Essential questions for linguistic literacy in the world language classroom

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Abstract

This paper argues for bringing insights from linguistics into the world language classroom. At any level of study, such insights can add intellectual interest to the study of a target language (TL), and can also help students accept and acquire aspects of the TL that are different from their first language or that are inherently challenging. As a supporting framework, the paper proposes five linguistics-based essential questions for world language education: (1) How is the TL different from other languages? (2) How is the TL similar to other languages? (3) What are the roots of the TL? (4) How and why does use of the TL vary? (5) How do people learn and process the TL? The paper illustrates each essential question with relevant aspects of five commonly-taught languages: Arabic, Chinese, French, German, and Spanish. Finally, it outlines how teachers can incorporate the essential questions in their teaching.

Introduction

Two of the top priorities in the world language classroom are generally recognized to be functional competence in the target language (TL), and an understanding and appreciation of its speakers' culture (or cultures). This paper proposes a third priority: linguistic literacy. Students deserve to know the most interesting facts about the TL. For example, students learning an Indo-European language, such as a Romance language, German, or Russian, should be aware of the size and importance of this language family and how their TL fits within it. Those learning Chinese should know that hundreds of other languages, from the

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Americas to Africa, are also tonal, but that Old Chinese was not. And all should know that children learning the TL as their own first language (L1) face many of the same challenges and make many of the same mistakes that students do.

Linguistic insights add intellectual interest to a language class because they connect the TL to other languages, to general linguistic principles, and to other fields, specifically, history, sociology, and psychology. They can also help students gain proficiency in two ways. First, students may be more willing to accept differences between the TL and their L1 if they learn that these differences are shared by other languages, or, conversely, that they are distinctive or even unique features of the TL. Second, linguistic insights can help students better understand and master challenging aspects of the TL.

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The remainder of this paper is organized as follows. The first section proposes a framework, based on the curricular concept of essential questions, for incorporating linguistic literacy in the world language classroom. The second section gives examples of language features from a variety of commonly-taught languages that address the essential questions. A third section outlines instructional strategies for implementing the framework across proficiency levels.

An Essential Questions Framework for Linguistic Literacy

"Essential questions"—challenging, open-ended questions that provide focus and intellectual depth for a course or unit—have been a staple of curriculum design since Wiggins and McTighe introduced them in *Understanding by Design* (1998). In a follow-up publication, McTighe and Wiggin13) offered examples of essential questions from various disciplines, including world language (p. 3). They presented questions about learning the TL (e.g., "How can I sound more like a native speaker?") and also its culture (e.g., "How can I explore and describe cultures without stereotyping them?"). These are important questions, but they do not sufficiently address the object of acquisition: the TL itself.

The field of linguistics offers a robust framework for generating TL-oriented essential questions for language learning. As a preliminary, one can identify five essential questions for linguistics itself, each based on one of its subfields:

1. *How are languages different?* In the core field of descriptive linguistics, linguists explore the full range of the tools that languages can draw on: different sounds, meanings, and grammatical encodings.
2. *How are languages similar?* The search for universals is perhaps the central goal of theoretical linguistics. It is connected to the practical aim of designing computer systems that can be tuned or trained to process a variety of languages.
3. *How are languages related?* The subfield of historical linguistics establishes family trees among languages and also examines how languages interact and influence each other.

4. *How do social and other factors affect language use?* Language is not spoken in a vacuum. The subfield of sociolinguistics investigates variations in language use due to geography, class, sex, age, and communicative context.
5. *How do people learn and process languages*? The subfield of psycholinguistics covers first and second language acquisition and also how speakers produce and understand language.

Each of these suggests a parallel essential question for the language classroom: (1) How is the TL different from other languages? (2) How is the TL similar to other languages? (3) What are the roots of the TL? (4) How and why does use of the TL vary? (5) How do people learn and process the TL?

