EXPLORING THE ROLE OF PERCEPTION IN LANGUAGE LEARNING: A PLURILINGUAL AND ECOLOGICAL PERSPECTIVE ON STUDENTS’ PERCEPTIONS OF FRENCH-ENGLISH PROXIMITY

by

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Abstract

This study explores adult students’ subjective perceptions of the proximity between French and English. Through a plurilingual, ecological perspective (Piccardo, 2017; van Lier, 2004a) and the theory of affordances (Gibson, 1979/1986; Rietveld & Kiverstein, 2014), perception of language proximity is conceptualized as a dynamic construct that can either facilitate or hinder learning. This study implements four methods (drawing task, language background questionnaire, cognate recognition task and semi-structured interview) to analyze participants’ perceptions of French-English similarities at three levels of analysis (cognate characteristics, patterns within groups and individual perceptions). The findings suggest that participants who viewed cognates as facilitative for their language learning had greater metalinguistic awareness and recognized more French-English cognates. Conversely, participants who perceived cognates as detrimental to their learning tended to demonstrate a lack of metalinguistic awareness and recognized very few French-English cognates. The study highlights the importance of fostering close perceptions of language proximity in language learning.
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I. INTRODUCTION

This thesis draws on plurilingual and ecological perspectives to investigate students’ perceptions of language proximity. The purpose of this introductory section is to establish three key foundational ideas that guide the direction of this thesis. The first idea relates to identifying and discarding monolingual assumptions about language learning. The second is framing the topic of investigation around metalinguistic awareness. The third is evaluating metalinguistic awareness through a dynamic systems approach. The following summary of the literature navigates these concepts through different perspectives in order to refine and redefine the scope of the study.

A New Baseline: Abandoning the Monolingual Perspective

In language learning research, the competence and performance of the monolingual native speaker is often posited as the ideal or standard of language learning. Learners are often compared to native speakers in terms such as success, failure, mastery or native-like. However, the implicit assumption of this approach is that second/foreign language learning is inferior and imperfect compared to native language learning. This is a detrimental assumption to hold because it neglects the study of second/foreign language learning in its own right and restricts the scope of research to only a subordinating, comparative approach.

Ortega (2013) describes two criticisms of this approach. The first is Bley-Vroman’s (1983) comparative fallacy. Bley-Vroman (1983) argued that empirical insights into learner language could be significantly hindered when that learner language is compared to a perceived ideal and perfect target language. The second criticism is from Klein’s (1998) target deviation perspective. Similarly, Klein (1998) argues that comparisons to the target language shifts the focus of study not on what the learner can do but what the learner fails to do. Both authors share the conclusion that learner language is worthy of study in its own right and not just as a flawed, deviant form of the target language.

Cook’s (1999) concept of multicompetence provides an alternative and positive reframing to the field. Multicompetence is defined as “the knowledge of more than one language in the same mind or the same community (Cook, 2013, p. 1). Cook (1999)
criticizes the use of the monolingual native speaker as the ideal and argues for a qualitative difference between monocompetence and multicompetence. The concept of multicompetence has since contributed to a more positive perception of language learners as “successful multicompetent speakers, not as failed native speakers” (Cook, 1999, p. 204). However Hall et al. (2006) argue that this perspective has been less influential in generating and transforming our understandings of language knowledge. This is because there are three underlying assumptions embedded in the concept of multicompetence that invoke the target deviation perspective and comparative fallacy.

The first problematic assumption outlined by Hall et al. (2006) is that L1 and L2 language knowledge within a bilingual individual are viewed as distinct, homogeneous systems. Hall et al. (2006) argue that this assumption restricts research to focus solely on the syntactic changes that result from the interaction between the two language systems. This is apparent in the terminology used such as borrowing, transferring, shifting and sometimes more negatively as deviation, interference or negative transfer (Hall et al., 2006). The second assumption is that all of the language systems known by an individual are compared to their respective, monolingual standards of correctness. This leads to an array of various descriptions attempting to classify speakers based on ideal native competences such as “balanced bilinguals” or “ambivalent balanced bilinguals” (Herdina & Jessner, 2002, p. 118; as cited in Hall et al., 2006). Hall et al. (2006) claim this to be an “empty exercise” (p. 224) that is not congruent with the argument of a qualitative difference between monocompetence and multicompetence. If monocompetence is in fact different, it should not be used as a means of comparison. The third is the assumption that language knowledge is static and homogenous across different speakers and contexts. This is evident in comparative studies that categorize participants into groups of “monolinguals,” “bilinguals” and/or “trilinguals” etc., and their level of performance in their language(s) in comparison to a native standard. These categorizations assume uniformity within groups based only on the languages that they know without consideration of critical and established influences on language knowledge such as class, education, age, gender and location (Hall et. al, 2006).
Not only does the monolingual standard hamper our conceptual insights, it also obscures and complicates advances in theoretical understandings of language processing and development. The field of Second Language Acquisition (SLA) emerged in the early 1970’s (Selinker, 1972; as cited in Larson-Freeman, 2018), delineating itself from native/monolingual language learning. Previous studies in SLA have conceptualized various paths and outcomes of learning based on age and order of acquisition (e.g., bilingual vs. successive language acquisition) (Ortega, 2013). However those paths increase exponentially with the addition of one additional language (Cenoz, 2000):

1. simultaneous acquisition of L1/L2/L3
2. consecutive acquisition of L1, L2 and L3
3. simultaneous acquisition of L2/L3 after learning the L1
4. simultaneous acquisition of L1/L2 before learning the L3

Trilingual Language Acquisition (TLA) researchers have attempted to differentiate and position themselves as unique from SLA (Cenoz et al., 2003). The obvious consequence of this is, then, do we have separate theories of monolingual, bilingual, trilingual and quadrilingual learning? Contrary to this, neuroimaging studies demonstrated that there is no significant difference in the processes involved in L2, L3, Ln etc. processing (de Bot & Jaensch, 2015). Based on their review of the neuroscientific evidence, de Bot and Jaensch (2015) suggest a significant reorientation of the field that does not differentiate L2 and L3 learning and processing mechanisms. Any theory of language learning, whether L1, L2, L3 etc., should be able to account for a human’s potential for multilingualism (Ortega, 2013). This perspective is summed up eloquently by Hammarberg (2001, p. 21):

“Assuming that humans are potentially polyglot by nature, an adequate theory of language competence, use and acquisition should be able to account for polyglot cases, and preferably take these as the norm.”

