how they differ. Previously, I have discussed which approaches correspond with which theories of psychology. In this section, I will briefly summarize the components of different methods that the new resources will include.

Total Physical Response (TPR) incorporates physical gestures and movement. It also allows for L2 learners to speak in the L2 when they feel comfortable. The resources will not force learners to ask a question or answer one in the L2 when they are not yet comfortable. Students can either reply to or ask the questions in the L1 flowing more freely between both languages.

The Natural Approach focuses more on communication skills than speaking the L2 with perfect form and pronunciation. It also includes little or no direct grammar instruction. The resources will aim at motivating learners to interact, but will not focus on the grammar or pronunciation of that interaction.

Given the move in the teaching profession toward a post-method era, few, if any, teachers adhere strictly to one teaching methodology-something that I noticed firsthand in my teaching. Teachers often take techniques from different methods that they find effective, and they discuss techniques amongst their colleagues that they find innovative and efficient. Nilufer Can (2012) echoes this idea in her presentation to English as a Second Language (ESL) teachers. She emphasizes teachers are not just practitioners of teaching but also researchers in the field. Teachers can recognize the idealistic shortcomings of methods and adjust them to meet real needs. Also, the changing and incorporation of different methods highlight educators' understanding of these methods and their understanding of the limitations of the method. In her presentation, she states:

Educators should make use of their experiences and knowledge and share them [...] In doing so, they should be able to justify how they construct their own methods by referring to the macro-strategic and three-dimensional frameworks as general and flexible guidelines. These frameworks present principles that are applicable and adaptable in every context and guide both experienced and inexperienced teachers for professional development both as a researcher and practitioner (Can, 2012, p. 10).

The resource that I am proposing, which seeks to help non-L2 professionals add a language component in their elementary instruction, should incorporate elements of existing L2 teaching methods that apply to this setting, that apply to young elementary students, and that help achieve the goal of sensitizing K-2 learners to other languages and cultures.

### 4.3. Proposal for New Resource

Without need for much explaining, the most ideal scenario for elementary students to learn an L2 is with a trained educator who is competent in the L2 and L2 pedagogy. However, given the current state of staffing positions in elementary schools in Montana, teachers make do without said trained language instructors (as revealed by the survey study I presented in Chapter 3). There is still much that elementary teachers can do with their classroom in order to introduce L2s. This section will start by articulating the objectives of a proposed resource to add a language component into the elementary school classroom. These objectives will clarify what the resource aims to accomplish with the students. Then this section will propose an organization of the content for the resource.

### 4.3.1. Main Objective of the New Resource

$>$ Primary Objective- this resource will sensitize K-2 learners to other languages and cultures.

### 4.3.2. Specific Objectives

| Objective: | In order to accomplish this, this resource <br> could... |
| :--- | :--- |
| Encourage communication and interaction <br> amongst the K-2 learners. <br> Raise cultural understanding | -teach questions and not just responses |
| Connect to other content areas in the Montana |  |
| Common Core Standards and Montana Indian |  |
| Education for All | -include specific cultural lessons that focus <br> on the differences and similarities between <br> the culture(s) |
| Establiss a greater L2 community that feature appropriate these standards |  |


| Be easily accessible and available | -be completely free and online so teachers <br> could access it without additional personal <br> cost |
| :--- | :--- |
| Be relevant to K-2 | -focus on spoken language and images to <br> convey meaning and limit the use of written <br> language <br> -focus on phrases in the $1^{\text {st }}$ and $2^{\text {nd }}$ person as <br> K-2 children are most often in the <br> egocentric phase of development |
| Instruct L2-Novice Teachers | -contain one lesson per unit which teaches <br> classroom directions in the L2 that the <br> teacher could use anytime |

Table 2: Specific objectives to be followed during the design of the resource and how it could meet them

### 4.3.3. Organization of Content for New Resource

Taking into consideration the feedback received from teachers, the new resource will include three units. The first unit will be in Spanish and feature hispanophone culture, the second will be in French and feature francophone culture, and the last unit will focus on non-European languages and Montana Amerindian cultures. Each unit will be comprised of four weeks, and each week will have three 15-minute lessons. Two of these lessons will be in the target language (the L2 being instructed) and the third lesson focused on culture will be in English. The cultural section will be mostly in English and feature some L2 words. To make the units interactive, there will be a brief video or song with each lesson. These videos will present the vocabulary and questions to be practiced in class. The videos will encourage the teacher to pause to allow the students the opportunity to interact with each other by asking one another the practice questions and responding. All three units are outlined in figure 8.