Many language features can be viewed through the lens of one or more of these questions. The Spanish past tense is a good example because it relates to all five. Compared to most other languages (question 1), Spanish actively uses a greater variety of constructions (conjugations and auxiliary structures) to express the past (Dahl, 1985, p. 171). At the same time, many languages (question 2), like Spanish, distinguish between ongoing and completed past actions (Dahl & Velupillai, 2013). The roots of Spanish (question 3) explain irregularities such as the identical preterit forms of the verbs *ser* [to be] and *ir* [to go] (*fui*, *fuiste*, *fue*…): these originated with *esse* (*ser*'s Latin forerunner), and took over the original past tense forms of Latin *ire* (*ii, isti*, *iit*…) as these eroded over time (Lathrop, 2003, p. 191). If less educated, or when speaking informally, many speakers add an *s* to the second person singular form of the preterit, e.g. **hablastes* for *hablaste* [you spoke] (a variant form, question 4), because this is the only such form that lacks an *-s* (Penny, 2000, p. 220). Finally, children's errors as they learn the past tense (question 5), such as **saló* [he left] instead of *salió* (Clark, 1985, p. 704), resemble those of students learning Spanish as a second language.

The five questions proposed earlier meet McTighe and Wiggins's various criteria for essential questions (2013, p. 3). For example, they are open-ended, without a "single, final, and correct answer." While each one of these questions can be contemplated by a beginning student, a full answer would require at least a book-length treatment. In addition, they "recur over time." Since the questions are not specific to one aspect of language, students can revisit them during the school year or a longer course of study. As a final example, they point toward "important, transferable ideas." The questions can be applied to multiple target languages, and also connect language study with history (question 3), sociology (question 4), and psychology (question 5).

Note that questions 3, 4, and 5 are thus relevant to ACTFL's (2012) "Connections" World-Readiness Standard ("Learners build, reinforce, and expand their knowledge of other disciplines"). At the same time, questions 1 and 2 provide a principled way to address the "Comparisons" standard ("Learners use the language to investigate, explain, and reflect on the nature of language through comparisons of the language studied and their own"). These essential questions should therefore be of value to all language teachers.

Examples from Commonly-Taught Languages

This section further illustrates the essential questions using representative examples from five commonly-taught languages: Arabic, Chinese, French, German, and Spanish. In addition to providing a start-up set of examples for teachers of these languages, this section demonstrates the applicability of the essential questions to a broad range of linguistic features in a diverse group of languages.

Question 1: How is the Target Language Different from Other Languages?

Marketers know that they can generate interest in a product by describing it as "unique" or "special." Teachers can do the same with the more unusual aspects of a TL, thus turning potential liabilities into assets. These aspects can be identified at multiple levels: demography, orthography, phonetics, and grammar.

*Demography***.** The five commonly-taught languages considered here differ from most other languages in their demographic prominence. Arabic, Chinese, and Spanish are among the world's top ten languages (Eberhard, Simons, & Fenning, 2019), judging by their numbers of native speakers, while French, German, and Spanish are among the top six languages of Europe (European Commission, 2012, p. 5). Moreover, Arabic, French, and Spanish are each official languages in more than a dozen countries. While this information is often shared in beginning courses, the essential questions framework places it in a broader context as one of these languages' distinguishing features.

Orthography. The writing systems of many commonly-taught languages include unusual elements. German is the only language to use the letter ß (ss) and is also unique in its vigorous use of capital letters. The inverted ¿ and ¡ marks are used today only in Spanish. The *ñ* originally a scribal abbreviation of nn, has become a universal symbol of Spanish; it is used in only a handful of other languages, most with a historical connection to Spanish. Arabic is one of the few consonantal writing systems. Finally, the Chinese writing system is "the only widespread purely logographic script in use today" (Comrie, 2013, section 2, paragraph 6), and was one of the few writing systems invented for a specific language rather than adapted from an existing system (Sampson, 1985).

Phonetics. Many commonly-taught languages incorporate noteworthy sounds. Castilian Spanish has the voiceless interdental fricative /θ/ of *cerveza*, considered to be in the same category of 'unusual consonants' as the clicks (akin to English tsk) used in some languages of Africa (Maddieson, 2013e, section 5). Arabic has two uvular consonants, /q/ (qāf) as in رمق [moon] and /ʁ/ (ghayn) as in لازغ [gazelle], and two pharyngeal consonants, /ʕ/ (ayn) as in سورع [bride] and /ħ/ˀ(hāˀ) as in نصاح [horse]; uvulars are uncommon, and pharyngeals genuinely rare (Maddieson, 2013b, 2013e). The French front rounded vowels, /y/ as in su [known], /ø/ as in queue [tail], and /œ/ of œil [eye], are also unusual: most language have none (Maddieson, 2013c), yet French has three.