If we are then to shift the standard from monolingualism to multilingualism, the existing comparative studies between monolinguals, bilinguals and trilinguals may be an appropriate place to begin our investigation: What distinctively characterizes multilingual processing and learning and how can that aspect be captured by a holistic understanding of language learning? Many of these comparative studies demonstrate a general trend whereby bi/trilinguals have a heightened level of metalinguistic awareness compared to
monolinguals (Thomas, 1992; Jessner, 1999; Moore, 2006; Charkova, 2003; Rauch et al., 2012; Cenoz, 2013). Perhaps an account of metalinguistic awareness in multilinguals can provide unique insights into language learning.

Object of Study: Multilingual Metalinguistic Awareness

The term metalinguistic awareness (MLA) (and its variants language awareness, metalanguage awareness, etc.) is often intentionally used vaguely in the field of applied linguistics. However in order to investigate MLA as a research construct, terminological precision is necessary (Komorowska, 2014; Berry, 2014). This thesis draws on Jessner’s (2008) definition of MLA as the ability to focus on and switch between the form and meaning of a language. Levels of MLA in monolinguals have been commonly assessed based on learners’ performance on word judgment and/or semantic judgment tasks (Smith & Tager-Flusberg, 1982). In Serrano (2011) for example, child participants’ ability to state the rule for when to use “his/her” was taken as evidence of their MLA. MLA has been found to be varied and multifaceted in children as young as two to three years of age and was significantly correlated to their performance on other measures of language development (Smith & Tager-Flusberg, 1982). The development of MLA also progresses well into adulthood (Edwards & Kirkpatrick, 1999).

However, MLA necessarily becomes more complex when investigated in the context of learners who are bi/multilingual. Multilingualism in this sense is not defined as a high level of proficiency in each language, which can be used to the same extent in every communicative context. Instead, it goes beyond the linguistic realm and into a broader educational and cultural sphere. Thus, multilingualism is the ability to communicate in different languages in different domains of communication based on the cultural context (Franceschini, 2011). Therefore a multilingual’s MLA cannot be conceptualized compartmentally through the monolingual, linguistic definition as the ability to reflect on each language as an individual object. Multilingualism is a single construct, which is built upon the varied proficiencies of all of the known languages. Therefore multilingual MLA necessarily transcends the monolingual definition and must include the ability to navigate and draw on resources from all languages and the ability to apply them to various affective, social, cognitive, performative domains (Komorowska, 2014).
Jessner (2008) defines multilingual MLA as the set of skills and abilities developed from one’s individualized linguistic and metacognitive knowledge, which can be applied to deal with particular linguistic problems in the target language. Based on this definition as a set of skills, multilingual MLA has also been explored more specifically through various ways such as divergent/creative thinking, interactional/pragmatic competence, communicative flexibility and translation skills (Jessner, 2008). This set of skills is not tied to particular languages but instead to communicative and learning contexts resulting in wide individual variation (Moore, 2006). Some influences on individual variation include beliefs about language learning, individual backgrounds and prior linguistic experiences (Thomas, 1992). Therefore MLA, when defined as a set of skills greatly influences how multilinguals as individuals use and make connections across their linguistic resources in order to apply them to their learning.

The comparative studies have illuminated MLA as an important factor in language learning but based on the assumptions and criticisms above, Hall et al. (2006) argue that these comparative studies do not advance our understanding of language learning. How then, are we to explore something such as MLA, which is a highly individualized set of skills that influences how learners use language? We need an appropriate framework that can capture the complexity of MLA in multilinguals that does not invoke the comparative fallacy or the target deviation perspective. This framework should also depart from the assumptions described by Hall et al. (2006) by acknowledging language knowledge as an integrated, whole system, and the varied competences within individuals as a valuable point of study in its own right. It should also acknowledge the heterogeneity of language knowledge across speakers and contexts. The following section demonstrates why Dynamical Systems Theory can be this approach.

**Conceptual Lens: Dynamic Systems Theory**

The importation of dynamic systems/complexity theory (DST) in applied linguistics can be attributed to Larsen-Freeman (1997). As a theory originating in the physical sciences and mathematics, it was used to interpret complex, non-linear patterns of development. In its application to the field of applied linguistics, DST views language
as a complex system that undergoes change through continued use and time. A brief overview of DST is presented based on a selection of the theory’s key principles:

1. Dynamic systems are composed of smaller *subsystems*, which are interrelated and nested within one another (de Bot et al., 2007a). They are nested in the sense that all subsystems are a part of a greater system while also containing smaller systems within itself. All parts of the system are connected across different subsystems and so changes in one variable can affect all other aspects of the system. For example, learner language is viewed as a system embedded nested contextual layers including the individual, the social and the socio-political.

2. Thus, DST views *context* not as a background to the system but as an essential part of the complex system (Larsen-Freeman, 2012). Due to the complete interrelatedness of the system, it is difficult to gain valuable insights by studying a system isolated from its context. As such, a DST approach would not be reductionist and exclusively study cause-effect relationships.

3. Dynamic systems are often characterized by *non-linear development* (de Bot, 2008). Initial small effects can have drastic long-term outcomes (i.e., the butterfly effect) due to the interconnectedness of the system so there is neither a linear developmental path nor an end state of development.

4. Dynamic systems are *self-organizing*. Self-organization is a period of massive restructuring, preceded by high variability and results in the emergence of a more complex order (de Bot, 2008; Larsen-Freeman, 2012).

The application of a DST approach in the study of language learning implies significant conceptual changes compared to traditional research (Larsen-Freeman & Cameron, 2008b). DST theories describe the system at a higher-order, abstract level since it is not always possible to explain and predict the behaviour of all components of a system. In comparison to conventional reductionist approaches that isolate causal variables, DST focuses on complex, reciprocal relations that give rise to certain behaviours. These relationship variables are never extracted from their original context nor are claims about the whole system made. Therefore, instead of *prediction* and *replicability*, DST approaches use *description* and *retrodiction* (interpreting the present
based on past events/factors) in order to explain the components and relationships of a system (Larsen-Freeman & Cameron, 2008b).