Figure 8: Summarized structure of the proposed resource

### 4.3.3.1. Unit 1: Spanish and Hispanophone Culture

The first week of this unit will have three lessons that focus on greetings, introductions, and goodbyes. The first lesson with present the key phrases "Hello," "What's your name?" "My name is..." and "Good Bye". The second lesson will present the key phrases "How are you?" "I'm good," "I'm OK," and "I'm not good/ I'm bad". The third lesson will discuss how different hispanophone people around the world greet each other with their words and gestures (Ex:
handshakes, kissing, waving, etc.). This lesson will also briefly show how Spanish is written and read from left-to-right.

The second week of this unit will have three lessons that focus on numbers and food.
The first lesson will present the numbers 1-10 and the key phrase "How many are there?" The
second lesson will present the numbers 11-20 and three common foods like bananas, apples, and oranges. The third lesson will discuss how different hispanophone people around the world count on their hands (is it thumbs first or fingers first) and showcase some fruits and vegetables not so common in Montana.

The third week of this unit will have three lessons that focus on shapes. The first lesson will present the vocabulary for squares, circles, and triangles along with the key phrases "What is this?" and "This is a..." The second lesson will present the vocabulary for cubes, spheres, and pyramids and the key phrases "What is that?" and "That is a..." The third lesson will discuss how different shapes appear in the artwork and cultural artifacts of hispanophone culture around the world (like the Gaudi sculptures in Barcelona).

The fourth week of this unit will have three lessons that focus on nature and animals. The first lesson will present the vocabulary of a few plants such as trees, flowers, and grass along with the key phrases "Where is ...?" "here," and "there". This lesson will also review the earlier phrase "How many are there?" The second lesson will present the vocabulary of common household animals such as dogs, cats, and birds along with the key phrases "Do you have a...?" "I do," and "I don't". The third lesson will discuss different flora and fauna that are more common in certain hispanophone countries but atypical for Montana as well as flora and fauna that both Montana and hispanophone countries share.

There will be one more section of this unit that will focus on classroom directions in Spanish. This section is purely for the teacher's education in the language and can be completed anytime during the unit. The key phrases that it will present are ones which the teacher uses to ask the children to do things such as "please sit down," "please line up," "please pull out your books" etc.

### 4.3.3.2. Unit 2: French and Francophone Culture

This unit will closely resemble the first unit but with a language focus on French and a cultural focus on cultures of the francophone world. Like Unit 1 Week 1, the first week of this unit will have three lessons that focus on greetings, introductions, and goodbyes. The first lesson will present the key phrases "Hello," "What's your name?" "My name is..." and "Good Bye". The second lesson will present the key phrases "How are you?" "I'm good," "I'm OK," and "I'm not good/ I'm bad'". The third lesson will be different from that of the first week of Unit 1 in that it will discuss how different francophone people around the world greet each other in a formal and an informal way (such as the use of vous for formal and $t u$ for informal). This lesson will also briefly show how French is written and read from left to right and from top to bottom.

Just like the Unit 1 Week 2, the second week of this unit will have three lessons that focus on numbers and food. The first lesson will present the numbers 1-10 and the key phrase "How many are there?" The second lesson will present the numbers 11-20 and three common foods like bananas, apples, and oranges. The third lesson will discuss how numbers are written in France and showcase French and francophone dishes not so common in Montana.

The third week of this unit will have three lessons that focus on colors. The first lesson will present the vocabulary for the primary colors blue, yellow, and red along with the key phrases "What color is this?" and "This is ..." The second lesson will present the vocabulary for the secondary colors orange, green, and violet and the key phrases "What is your favorite color?" and "I like...". The third lesson will discuss how different colors appear in the artwork and cultural artifacts of francophone culture around the world (like Monet's paintings).

The fourth week of this unit will have three lessons that focus on leisure and activities. The first lesson with present the vocabulary of a few activities such as running, dancing, and playing along with the key phrases "Do you like ...?" This lesson will also review the earlier phrase "I like..." The second lesson will present the vocabulary of the key phrases "What are you doing?" "I'm running," "I'm dancing," and "I'm playing". The third lesson will discuss what people in francophone countries do for leisure and in what ways it is similar and different to that of Montanans.

Similar to Unit 1, this unit will contain one more section that will focus on classroom directions in French. This section is purely for the teacher's education in the language and can be completed anytime during the unit. The key phrases that it will present are ones which the teacher uses to ask the children to do common classroom tasks such as "please sit down," "please line up," "please pull out your books" etc.

### 4.3.3.3. Unit 3: American, Southwestern Asian, and Chinese Culture

This unit will be different from the first two in that each week will explore a different language and culture. The first week of this unit will have three lessons that focus on American Sign Language (ASL). The first lesson will present the letters in the alphabet in ASL. The second lesson will present the key phrases "Hello," "What's your name?" "My name is..." and "Good Bye". The third lesson will discuss the different deaf communities around the U.S. and aims to de-stigmatize the view of deaf people by hearing people.