Grammar. The co-existence of the two forms of the Spanish imperfect subjunctive, such as *hablara* and *hablase* [would speak], is highly unusual. Such cases of grammatical overabundance are otherwise found only in small sets of words, such as the French verbs *asseoir, s'asseoir,* and *rasseoir*, which have two possible conjugations in a variety of tenses (Thornton, 2018).

A singular aspect of Chinese grammar is its word order in sentences with relative clauses. Almost all languages whose basic word order, like that of Chinese, is subject-verb-object (SVO), place the head of a relative clause (the noun that it modifies) before the clause (Dryer, 2013). An example is the English noun phrase *people who watch movies*, in which *people* is the head noun of the relative clause *who watch movies*. However, Chinese relative clauses precede their head noun, as in 看电影的人 *kan-dian-ying-de-ren* [watch-movie-的-people], with 的 *de* being a preposition used to create the relative clause.

As a final example, both Spanish and Arabic mark gender in their subject pronouns to an unusual degree. Most languages have gendered subject pronouns only in the third person, as in English (*he/she*), or not at all, as in languages including Finnish, Basque, Hindi, and Tagalog (Siewierska, 2013). But Arabic has gendered second person pronouns (أنتَ/أنتِ *anta/anti* [you] and أنتم/أنتن *antum/antunna* [you all]), while Spanish first and second person plural pronouns are both gendered (*nosotros/as* [we], *vosotros/as* [you all]).

Question 2: How is the Target Language Similar to Other Languages?

While the goal of the first essential question is to intrigue students, the goal of the second is to reassure them. The emphasis shifts from highlighting exotic features of the TL to debunking superficially exotic elements that turn out to be normal when considered from a broader linguistic perspective. Below are representative examples of such features from orthography, phonetics, and grammar. To simplify the exposition, these examples assume that students' first language is English.

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Orthography. The Romance languages use capital letters sparingly. For example, days of the week, months of the year, nationalities, languages, and religions are all written in lower-case letters, as in Spanish *sábado* [Saturday] and *mayo* [May], and French *allemand* [German] and *catholique* [Catholic]. This is not an oddity, but rather the norm in almost all languages that use the Roman alphabet, with English and German the only exceptions.

Phonetics. Many non-English sounds found in commonly-taught languages occur in many other languages as well. Some examples are the trilled /r/ of Spanish *rojo* [red] (Maddieson, 2009, pp. 78-81), the velar fricative /x/ of German *buch* [book] and Spanish *ajo* [garlic] (Moran, McCloy, & Wright, 2014), and the nasal vowels of French, as in *Jean* [John], *fin* [end], and *bon* [good] (Hajek, 2013). Nor are tonal languages like Chinese uncommon: hundreds of languages worldwide employ tone, including dozens in Africa (Maddieson, 2013d).

Arabic and Spanish are typical in their modest inventories of five or six vowel sounds; this is the most common size worldwide (Maddieson, 2013a). The Spanish vowel system is doubly ordinary because its five vowels form the cardinal set /a/, /e/, /i/, /o/, and /u/, the most common five-vowel system (Crothers, 1978).

Grammar. The five languages discussed here all divide their nouns into distinct categories, using criteria seen in many other languages. Grammatical gender, a basic feature of the Romance languages, Arabic, and German, occurs in almost half of over 250 languages surveyed by Corbett (2013). In Chinese every noun belongs to a category, usually shape-based, that determines which obligatory noun classifier, akin to *sheet* as in *three sheets of paper* or *stick* in *one stick of gum*, accompanies it in every numerical expression. Such classifiers are found in dozens of languages, mostly in Asia and Central America (Gil, 2013).

Returning to the topic of subject pronouns, all the target languages considered here distinguish singular and plural 'you,' and all but Arabic distinguish formal and informal 'you' as well. Worldwide, most languages make the former distinction (Ingram, 1978), and about thirty percent the latter (Helmbrecht, 2013).

A final example is the personal *a* in Spanish, seen in such sentences as *Visitamos a María* [We visit Mary], where it precedes direct objects that are both human and specific. It is an example of "differential object marking," a phenomenon found in hundreds of languages (de Swart & de Hoop, 2007). Essentially, because nouns like *María* are more likely to be subjects than objects, many languages flag them when they occur as objects in order to avoid confusion. This is especially important in languages that, like Spanish, have flexible word order.