The DST also implies important methodological changes for applied linguistics research. DST embraces variability as the focus of study rather than as an inconvenience that must be filtered out (Larsen-Freeman & Cameron, 2008a). By emphasizing variability, the context becomes essential to interpreting a system. For an individual, that context includes the physical, social, cognitive, cultural, personal and socio-political aspects, which are inseparable influences on their behaviour. As such, a DST perspective permeates all levels of the research process including the literature review, data collection methods, data analysis and interpretation. Larsen-Freeman and Cameron (2008a) suggest that methods such as longitudinal case studies, ethnographies and action research exemplify the methodological principles of DST and are useful for investigating complex systems.

The DST framework is still a relatively new approach in applied linguistics. However it is not completely novel since it shares many conceptual similarities with the more widely known sociocultural theory (SCT). Lantolf and Thorne (2006) define SCT as a perspective in which “human mental activity arises as a consequence of the functional system formed by our biologically specified mental capacities and our culturally constructed symbolic artifacts” (p. 67). As demonstrated in the summary of DST above, a DST researcher would not disagree with this definition. However de Bot et al., (2007b) articulate that while SCT provides a rich description of the interaction of important factors, it does not specify or explicitly focus on what processes and mechanisms are involved in language learning. Here de Bot et al., (2007b) argue that DST, which does just this, goes beyond SCT and can contribute to more powerful insights because of this focus on the process.

What then, would a DST approach to language learning look like? In the following section, I will explore three different perspectives adhering to DST principles that investigate metalinguistic awareness. Insights from all three will be integrated in order to generate questions and connections that look specifically at the process of language learning.
II. LITERATURE REVIEW

A DYNAMIC MODEL OF MULTILINGUALISM

After Larsen-Freeman’s work introducing DST to the field of applied linguistics in 1997, Herdina and Jessner’s (2002) book, *A dynamic model of multilingualism,* was the first publication to apply a DST perspective and the first to propose a model of multilingualism using DST (de Bot et al., 2007b). Herdina and Jessner’s (2002) theory, the Dynamic Model of Multilingualism (DMM), has since contributed to the prevalence of DST research in the field today and provided researchers with the theoretical foundations to apply DST-grounded principles in research. The model is represented in the figure below:

![Dynamic Model of Multilingualism (DMM)](image)

In the DMM, competences in each individual language, which are often labelled by order of acquisition (L1/L2/L3), are redefined as interdependent competences of linguistic systems (LSn). CLIN is the cross-linguistic interaction, which acts as an umbrella term to encompass transfer, interference, code switching and borrowing, as well as the underlying competence of these phenomena. Overall multilingual proficiency is defined as the dynamic interaction among all of the psycholinguistic systems and cross-linguistic interaction, which leads to the emergence of the multilingualism (M) factor (Jessner, 2008). Jessner (2008) proposes that MLA, as the “M factor,” is the construct that differentiates monolingual, bilingual and trilingual learning due to its catalytic effects on language learning. This advantage in language learning is a result of the development
of skills in language learning, management and maintenance, which are lacking in monolingual speakers.

This multilingual advantage has been demonstrated in the literature. Previous research on multilingual MLA has commonly used methods such as lexical tests and grammaticality judgment tasks in order to compare the differences between monolingual, bilingual and/or trilinguals’ MLA. As previously mentioned, the findings represent a general trend whereby bi/trilinguals have an advantage in terms of MLA compared to monolinguals since MLA seems to increase with the number of languages known (Thomas, 1992; Moore, 2006; Charkova, 2003). Other studies that have focused exclusively on bi/trilinguals found that those with higher proficiency levels also had higher MLA (Stratilaki, 2006; Jessner, 2008; Dillon, 2009). Although only some of these studies explicitly align themselves with the DMM, the results seem to support Herdina and Jessner’s (2002) theorization of MA as an emergent feature reliant on the breadth and depth of one’s language repertoire and the strategies used in language learning, management and maintenance.

Despite the empirical support for the DMM, Herdina and Jessner (2002) acknowledge that the DMM is not a comprehensive, dynamic-systems based model of multilingual proficiency. Although the model can predict ideal-typical patterns of multilingual development (e.g., balanced bilingualism, transitional bilingualism), it is not capable of modelling individual developments of multilingualism. This is because many individual and environmental factors were intentionally ignored. Herdina and Jessner (2002) state, “DMM patterns are ideal-typical in so far as they do not try to model individual developments of multilingualism but rather suggest an abstract idea of how a particular model of multilingualism would develop if we ignored individual variables” (p. 140, emphasis mine). Specific dynamic-systems features were also excluded such as qualitative change resulting from self-organization, synergetic connections and emergence (Herdina & Jessner, 2002, p. 142). However, in a peripheral discussion about a “realistic model of the multilingual speaker” (p. 135), Herdina and Jessner (2002) describe a learner’s general language effort (GLE), which is characterized as the main influence on the development of their multilingual system. They describe two factors determining GLE. The first is effective communicative needs, which refers to one’s
requirements of their communicative environment (e.g., number of exchanges, duration, intensity of exchange). These effective communicative needs are then interpreted through a second factor defined as perceived communicative needs, which is the individual’s subjective interpretation of the requirements of their communicative environment.

However despite its theoretical foundation on DST, the DMM erases many of the key concepts of a dynamic system such as contextualization, non-linearity and interconnectedness. Although Herdina and Jessner (2002) defend a holistic approach, their stance extends only to conceptualizing an ideal-typical language competence and not to describing a realistic developmental model. A holistic, dynamic view of language proficiency would necessarily require consideration of the environmental and mental context of the learner (Larsen-Freeman & Cameron, 2008a; Bono & Stratilaki, 2009) and how these would affect the development of MLA. Although the DMM includes a brief discussion of context through GLE, this is not sufficient since explanatory accounts of qualitative change, synergetic connections and emergence were explicitly excluded.

**Missing piece: The role of perception in multilingual proficiency**

Despite the exclusion of these critical factors, Herdina and Jessner (2002) have seemed to identify a crucial aspect of the dynamicism of multilingualism. They define perceived communicative needs as a significant factor in both introducing and resisting change to a language system (Herdina & Jessner, 2002). It is an anticipatory and adaptive factor that “allows for an individual interpretation of reality… in terms of subjective language planning” (p. 137). However as an important factor along with effective communicative needs that contribute to GLE, Herdina and Jessner (2002) do not go beyond to explain how learners are subjectively interpreting aspects from these effective communicative needs. How do these subjective perceptions arise from the aspects in their communicative environment and ultimately have an impact on multilingual proficiency?