The second week of this unit will have three lessons that focus on Arabic language and arabophone culture. The first lesson will present the first half of the Arabic alphabet, and the second lesson will present the second half of the Arabic alphabet. Each of these lessons includes
a component that allows the children to practice identifying the letters. The third lesson will discuss the diversity of arabophone nations around the world. This lesson will also present a basic "hello" and "goodbye" in Arabic.

The third week of this unit will have three lessons that focus on different Montana Amerindian cultures. The first lesson will present basic phrases such as "hello," "My name is...", and "goodbye" in Salish. The second lesson will present the names of different Montana animals along with the key phrases "I like..." and "Do you like...?" The last lesson will give a brief overview of the 12 different Amerindian tribes in Montana and present the greetings from each corresponding language (such as Tawnshi in Michif or Oki in Blackfoot).

The fourth week of this unit will have three lessons that focus on Mandarin Chinese and Chinese culture. The first lesson will present the numbers 1-10 and the key phrase "How many are there?" The second lesson will present the numbers 11-20 and basic greetings. The third lesson will showcase the Chinese lettering system and discuss the cultural festivals unique to Chinese culture. This lesson will also discuss the impacts of the Chinese workers in Montana.

### 4.3.3.4. Montana Common Core Standards:

These units will meet many of the standards according to the Montana Common Core Standards for Mathematics and English Language Arts \& Literacy (OPI, 2011). Also, these standards will fulfill one of the Essential Understandings set by Montana Indian Education for All (OPI, 2012). To see specifically which standards will be met, refer to Appendix B.

## Chapter 5: Conclusion

This study addressed the position in which elementary school teachers find themselves when they recognize the benefits of bilingualism but are limited in being able to provide L2 instruction. A growing body of research indicates that L2 learning in elementary school has many benefits. The participants of my survey indicated that they have a positive attitude toward L2s but my review indicated that they are limited by the amount of free resources available to them. To address this limitation, I proposed new materials that would be tailored to the teachers' needs and requests.

In the second chapter of this study, I reviewed research studies that conclusively show that learning an L2 as an elementary student has inherent cognitive, academic, and affective benefits. I also reviewed theories of learning and language acquisition and ended with a theory of a learning situated in a sociocultural context like one found in an elementary classroom. I found also that the field of L2 acquisition is now embracing approaches that underscore this discursive, interactive method of teaching and learning.

In the third chapter, I researched the need for L2 instruction in Montana. Many of the elementary classroom teachers surveyed indicated that they were already trying to implement L2 instruction even if there was not an L2-trained teacher at the school. Almost all of the teachers were receptive to the idea of a free, online resource that would teach one or more L2s in an engaging, relevant way. Also in this chapter, I analyzed the abundance of L2 resources available for teachers who do not already speak the language and found that all of them lacked the discursive feature that characterizes classroom dynamics. This feature is visible when students inquire with each other and respond to one another's questions. The resources, both for free and for a price, had a lack of focus on instructing students how to ask the questions themselves.

In the fourth chapter, I outlined a new resource in order to address the shortcomings of the resources reviewed in the third chapter, such as the lack of resources targeted at K-2 learners, the lack of resources that use a discursive method, and the lack of free resources for this age group. This resource will also take into consideration the feedback received from the teachers during the survey and will be directly tailored to the Montana Elementary K-2 context.

The limitations of this study were largely due to time and location. The survey I conducted aimed at asking a limited number of questions to ensure a greater participation for teachers. Because of this, it did not seek to find out why teachers who were already including an L2 were choosing to do so. It also did not inquire about the level of L2 exposure which these teachers had experienced. Also, it never directly asked the teachers how often they referred to resources found on the internet for content matter. My results were based on participants’ willingness to use an online resource but not on the reality of the practice. Also, I sent a limited number of invitations to the survey based on a fixed timeline. This restricted the number of teachers I could invite to participate, and I purposefully started with the local Missoula area and expanded to other areas with which I was familiar. This research could be expanded to cities and towns from all counties of the state. In the review of available materials, this study does not consider new online resources which are continually being created or updated. With the creation of new technology, new resources will become available.

However, despite these limitations, this study demonstrates that very few elementary schools have an L2 teacher, and therefore, that these schools could do more to hire one. This study also shows that many Montana elementary teachers are willing to include an L2 component in their instruction and that they had an overall positive attitude toward L2 instruction in elementary schools. It also shows that teachers tended to have a greater interest in European
languages, particularly Spanish and French. Lastly, this study demonstrates the niche that could be filled by future resource designers. There are not enough interactive, free resources that are targeted for K-2, and the teachers in this study demonstrate that they desire these kinds of resources.