While the second essential question naturally lends itself to differences between the TL and English, teachers can also draw students' attention to similarities with English that reflect typical language behavior. For example, the large numbers of irregular verbs that plague English as well as German and the Romance languages are among these languages' most frequent verbs, such as 'to be,' 'to go,' and 'to have.' This is simply because irregular verbs tend to be normalized over time unless they are used frequently, in real life as well as in the language classroom (Lieberman, Michel, Jackson, Tang, and Nowak (2007).

Question 3: What are the Roots of the Target Language?

Historical linguistics was the first application of linguistic science and is still an important branch of the field. Starting in the 18th century, linguists endeavored to map out the family tree of the Indo-European languages and to reconstruct a hypothetical version of the family's progenitor, called Proto-Indo-European. Since then, linguists have applied the techniques developed by these researchers to other language families around the world.

Today's language student can profit, at a high level, from the fruits of this research. Their knowledge of TL history is too often limited to generally-known facts such as "French comes from Latin," "German is close to English," or "Arabic is related to Hebrew."

The importance of the Indo-European language family should impress any student of German or a Romance language. Indo-European languages boast more

speakers and are spoken in more countries than languages in any other family (Eberhard, Simons, & Fenning, 2019). Students of Chinese may not be aware that it, too, belongs to a large family, Sino-Tibetan. The different varieties of Chinese comprise the Sinitic branch of this family, while the other branch, Tibeto-Burman, consists of almost 450 languages spoken in southern China, the Himalayas, and Southeast Asia (Eberhard, Simons, & Fenning, 2019). Students of Arabic probably associate this language with the Middle East but should be aware that linguists characterize it as African. The Semitic language family, which comprises Arabic and Hebrew among other languages, is part of the Afro-Asiatic language family, one of the three language families of Africa, along with Niger-Congo and Nilo-Saharan.

Just as an individual's ancestry can provide valuable medical information, so too, learning about the roots of a TL can have practical as well as intellectual value. This is why the use of language history to teach vocabulary has a long and well-deserved provenance. Like rings on a cross-section of a tree trunk, a language's vocabulary reflects its history, showing the cultural cross-currents that have contributed to the language's growth. French provides a good example of this approach (Walter, 1994), as its current vocabulary reflects every phase of French history, from the Gauls of pre-Roman France (e.g., *le druide* [druid]) to today's onslaught of English (e.g., *le weekend*).

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Borrowed words are of particular interest when they form structural patterns. For example, Greek nouns ending in *-ma*, such as *drama*, entered Spanish (and Italian) as an irregular subset: they are masculine even though they end in *-a*. Learning to recognize these words can help students remember their irregular gender. As another example, many Arabic words whose roots have four consonants instead of three, such as مرجان *marjan* [coral] and خنابس *sabanikh* [spinach], come from Persian (Babil, 2014). Etymology provides a useful perspective for highlighting words of this type, which have special treatment in Arabic grammar.

The pedagogical value of language history goes beyond vocabulary: historical insights can inform instruction on grammar as well. As an example, language history explains many of the peculiarities of the Spanish verb system (Penny, 2002; Hochberg, 2016). The duplicate forms of the imperfect subjunctive mentioned earlier evolved centuries apart, from two different Latin past tense conjugations. The irregular verbs *ir* [to go] and *ser* [to be] each merged three distinct historical roots, which accounts for such forms as *vamos* [we go], from the Latin root *vadere* [to go, walk], and *era* [he was], from the Latin root *esse*; the infinitive *ser* itself comes from *sedere* [to sit]. Irregular forms like *conozco* [I know], from the verb *conocer* [to know], preserve the /sk/ sequence of the original Latin verb *cognoscere*. The stem vowel alternations in forms such as *perder/pierdo* [to lose/I lose] and *soñar/sueñan* [to dream/they dream] reflect the general change of Latin ĕ and ŏ to Spanish *ie* and *ue* in stressed syllables (e.g., *pĕtra* [rock] > *piedra*, *bŏnus* [good]

> *bueno*). Finally, the double meaning of *hay* [there is/are] stems from the word's origin as a possessive: for instance, today's *Hay muchos árboles* [Thʁere are many trees] originally meant something like "One has many trees."

Language history can even illuminate core aspects of the TL. Students of Chinese will be interested to learn that Old Chinese did not have tone (Baxter, 1992, pp. 302-24; Sagart 1999). The tonal system began to evolve in the first centuries of the Common Era, when speakers began to omit certain consonants at the beginning or end of syllables. While still present, these consonants had small effects on a syllable's pitch. (For example, when pronouncing *bit* and *bid* in English, chances are that *bid* will have a slightly lower pitch.) When the consonants were lost, these small pitch differences graduated from side effects to primary carriers of meaning.