Although Herdina and Jessner (2002) have identified perception as important in ultimately contributing to multilingual proficiency, a procedural explanation of this is absent in the DMM. Thus, as an ideal-typical model of learning extracted from context and qualitative features of change, the DMM provides only vague descriptions of factors
and relationships. This vagueness does not offer much in terms of concrete constructs that can be investigated in further research nor can it make applicable contributions to the language classroom (Berry, 2014). In summary, the DMM does not embody critical aspects of DST. However Herdina and Jessner (2002) appear to have identified perception as a critical aspect of contextualized MLA. We then turn to another perspective that can potentially provide insights into the role of these subjective perceptions in language learning.

**A PLURILINGUAL VISION OF LANGUAGE LEARNING**

As seen in the previous section, the main criticisms of the DMM were its exclusion of contextual factors, qualitative change and individual trajectories of development. However this leads to a mere acknowledgement of subjective perception without a thorough account through a genuine DST lens. To address these issues, we now turn to the plurilingual conceptualization of language use and learning.

**From Multilingualism to Plurilingualism: DST, context and pedagogy**

Plurilingualism arose in the late 1990s (Council of Europe, 1996, 1998, 2001; Coste, Moore & Zarate, 1997/2009), in contrast to teaching and learning approaches rooted in a negative native-speaker bias. Rather than criticizing learners for their errors and use of other languages, plurilingualism goes beyond an understanding of languages as separate entities and merely co-existing together to one that views languages as dynamic, intertwined and as resources that learners can exploit in future language learning. Unlike the monolingual disposition that upholds native speaker competence in all languages as the goal, a plurilingual perspective conceptualizes a realistic learner who communicates with their partial and imbalanced competences in various languages (Piccardo, 2018). However plurilingualism extends beyond the use of other languages insofar as they are used towards learning only the target language. This approach still invokes a linear and monolingual view. In comparison, plurilingualism is defined as the synergistic integration of all languages in an individual’s linguistic repertoire that contributes to the development of creativity and curiosity towards language learning (Coste & Simon, 2009; Marshall & Moore, 2016; Piccardo & North, in press-b).
Embracing a plurilingual approach holds many advantages in the investigation of research constructs. Lowie (2013) argues that the underlying philosophy of plurilingualism is fully compatible with DST. From a plurilingual perspective, learning is characterized as a “contextualized individual trajectory” (Lowie, 2013, p. 17), which demonstrates congruence with DST concepts such as non-linear development and sensitivity to context. As such, a plurilingual approach inherently frames research questions to investigate the complex processes of individuals (Lowie, 2013). Rather than reducing and de-contextualizing components into linear cause-effect relationships, issues such as individual history and the development of subsystems over time are key areas of investigation. Thus plurilingualism overcomes the problems of the DMM by embracing key DST qualities.

Piccardo and North (in press-b) note that a plurilingual approach to teaching and research uses three concurrent lenses of analysis. The first is the psychocognitive lens, which views the language-learning brain as a dynamic system. The DMM works mainly from this lens but ultimately fails because it does not account for the second, sociocultural lens. The sociocultural lens views language learning as necessarily mediated through context and social interaction. As previously discussed, this lens is crucially absent in the DMM and this contributes to many of its flaws as an adequate model of language learning. The third is the pedagogical lens in which plurilingualism envisions innovations in language pedagogy.

Piccardo (2014; 2018) outlines some of these key pedagogical innovations of plurilingualism. First, as seen in the second lens described above, learning is a socially constructed process. Students need opportunities to explore and co-create language with other students however a teacher may not know every language known by students in his or her plurilingual classroom. Thus the role of a teacher is transformed from that of a lecturer to more of a facilitator (Piccardo, 2014). Another important change is that learning becomes action-oriented. Instead of repeating language exercises that have little to no application outside of the classroom, learners are pushed to strategically and reflectively draw on their plurilingual repertoires to succeed in real-life situations.

Overall plurilingualism overcomes the previously discussed problems with the DMM. By simultaneously considering the three lenses of analysis, it is clear that
Plurilingualism genuinely embraces DST qualities and necessarily investigates the impact of the context and the social on language learning. Plurilingualism also goes beyond the DMM by entailing concrete pedagogical changes. Thus we take a plurilingual perspective in the following section and in this thesis to maintain this view of language learning that is dynamic in nature, socially mediated and pedagogically relevant.

**MLA & Social representations**

Where, then, does MLA play a role in the plurilingual approach? As seen previously in the DMM, MLA is the key emergent factor that facilitates language learning (Herdina & Jessner, 2002). Similarly MLA is a necessity of plurilingual competence, which facilitates learning through awareness and reflection (Piccardo, 2013). The mixing of other languages to enhance learning is seen as a natural strategy rather than as a stigmatized practice (Piccardo, 2018). Thus plurilingualism does not keep languages separate but acknowledges individualized and imbalanced repertoires that can be beneficial to language learning. From both an empirical and pedagogical standpoint, a series of imminent questions arise: What determines whether learners perceive their existing plurilingual repertoires as useful or not? If they are considered useful, how and which parts of their plurilingual repertoires do they draw from to help with the target language?

Castellotti and Moore (2002) argue that this is largely determined by *social representations* of language learning. They state that learners “construct a representation of the interlinguistic distance between their own language system and that of the language being learned” which shape the particular learning strategies used by learners (Castellotti & Moore, 2002, p. 9). Some examples of social representations of language learning include representations of countries and speakers, of similarities and differences between linguistic systems, of the learning process and of plurilingualism (Castellotti & Moore, 2002). These social representations are flexible, dynamic and never permanent. They are developed through communication and sociocultural practices between and among groups. Thus social representations help or hinder plurilingual strategy use by shaping which aspects are deemed relevant to learning (Stratilaki, 2012).