I have taken the first steps to address this need by proposing the structure of resources that would meet the requests of these teachers. These resources would be less ideal than having more L2 teachers in elementary schools. But as a remedial measure, I would encourage L2 educators to collaborate in creating this resource for their colleagues in early elementary schools in the absence of formal L2 instruction in that setting.

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## Appendices:

Appendix A: Screenshot of Survey Used in Study

1) School where you teach

Short answer text
2) Grade you teach *Mindergartan19t Grade2nd GrodeOther.
3) Have you ever added a world language component to any of your lessons/units?YesNo
4) Would you be interested in a FREE ONLINE, INTERACTIVE RESOURCE to incorporate a world language into the content areas you currently teach with minimum class time involvement (e.g. $15-\mathrm{min}$ sessions weekly or monthly)?YesNo
5) If you were to take 15 min of your class time, what would the resource need to have?
6) About which world language(s) would you like this to be? *

## Appendix B: MCCS and IEFA Essential Understandings in Proposed Framework

Math- Counting and Cardinality- Know number names and the count sequence [ $\mathrm{K}^{14}$ ] Counting to tell the number of objects [K] Comparing Numbers [K]

Geometry- Identify shapes [K]
Reason with shapes and their attributes [1\&2]
Number \& Operations in Base Ten- Extend the Counting Sequence [1]
Understand place value [1\&2]
Mathematical Practices - Reason abstractly and quantitatively [K-2]
Reading - Print Concepts- Follow words from left to right and top to bottom [K]
Recognize that spoken words are represented in written language by specific sequences of letters [K]

Demonstrate understanding of spoken words [K-1]
Speaking and Listening- Comprehension and Collaboration- Prepare for and participate effectively in a range of conversations and collaborations with divers partners [K-2]

Ask and answer questions in order to seek help, get information, or clarify something that is not understood [K]

Speak audibly and express thoughts, feelings, and ideas clearly [K]

[^9]Language- Vocabulary Acquisition and Use - Identify real-life connections between words and their use [K-2]

Indian Education for All Essential Understandings
-Essential Understanding 1 - There is great diversity among the twelve nations of Montana in their languages and cultures.


[^0]:    ${ }^{1}$ In this study, $4^{\text {th }}$ grade Dutch children who had no formal instruction in English incidentally acquired English language skills by watching English shows subtitled in Dutch.

[^1]:    ${ }^{2}$ Ages here are presented in years; months.

[^2]:    ${ }^{3}$ The number of $5^{\text {th }}$ graders remaining of the original group of $3^{\text {rd }}$ graders was 609 from the bilingual group and 399 from the monolingual group.

[^3]:    ${ }^{4}$ In addition to the 39 K-2 teachers who replied to the survey, three more teachers responded (a physical education teacher, a Title IX teacher, and a K-5 teacher). They were eliminated from the analysis of Items 1-4 because they were not specifically K-2. For Items 5-6, the two of them who provided feedback were included in the analysis giving a total of 41 respondents for Items 5 and 6.

[^4]:    ${ }^{5}$ Easy Peasy French for Kids is not included in the detailed review due to its specificity to one language. Also, Babbel and Fluenz were included in the cursory review table because they are free materials for a beginning level L2 learning, but I concluded that these materials would be most appropriate for students older than Elementary School students.

[^5]:    ${ }^{6}$ The French video that I watched is found here: http://www.busybeavers.com/watch/
    ${ }^{7}$ A Sample of a Chinese learning video can be found here: $h t t p s: / / w w w . y o u t u b e . c o m / w a t c h ? v=S l a a 3 v 2 M C k Q$

[^6]:    ${ }^{8}$ Available here: One of the instructional videos is available to view here:
    https://www.youtube.com/watch? $\mathrm{v}=\mathrm{mQeEg}$ Hg89Y),
    ${ }^{9}$ A video of some teachers' testimonials is available here: https://www.youtube.com/watch?v=3TSNuKfII60

[^7]:    ${ }^{11}$ I have previously mentioned a material called DuoLingo which teaches an L2 largely through the L1, hence the "duo" language in the name. DinoLingo is a material with animated stories about dinosaurs, hence the "dino". ${ }^{12}$ A sample of the video is here: http://dinolingo.com/languages/spanish.html.

[^8]:    ${ }^{13}$ Image from following source: https://www.actfl.org/assessment-professional-development/assessments-the-actfl-testing-office/aappl/tasks-topics

[^9]:    ${ }^{14}$ [K] will be used to represent standards appearing for kindergarten as will [1] for first grade and [2] for second grade