Likewise, Arabic, and more broadly the Semitic languages, did not always have these languages' current system of three-consonant roots. Deutscher (2005, pp. 178-206) has argued, based on patterns still seen in irregular verbs today, that the original Semitic language, termed Proto-Semitic, had a more typical linguistic structure, with word roots that included both consonants and vowels. He hypothesized that the change to a consonantal system began when Proto-Semitic developed a critical mass of vowel alternations such as those seen in English *goose/geese* and *mouse/mice*. Once speakers came to see consonants as the primary carriers of meaning and vowels as grammatical markers, later grammatical developments then exploited, and thus reinforced, this dichotomy.

Question 4: How and Why Does the Target Language Vary?

Speech reveals much about individuals: where they grew up; their social class, age, and gender; and whether they consider a conversation to be formal or informal. One need not be a linguist to decipher such clues; most people are keenly aware of language variation. They notice accents, think it is funny (or embarrassing) when a middle-aged person tries to sound "hip," and are careful to use a different speaking style in the boardroom and the barroom. This metalinguistic awareness is especially striking given that in general, language use and understanding take place without conscious attention. Language variation is thus an approachable topic to explore in the classroom.

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For most world languages, the main factor affecting language use is geography. Students can learn about dialectal differences within individual countries (e.g., Castilian versus Andalusian Spanish) and/or between countries (e.g., French in France versus in Quebec). For the Romance languages and German, as in English, dialectal differences interfere with communication to only a moderate degree, whereas different varieties of Chinese and Arabic can be mutually unintelligible.

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Dialectal variation often involves the most complex aspects of a language. Learning about dialects can thus validate the challenge that these aspects pose to students, while enriching their understanding of the TL and its cultural context. This principle can be seen at work in aspects of language from pronunciation to grammar.

An apt example in pronunciation is the contrast between Spanish and French vowels. Because Spanish has only five vowel sounds, most dialectal variation in Spanish pronunciation involves consonants: some well-known phenomena are *seseo* and *ceceo* (expansion of /s/ or /θ/), *yeísmo* (loss of the *ll/y* distinction, as in *calle* [street] versus *caye* [falls]), and the weakening or loss of final *-s* (Penny, 2000). In contrast, most variation in French involves vowels, of which the language has more than a dozen. For example, vowels account for most of the pronunciation differences between Belgian and Parisian French, such as the length distinction between "the *a* of *patte* [paw] and the *a* of *pâte* [pastry]" (Walter, 1994, p. 139).

Other pertinent examples come from Arabic and Chinese. Kaye (2009) describes stress as "the most intricate part of [Arabic] phonology," and, correspondingly, reports extensive variation in stress placement among Arabic dialects (p. 485). He gives the example of the word اتبتك *katabata* [both of them wrote], each of whose four syllables is stressed in at least one form of Arabic. Tone is, of course, a major focus in Chinese language instruction, and likewise varies among different forms of Chinese. According to Li and Thompson (2009) "Tonal variation accounts for the most common differences among the dialects of China. It is often true that the dialects in two villages, just a few miles apart, have different tone systems" (p. 606). Tonal systems range from the simple (Beijing Mandarin, with four tones) to the complex (Cantonese, with nine).

Differences in vocabulary are the most obvious hallmark of dialectal variation. Classes might want to keep a word board (physical or virtual), perhaps combined with a map, to track outstanding differences they learn about during a school term. The principle of complexity described above applies in this domain as well. For example, French in France lacks distinctive words for *seventy*, *eighty*, and *ninety*, a lexical gap resulting in such unwieldy numbers as *quatre-vingt-dix-huit* [ninety-eight] (literally [four-twenties-ten-eight]). Not surprisingly, these words undergo considerable dialectal variation, with Belgian, Swiss, and Canadian French using some or all of the simpler *septante*, *huitante (octante)*, and *nonante*.

Personal pronouns in many commonly-taught languages illustrate the connection between grammatical complexity and dialectal variation. German pronouns are particularly notorious. While *ich* [I], *du* [you (informal)], and *er* [he] have distinct nominative, accusative, and dative forms, other pronouns conflate either nominative and accusative, or accusative and dative. Moreover, many pronoun forms are ambiguous; for example, *ihr* is both the third person feminine singular dative and the second person informal plural nominative. Not surprisingly, dialectal variations on this system abound (Howe, 2013, pp. 262-282).