This impact of social representations in language learning has been investigated through studies on participants with high proficiency in multiple languages. In one such
study, Bono and Stratilaki (2009) discuss Herdina and Jessner’s (2002) M-factor and conceptually tie it to what they label the *plurilingual’s potential asset*. The M-factor and the plurilingual’s potential asset are defined similarly. Both operate at the metalinguistic level, are based on the number of known languages in a plurilingual repertoire and consist of communicative and learning strategies that grant plurilinguals a strategic advantage in language learning and use. However Bono and Stratilaki (2009) also explicitly highlight the significant effect of social representations on either blocking or awakening this potential. In their study of plurilingual young adults in France and Germany, it was found that traditional/grammar-based classrooms contribute to the formation of social representations that hinder learning. These include social representations about exaggerated distance between two languages (“Spanish is a Latin language, English is not”), the native speaker model as the goal of language learning and ineffective methods of how to achieve that goal (“You have to learn everything by heart”) (Bono & Stratilaki, 2009, p. 217). In comparison, learning environments in which learners’ plurilingualism is respected and nurtured contribute to positive and helpful representations of oneself and of language learning (Bono & Stratilaki, 2009; Moore & Gajo, 2009).

However such nurturing environments and positive perspectives about plurilingualism may be insufficient in developing a sophisticated level of MLA that grants a strategic advantage in language learning. Oliveira and Ançã (2009) discuss the importance of critically evaluating negative perceptions and fostering positive social representations through classroom interventions. One such example that they discuss is to deconstruct negative social representations about the native speaker model. Through discussions with the participants in the study, Oliveira and Ançã (2009) found that the native speaker myth was still prevalent and hindered the development of learning. It would be beneficial to critique this model and discuss more realistic goals of language learning and pathways of achieving those goals. Another intervention suggested by Oliveira and Ançã (2009) is to help learners develop awareness of perceived and objective language proximity. If learners’ attention were drawn to similarities between similar languages (e.g., English and Spanish in the example above in Bono & Stratilaki, 2009), this would reduce that exaggerated perception of distance and thus allow them to skilfully transfer knowledge from their plurilingual repertoires.
Missing piece: Beyond a description of social representations

From a plurilingual perspective, it is clear that social representations play a critical role in language learning. Where the DMM only identified perception as having an impact on the M-factor, the plurilingual approach explicitly describes social representations and its importance in the development of a plurilingual asset. The in-depth description of social representations and the studies that arose from this perspective led to a better understanding of how individual subjective perceptions operate in learning. As stated in the cited studies above (Castellotti & Moore, 2002; Bono & Stratilaki, 2009; Oliveira & Ançã, 2009), social representations are highly influenced by context and thus this has clear pedagogical implications of how they are fostered or hindered in language classrooms.

However despite providing a detailed description of social representations, the main criticism of the DMM also applies here. Work on social representations is largely descriptive and does not explicate a mechanism of how they actually affect learning or develop over time from various contextual factors (Raudsepp, 2005). This holds important implications for further work in empirical research and pedagogical innovation. How can we empirically investigate the development of social representations and their manifested effects on individuals’ language learning? Although Oliveira and Ançã (2009) discuss possible interventions such as focusing on the native speaker bias or perceived language proximity, it is not clear how teachers can begin implementing these interventions in their classrooms.

De Bot and al. (2007b) also question whether the concept of ‘representations’ conforms with a DST approach to learning. Since DST is inherently interested in development over time, procedural accounts and descriptions of relationships and emergent factors are core aspects of DST research. Yet the term ‘representations’ seems to obscure these aspects. Gallagher (2008), who advocates for a non-representational view, states that the concept of ‘representation’ is “sometimes nothing more than a handy, but often confused and misleading term that is nothing other than a placeholder for an explanation that needs to be cast in dynamical terms of an embodied, environmentally embedded and enactive model” (p.12). Therefore it seems that social representations, as merely descriptive, are not compatible with a DST approach and cannot provide a
procedural explanation of how subjective perceptions shape and are shaped by language learning experiences.

Thus far, the plurilingual perspective overcomes criticisms of the DMM by identifying individuals’ subjective perceptions as key factors to the development of MLA. However it fails to provide an explanation of how and why these subjective perceptions are key factors. This is not a criticism of the plurilingual approach but of the representation construct. In other words, we still need a construct of subjective perceptions that is plurilingual but non-representational. Now that subjective perceptions have been identified through two (fairly) independent domains of research, it is plausible that this could be a key concept in understanding the development of MLA and its impact on language learning. There appears to be some kind of subjective reality that is shaping how they learn and what they determine is transferable across languages. We now turn to the literature on cross-linguistic interaction. Exploring this domain allows us to investigate questions such as, what aspects of language are learners transferring to the target language and from where/which language? What are they not transferring? Looking at empirical studies on transfer might be able to illuminate some insights on this process.

**CROSS-LINGUISTIC INTERACTION**

**Approaches towards the study of language transfer**

Studies on language transfer can be traced back to the 1950’s with Lado’s (1957) contrastive analysis hypothesis. This approach emphasized the role of differences between languages that lead to errors and bad habits in production, for example phonemes in the L2 that are non-existent in the L1. When applied to the classroom, teachers would focus students’ attention to these differences in order to minimize interferences from the L1. The assumption behind this approach then is that knowledge of other languages negatively affects the learning of an additional one. Thus learners should consider languages as separate entities in order to notice and compare the differences between languages. The contrastive analysis hypothesis highly coincides with the monolingual approach to language learning. The use of terminology such as
‘bad habits’, ‘errors’ and ‘interference’ further demonstrates this negative framing of learners as deficient and striving towards the goal of native speaker competence.

In the 1980s, the term ‘interference’ was replaced with ‘cross-linguistic influence’ in order to take a more neutral stance (Sharwood-Smith & Kellerman, 1986; as cited in Otwinowska, 2016). In recent years, it has further shifted to the term ‘cross-linguistic interaction.’ This was to dispel the assumption that transfer was only unidirectional. The growing body of literature has demonstrated that language transfer is multidirectional and represents highly complex relationships between language systems (Herwig, 2001; De Angelis, 2005; Stratilaki, 2006). Thus, the term ‘cross-linguistic interaction’ fits more within a DST and plurilingual perspective as it embraces a multidirectional and dynamic interaction of learned languages over time.

**Cognate Facilitation Effect: Laboratory research**

Various studies have suggested the role of *typological similarity* as a significant factor influencing cross-linguistic interaction (Cenoz, 2001; de Angelis & Selinker, 2001). Typologically similar languages, such as French and Spanish, share many similarities between various linguistic components including orthography, grammatical structure and vocabulary. Thus typologically similar languages are often easier to learn than more typologically distant languages since unknown aspects in the target language can often be effectively deduced based on knowledge in the other language.

This advantage in learning typologically similar languages has been extensively explored in terms of vocabulary and, in particular, *cognates*. Cognates are identical or nearly identical words in both spelling and meaning in two languages. Thus many researchers have suggested that the existence of cognates between a typologically similar pair of languages facilitates vocabulary learning and processing. This phenomenon is defined as the *cognate facilitation effect*. Numerous studies employing word association, picture association, translation and lexical decision tasks have demonstrated this privileged status of cognates in learning and retrieval (Kroll et al., 1998; Szubko-Sitarek, 2011; Dijkstra et al., 2010). This has been attributed to the fact that cognate pairs have both formal (orthographic, phonological) and conceptual (semantic) overlap. Thus, cognates are processed and learned faster than translation equivalents, which have only conceptual overlap, as well as false cognates, which share only formal similarities.
However there are many factors that can enhance or diminish the cognate facilitation effect. Otwinowska (2016) summarizes the various categories of factors that influence lexical cross-linguistic interaction. Here, they are reduced and simplified to the ones that are applicable to cognates:

1) Language-related factors: Cognate facilitation can be modulated by the specificities of the particular language pairs that are being investigated. For example, French to Spanish effects will differ from Italian to Spanish effects due to the particularities of the two languages involved and of the interaction between the two languages. One factor that affects cognate recognition is orthographic similarity. The cognate facilitation effect is significantly higher for identical cognate pairs compared to other cognate pairs that are less orthographically similar (Nagy et al., 1993; Dijkstra et al., 2010). A second factor is word frequency. Recognition was facilitated when the cognate word in the target language is a high frequency word (Dijkstra et al., 2010). A possible third modulating factor is word class. Cognate pairs that are nouns experience a higher facilitation effect. Nouns in general are often learned faster due to being more similar in meaning across languages and are often less marked and more concrete than other word classes (Otwinowska, 2016).

2) Contextual factors: In the previously mentioned studies that employed methods such as word association and lexical decision tasks to investigate the cognate facilitation effect, the cognate pairs are presented in those tasks were isolated from any context. However learners do not often encounter nor process cognates in isolation. Van Hell (2005, p. 2298-2299) notes that all of the language-related factors above are inhibited when the cognate is presented in highly semantically constraining sentences (e.g., “apple” in the sentence, “she took a bite out of the fresh, green…”) because the predictability arising from sentence context reduces co-activation of the related words in other non-target languages.

3) Learner-related factors: Among the same language pairs being used within a similar context, there are still individual factors that can modulate cognate facilitation effects. The first is cumulative language experience. Learners who have more languages tend to process and learn cognates faster (Otwinowska, 2016). These findings reflect the broader MLA studies that demonstrated the MLA advantage that bilinguals and
multilinguals have over monolinguals (Thomas, 1992; Jessner, 1999; Moore, 2006; Charkova, 2003; Rauch et al., 2011; Cenoz, 2013) and the plurilingual potential asset as defined by Bono & Stratilaki (2009). Since recognizing and using cognates is a metalinguistic strategy, this is not a surprising point of convergence.

A second learner-related factor discussed by Otwinowska (2016) is the proficiency levels in both languages. This is also reminiscent of the DMM that suggests that those with higher levels of proficiency in their languages had higher levels of MLA (Stratilaki, 2006; Jessner, 2008; Dillon, 2009). Similarly, cognate facilitation effects from L1 emerge only when a certain level of L2 proficiency is reached. Thus Otwinowska (2016) suggests that a focus on cognates may not be useful until learners reach that proficiency threshold.

The third learner factor that affects the cognate facilitation effect is psychotypology. Psychotypology is defined as an individual’s subjective understanding of language proximity (Kellerman, 1983). This subjective perception of proximity may be very similar or different from the objective typological similarity between two languages. For example one learner may consider English and French as very different languages while another may consider them as similar. Studies demonstrate that learners who perceive the distance between the languages as smaller are more likely to transfer forms to the target language (Cenoz, 2001; De Angelis & Selinker, 2001; Otwinowska, 2016). Thus more distant psychotypological perceptions hinder learners’ ability to recognize, learn and apply cross-linguistic similarities to the target language. Here we can see that psychotypology shares conceptual similarities with social representations. As previously discussed, social representations of exaggerated distance between two languages negatively impacted learning (Bono & Stratilaki, 2009).

The research reviewed thus far suggests that the cognate facilitation effect is a complex construct that can be enhanced or hindered by a variety of different factors. In particular, learner-related factors show convergence with much of what was discussed in the previous chapters by further supporting the highly individualized, contextualized and perceptual nature of MLA. Again, a contextualized process of learning is critical in understanding how these subjective perceptions, social representations and/or psychotypology affect learning. However since most of the studies listed above were
conducted in decontextualized, laboratory settings, they do not investigate how learners actually engage with cognates in a naturalistic learning context. This is the focus of the following section.

**Cognates in the Classroom: Action Research**

It seems plausible that using cognates would be a natural and automatic strategy to employ when learning a typologically similar language. However as stated by Otwinowska (2016, p. 87), “for at least three decades studies have repeatedly shown that cognates remain unnoticed, or tend to be avoided, by learners.” Classroom research has consistently demonstrated that learners do not take advantage of even obvious cognates and do not automatically accept formally similar words as equivalent through mere exposure (Otwinowska, 2016; Helms-Park & Perhan, 2016).

To help students take advantage of cognate relationships in their learning, many studies across various language pairs, age groups and proficiency levels suggest that students need explicit training (Nagy et al., 1993; Molnar, 2010; Dressler et al., 2011; White & Horst, 2012; Otwinowska, 2016; Helms-Park & Perhan, 2016). For example in Helms-Park and Perhan’s (2016) study of Ukrainian-English cognates, university-level Ukrainian EFL learners were placed into one of three groups. The first was the control condition in which students did not receive any specific cognate-awareness raising materials or lessons. The second group was the exposure group where students were given cognate-awareness raising materials such as reading comprehension exercises but there were no dedicated cognate-awareness raising lessons. The third was the experimental condition in which students were given both cognate-awareness raising materials and lessons. The outcome of the study demonstrated learners in the experimental condition benefited from the focus on cognates. However the exposure group did not differ significantly in terms of cognate recognition in comparison to the control group. Thus the authors concluded that mere exposure is not sufficient for students to actually notice and use the cognates that they encounter (Helms-Park & Perhan, 2016).