Arabic and Spanish personal pronouns are likewise illustrative. While standard Arabic has an impressive array of 13 personal pronouns, most dialects have eliminated feminine plural pronouns, and also dual pronouns such as

امتنأ *antuma* [the two of you]. The Spanish pronouns meaning 'you' encode both number and politeness, a complexity reflected at the dialectal level. *Tú*, the standard informal singular pronoun, has largely displaced formal *usted* in Spain, while *usted* expresses intimacy in parts of Colombia. At the same time, the informal pronouns *vos* (singular) and *vosotros* (plural) are found only in parts of Latin America and Spain, respectively.

A second factor affecting language usage is social class. Many cultures distinguish a "proper" variety of their language from varieties spoken by members of lower socioeconomic groups. It is important for students to understand that there is nothing inherently inferior about "improper" language features. Like the English *ain't* or Spanish *leísmo* (the expanded use of indirect object pronouns), many such features are not recent aberrations, but long-standing variants that used to be more widely accepted. Some variant forms, such as **hablastes* (mentioned earlier), reflect a logical extension of an existing feature. More generally, language is never static, and most changes begin as disparaged variations, a process that linguists refer to as "change from below" (Labov, 2007). If nobody dared to stray from a "proper" version of their mother tongue, we would all still be speaking proto-Indo-European, proto-Afro-Asiatic, proto-Sino-Tibetan, and so on.

Language usage can signal age or gender as well as social class. In Germany, younger people tend to use more English loan-words, onomatopoeia, and superlatives (Johnson & Braber, 2008, p. 257). An intriguing example of a gender difference comes from North African French (Walter, 1994, pp. 155-6). The early French soldiers and teachers there adopted a tongue-tip pronunciation of /r/, under the influence of a pre-existing *lingua franca* that had elements of Italian, Spanish, and Portuguese. They passed this pronunciation on to the North African men they worked with or taught. Women only began to learn French many years later, from teachers who used the standard uvular /ʁ/ sound. As a result, the uvular /ʁ/ came to be perceived as effeminate, and men continued to avoid it in favor of /r/.

A speaker's dialect, class, age, and sex combine to predict which variety of the TL he or she will normally use. However, few people speak the same way in every circumstance. Most speakers adapt their speech depending on where they are and to whom they are speaking. Linguists refer to these different ways of speaking as *registers*, and usually place them on a continuum from formal to informal. Students can get a better feeling for the range of variation in the TL by studying conversations that capture different registers. An instructive example is Johnson and Braber's analysis of a pair of formal and informal telephone conversations in German, which noted differences in pronunciation, vocabulary, and grammar (2008, pp. 263-4).

In many speech communities, language variation goes farther than the examples discussed above: it encompasses multiple languages. Languages can coexist peacefully, like Spanish and Guaraní in Paraguay, or not, as in the often difficult relationship between English and French in Quebec. Multilingualism is thus a fascinating linguistic topic for language students to explore. Some possible specific areas to cover are the politics of language, bilingual education, code-switching (combining two languages in a single discourse), and the impact

that cohabiting languages have on each other's vocabulary, grammar, and even pronunciation.

Question 5: How Do People Learn and Process the Target Language?

Psychologists are interested in how children and adults learn language, and how the human mind processes language, once learned. The examples in this section show how sharing the results of this research with students can benefit them in several ways. While second language acquisition research suggests successful learning strategies, L1 acquisition research can reassure students that they will master challenging TL features through time and effort. In addition, language processing research can convince students of the psychological reality and importance of such features.

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Most language teachers explicitly address the process of second-language learning as a matter of course. For instance, teachers discuss learning styles, stress the importance of exclusive use of the TL, and model and practice specific learning techniques. They do this both to help students become better language learners and to promote critical thinking.

Insights from first language acquisition can play a different role in the classroom: that of reassuring students that they are on track to acquire the TL. This may seem paradoxical, for research suggests that unless second-language learners begin early, they are at a significant disadvantage compared to first-language learners (Johnson & Newport, 1989; Slabakova, 2013). This is partly for neurological reasons: the specially adapted role of the brain's left hemisphere in language learning ends at puberty (Werker & Tees, 2005). It is all too often exacerbated by limited hours and mixed quality of second language instruction. How, then, can learning about first language acquisition do anything but make older learners feel bad about their own efforts?

The answer is that first and second language learning are more similar than students may realize. For one thing, even though babies are natural learners, they do not master their mother tongue overnight. Their successful language acquisition is the result of years of effort. Moreover, both types of learners often struggle with the same aspects of the TL or L1. To take an example from pronunciation, the trilled Spanish /r/ is the last sound most Spanish-speaking children learn; 30-40% of children are still working on it at the age of four (Aguado, 2013, p. 20; Bedore, 1999, p.182). Turning to grammar, the complexity of case marking on German articles, as described earlier, ensures that children still make mistakes in this area at age four or later (Mills, 1985, p. 225). In both cases, students who struggle with these skills can be reassured that just as years of practice pay off for children, so too their own persistence will bring success.

Another similarity between first and second language learners is that both make the type of error that linguists call "overgeneralization," in which learners simplify a complex system by overapplying a rule or extending a frequent variant.

Thus children learning Spanish and French, just like adults, "correct" irregular verbs, changing Spanish *sé* [I know] to **sabo* and French *pris* [took] to **prendu*, and overuse the common *-ar* and *re* conjugations, changing Spanish *salió* [he left] to **saló* and French *rire* [to laugh] to **rier* (Clark, 1985). German learners extend the weak form of the past participle, saying **gegeht* for *gegangen* [went] and **gedenkt* for *gedacht* [thought] (Mills, 1985, p. 168). Arabic learners apply the simple plural suffixes -ات *a:t* and -ين *i:n* to more complex plurals, changing كبابش *šababi:k* [windows] and لدانص *sana:del* [sandals] to *تاكابش *šobbaka:t* and *نيلدنص **sandali:n* (Albirini & Benmamoun, 2014; Omar, 1973, p. 180; Ravid & Farah, 1999, p. 11). Furthermore, Mandarin learners overuse the generic个 *gè* classifier; for example, saying 一个羊 **yi ge yang* for 一只羊 *yi zhi yang* [one sheep] (Hu, 1993; Polio, 1994; Zhang, Lu, & Lu, 2013). When students make these mistakes, they can be reassured that children acquiring the TL as their L1 make them too, and that they are, in fact, a sign of progress.

With regard to language processing, insights from studies of adult TL speakers can also motivate students by showing them the importance of the principles they are learning. For example, research has shown that grammatical gender affects speakers' object concepts. Boroditsky, Schmidt, and Phillips (2003) asked Spanish and German speakers to describe in English objects that have different gender in those two languages. Spanish speakers used dainty adjectives such as *golden*, *intricate*, and *little* to describe objects that are feminine in Spanish (such as *llave* [key]), and virile adjectives such as *big*, *dangerous*, and *long* to describe objects that are masculine (e.g. *puente* [bridge]). The German speakers chose very different adjectives, such as *hard*, *heavy*, and *jagged* for masculine *Schlüssel* [key] and *beautiful*, *elegant*, and *fragile* for feminine *Brücke* [bridge]. This finding can impress students of any gendered language with the psychological power of this key aspect of grammar.

Implementation

At a minimum, teachers can incorporate linguistic explanations or perspectives into established lessons as they see fit and as time allows. In order to fully implement the approach described in this paper, however, teachers need (a) a means of sharing the five essential questions with their students, and of reconnecting with these questions throughout a course; (b) knowledge of relevant linguistic aspects of the TL; and (c) activities that help students appreciate these language aspects and link them to the essential questions.

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Sharing the Essential Questions

Wiggins and McTighe (1998) recommended that teachers pose essential questions at the beginning of a course, then return to them frequently. For teachers who have their own classroom, a logical way to do this would be to have a corkboard or poster dedicated to the questions. Teachers or students could then fill in the board (or poster) with relevant language features as the course progresses.

Teachers who do not have a dedicated classroom can maintain a similar electronic document, such as an evolving PowerPoint or Google Doc.

Linguistic Knowledge

The examples in this article are just a starting point; ideally, teachers will add to them in order to flesh out the essential questions. Unfortunately, teacher training rarely provides the background needed to do this. A typical "Introduction to (TL) Linguistics" class covers the basics of TL phonology, morphology, syntax, and so on; a typical "History of (TL)" class covers the same topics from a chronological perspective. Neither class is likely to emphasize aspects of TL linguistics or history that have direct application in the TL classroom. Likewise, most introductory textbooks on TL linguistics and history have an academic rather than a practical slant.