In order to interpret this lack of discrepancy between the control and exposure groups, Helms-Park and Perhan (2016) draw on the cultural assumptions of education in Ukraine. Strategies such as inferencing based on contextual cues are not often taught and
“individual students are not expected to make assumptions or to guess without a solid factual basis; in fact, students are criticized for making inaccurate guesses” (p. 26). Helms-Park and Perhan (2016) draw on the concept of psychotypology at the linguistic level to explain why English-Ukrainian cognates may be particularly more obscured due to the different scripts. However psychotypology seems to apply at the sociocultural level as well. Mere exposure to cognates may not be sufficient for the learning of those cognate forms if the learning environment enforces strict boundaries and discourages the transfer of knowledge between the languages.

Interpreting the disconnect between the laboratory and classroom

Therefore within a classroom context, cognates do not seem to maintain their privileged status in processing and learning as they do in laboratory settings. Unless teachers explicitly draw learners’ attention to these forms through targeted instruction, learners do not automatically make use of cognates. Otwinowska (2016) suggests two main reasons to interpret the incongruence between the laboratory and classroom research. The first is the specificity of laboratory settings. Laboratory experiments are planned with intricate detail and are often highly controlled. Cognates themselves are chosen with extreme sensitivity based on potential modulating factors such as orthographic similarity, word frequency and word class. These types of studies are also often done with participants that are highly proficient (C1/C2) in both languages of the cognates that are being investigated. Otwinowska (2016) questions how these studies, with highly proficient participants, apply to lower proficiency level learners. Perhaps participants with high levels of proficiency can strategically notice and use cognates but, as previously stated, there is a proficiency threshold that learners must meet before cognates can be useful to learning. In what way do these studies with highly proficient participants apply to learners below this proficiency threshold? Another common criticism to these types of experimental studies is its low ecological validity. As seen above, even embedding cognates within sentences reduces the magnitude of the effect. Then to what extent can these findings from highly controlled conditions be applicable to real-life, dynamically evolving classrooms?

A second factor that may contribute to the discrepancy between these two research settings is psychotypology. Many classrooms still employ a contrastive analysis
approach (Lado, 1957), in which false cognates are more likely to be highlighted due to the persistent belief that they cause learners to make more mistakes. However implicit within this belief is that the creative use of cognates would be detrimental to learning. The outcome of this is that learners often avoid using cognates altogether. This perspective is demonstrated above in the general approach to language education in Ukraine (Helms-Park & Perhan, 2016). Therefore context seems to significantly shape learners’ psychotypological perceptions. These perceptions then affect how learners engage with cross-linguistic similarities such as cognates and whether they can strategically notice and use them.

**Missing piece: Beyond a description of psychotypology**

The concept of psychotypology is invoked by Otwinowska (2016) as an explanatory factor in both laboratory and classroom research for why the cognate facilitation effect is not as strong. It also emerges to explain the discrepancy between laboratory and classroom research. However psychotypology cannot be considered a mere explanatory factor for discrepancies in cognate recognition. As shown in the research above, psychotypology is significantly shaped by the educational context but can also undergo change as demonstrated by effective cognate-instruction interventions. Thus psychotypology is fluid, contextually dependent and susceptible to change. What then exactly is psychotypology explaining about cognate recognition and learning? The discussion should not end at what psychotypology can explain but at explaining psychotypology. Again in this section of empirical studies we see the critical role of subjective perceptions in learning and the lack of investigation into how they actually affect learning.

**THE MISSING PIECE: AN ACCOUNT OF PERCEPTION IN LANGUAGE LEARNING**

The literature summarized above reveals a common thread within MLA research. This is the issue of how subjective and contextualized perception affect learning. Below is a summary of the criticisms from the three perspectives:

- **DMM: Perception:** The DMM theorizes an ideal-typical learning pathway and thus important perceptual factors such as perceived communicative needs are
intentionally put aside. The definite acknowledgement, however superficial, of this phenomenon implies a highly complex, subjective aspect of individual learning. However Herdina and Jessner (2002) give no explanation of how it is shaped or how it affects learning.

- **Plurilingualism: Social representations:** Within the plurilingual perspective, social representations are acknowledged and described as significant factors that contribute to a plurilingual’s potential asset. However there is no account of how social representations work in a non-representational way or how they can be operationalized to be investigated through empirical research.

- **Cross-linguistic interaction: Psychotypology:** There is much converging evidence that it is psychotypology that is being affected through the implementation of cognate awareness-raising interventions. However there is a lack of understanding of what is changed and how it improves students’ awareness.

As seen above, all three terms and perspectives acknowledge some kind of subjective perception that affects language learning. What is needed goes beyond just a detailed description of perception and what it affects. Social representations and psychotypology have both independently provided accounts of this perceptual impact on language learning, noting factors such as cumulative language experience and learning contexts as significantly shaping these perceptions. However, thus far, no adequate explanation of specifically how such perception is shaped or how it affects learning is given. This is an area that has been largely overlooked despite its importance to theoretical and pedagogical advancements. If a procedural account of subjective perception can be developed, this model can be applied and refined through classroom interventions that foster positive perceptions to enhance learning.