For this reason, the best resource for a language teacher seeking to incorporate linguistics in the classroom is probably a user-friendly book such as Bateson (2003) for Arabic, Sun (2006) for Chinese, Walter (1994) for French, Johnson and Braber (2008) for German, and Hochberg (2016) for Spanish. The concise language profiles in Comrie (1990) are another useful published resource. Helpful online sources include language-specific linguistics portals such as Mackenzie (1999-2017) for Spanish and Institut für Deutsche Sprache (n.d.) for German; online dictionaries that include etymologies, such as Académie française (n.d.) for French, DWDS (n.d.) for German, and Real Academia Española (n.d.) for Spanish; Forvo (n.d.), a crowd-sourced compilation of word pronunciations from speakers of dozens of languages; and Google's ngram viewer (Google, n.d.), which enables users to visually compare word and phrase frequencies over time in Chinese, French, German, and Spanish as well as other languages including English.

Activities

As mentioned above, teachers may invoke the essential questions simply by adding relevant linguistic explanations and perspectives to their teaching. For a greater benefit, teachers can engage students in take-home or in-class activities appropriate to their level of study. These fall into several categories, illustrated here with language features described in the previous section.

- *Activities that highlight key language features from questions 1 and 2.* Novice German students might make a word cloud of words with an ß; advanced Spanish students might write poems on the theme of *nosotras* or *vosotras*.
- *Data analysis*. Given the numbers 1-10 in a variety of languages, novice students of French or Spanish could predict the family classification of each set of numbers: are they from another Romance language, another Indo-European language, or a different language family? Intermediate Arabic students could propose explanations for errors made by children learning Arabic as L1 (Omar, 1973).
- *Data research.* Novice French students might look up the origins of a set of vocabulary words (perhaps clothing terms). Novice Spanish students could do the same for words ending with *-ma*; not all are Greek, and not all are masculine.

- *Text analysis*. Intermediate German students could test the precept that "frequent verbs are more irregular" by analyzing the verbs used in a newspaper article; advanced French students could compete to see how many differences from modern French they find in a sample of Old French.
- *"Ask a native speaker."* Thanks to the Internet, it is relatively simple for students to find native TL pen-pals, either individually or on a class-wide basis. Novice Chinese students might compare their study of Chinese characters with their pen-pals' own recollections, while advanced Arabic students might ask about their pen-pals' experiences trying to communicate with speakers of other varieties of Arabic.
- *Language/dialect comparisons*. Novice or intermediate students of Arabic, German, or Romance could compare noun genders for a set of words (e.g., body parts) in the TL versus another gendered language. Intermediate Chinese students could use Forvo (n.d.) to compare the tones of familiar words in other varieties of Chinese with those of the TL.
- *Reports and debates*. An intermediate/advanced French student might make a speech advocating gender-neutral adaptations to French grammar; an advanced Chinese class might debate whether Taiwan should adopt the simplified characters used in mainland China.

Conclusion

The preceding sections defined five linguistics-based essential questions for the world language classroom, gave examples of pertinent features from several commonly-taught languages, and suggested how teachers can use the questions to incorporate linguistic insights into their curriculum. As stated in the introduction, this approach can benefit learning in three ways.

First, linguistic insights add intellectual interest to the study of a world language. Topics such as language families, dialects, formal and informal speech, bilingualism, and the psychology of language all have a wide appeal.

Second, linguistic insights can help students accept aspects of the TL that differ from their L1. In some cases, teachers can show that these aspects are shared by many other languages; in others, that they are unusual or even unique; and in still others, that studies of children and adults demonstrate their psychological reality.

Third, linguistic insights can help students acquire aspects of language that are genuinely challenging. In many cases, teachers can validate students' own experiences by pointing out that these aspects are prone to variation or that children are slow to learn them. The fact that children do eventually succeed should provide reassurance. In addition, historical explanations may shed light on tricky subjects or help students learn vocabulary.

A final advantage is less tangible but perhaps more compelling. By acquiring linguistic literacy along with language proficiency and cultural competence, students will learn to appreciate that the TL is not merely a static object of study. Rather, it is a living, complex system that is connected to other languages past and present, to the places and societies that use it, and to its speakers, young and old.

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