**THE ECOLOGICAL PERSPECTIVE & THE THEORY OF AFFORDANCES**

We now turn to the ecological perspective to explore whether it can give us the concepts and tools needed to build this procedural account of perception. Van Lier (2004a) argues that the ecological perspective is a worldview that fundamentally reshapes the relationship between person and environment. He comments on the complexity of the
study of language learning, stating that, “the connections require both a practical, pedagogical and a theoretical, philosophical perspective. The ecological approach developed here is neither a theory nor a method. It is a way of thinking and a way of acting” (van Lier, 2004a, p. 3). A summary of the ecological perspective is given below:

“First, it shifts the emphasis from scientific reductionism to the notion of emergence. Instead of assuming that every phenomenon can be explained in terms of simpler phenomena or components, it says that at every level of development properties emerge that cannot be reduced to those of prior levels. Second, ecology says that not all of cognition and learning can be explained in terms of processes that go on inside the head. Finally, an ecological approach asserts that the perceptual and social activity of the learner, and particularly the verbal and nonverbal interaction in which the learner engages, are central to an understanding of learning. In other words, they do not just facilitate learning, they are learning in a fundamental way.” (van Lier, 2000, p. 246, italics in original)

Overall we can see much conceptual overlap among van Lier’s (2004a) ecological perception, Castellotti and Moore’s (2002) social representations in language learning and Kellerman’s (1983) psychotypology. All three perspectives frame a) the learner as playing an active role in perceiving and interpreting language information and b) the environment as a significant contributor to shaping the possibilities of action made available to the learner. Thus perceptions are context-dependent and highly malleable as demonstrated by all perspectives’ descriptions of the capability of perception to both enhance and hinder learning. However previous constructs failed to provide an account of the process of perception and thus had limited theoretical and pedagogical applications. It is here where the ecological perspective diverges from the previous perspectives because van Lier (2004a) focuses on a procedural account of ecological perception. A focus on process, although often overlooked in other approaches, is the core of the ecological perspective.

As a sort of metatheory that acknowledges and embraces emergence and situatedness, the ecological perspective shares much in common with DST. The first and second points of van Lier’s (2000) description of the ecological perspective clearly demonstrate this congruence. Larsen-Freeman (2018) also comments on how both perspectives understand non-linear development, interconnected subsystems and contextualized nature of learning and thus “ecological theories are systems theories” (p. 59). In the third point, perception comes up again but here it is central to understanding
and shaping our approach to language learning. To describe perception as learning, van Lier (2004b) draws on the theory of affor\-\-\-\-dances.

The Theory of Affordances

The theory of affordances originated from Gibson (1979/1986) in the field of perceptual psychology. Gibson (1979/1986), at that time, novelly applied the ecological perspective to visual perception. This transformed the field by re-envisioning a perceiver as an active engager who perceives and acts on affordances in their environment. Gibson (1979, p.127) defines affordances as “what it offers the animal, what it provides or furnishes, either for good or ill.” In other words, affordances are opportunities or possibilities for action. If affordances are mere possibilities then, it is incongruent with the notion of a passive perceiver. Thus, a perceiver is not a receiver of input who alternates between separate, sequential modes of perception and action. Instead a perceiver is simultaneously an actor who perceives relevant affordances and acts upon them, in turn changing their dynamic environment.

Therefore learning is inherently tied to learning how to perceive (van Lier, 2004b). Instead of conceptualizing learning as receiving and retaining “input” through mechanical instruction and exercise, learning emerges through the skillful activity of extracting relevant information from the diverse perceptual landscape (van Lier, 2007). Rietveld and Kiverstein (2014) provide a more detailed reinterpretation of Gibson’s (1979/1986) original work by extending the construct beyond visual perception to explain the process of general skill acquisition. They argue that Gibson’s (1979/1986) definition of affordances often obscures the complexity of the availability of affordances in the environment. To address this, Rietveld and Kiverstein (2014) draw on Wittgenstein’s (1953) notion of form of life. The form of life includes all aspects of the human niche by operating at three different levels of analysis. These include the human niche in general (in comparison to other animals), general patterns within sociocultural practices (e.g., academia, craftsmanship) and finally at the individual level where particular individuals interact with particular affordances. Thus Wittgenstein’s (1953) form of life situates affordances within the human and sociocultural context while also acknowledging individual agency within these contexts.
Situating the individual engagement of affordances within sociocultural practices then implies a normative dimension to acting upon affordances. This is also apparent in Gibson’s (1979, p. 127) original definition, citing that affordances can be used “for good or for ill.” Individuals learn skills and abilities by following the norms and guidance of experts in a practice. Thus particular actions can be considered correct or incorrect and/or improve or worsen a particular situation. Gibson (1979/1986) calls this process the education of attention. As novices become better at engaging with the right affordances as guided by experts, they selectively learn to pick up the right affordances while ignoring ones as deemed irrelevant by the normative standards of their practice. This leads to the development of a skill where with practice, adequate and effective engagement with the correct affordances becomes automatic (Rietveld & Kiverstein, 2014).

Detection and interaction with affordances then, is dependent on a particular individual’s skills and needs within a particular context (Rietveld & Kiverstein, 2014). All individuals have different skills and needs and thus different individuals will pick up on different affordances within the same context. There exist a rich and vast amount of affordances in any given context however it is only those affordances that are relevant to an individual’s needs that will become solicitations and invite action (Rietveld & Kiverstein, 2014).

Drawing on Rietveld and Kiverstein’s (2014) conceptualization of affordances illuminates van Lier’s (2004a; 2004b) ecological approach to language learning. The theory of affordances provides a theoretical account that explains the how of perception by describing the nature of affordances and the process of how it affects perception and thus, learning. From an ecological perspective employing the theory of affordances then, “…the nature of language is changed from a product, a static system that can be described in terms of its inner structure and components (structuralism), to a process of creating, co-creating, sharing and exchanging meanings across speakers, time and space” (van Lier, 2008, p. 599, italics in original).

Ecology, Affordances and Plurilingualism

By drawing on ecological perception and the theory of affordances we can see how the perceptual processes of interacting with affordances is fundamentally the process
of learning. Van Lier (2004b) then extends this concept to tie perception to language learning. This applies to the linguistic domain such as at the phonological and morphological level where learners are deciphering differences and patterns in pronunciation and word structure. However van Lier (2004b) also extends this argument to the broader social domain stating that the perception of self, others, languages and the environment also affects how learners make meaning from context. He states that it is this perception of the self and of the context that contributes to the development of contextualized MLA as well as identity development in the new language and culture (van Lier, 2004b).

Here we can see that van Lier’s approach converges with plurilingualism. The ecological view of language education emphasizes the role of others, the environment and the socially mediated dimension of language learning. These are all important tenets of plurilingualism as well. Piccardo (2017) also highlights the importance of perception in the plurilingual approach. This interrelated and cyclical understanding of ecological perception entails active exploration in language learning and the development of metalinguistic skills. Thus the affordance construct is useful in conceptualizing and ultimately in mobilizing an individual’s plurilingual potential asset (Piccardo, 2017).

The plurilingual, action-oriented approach to learning also emerges as a natural pedagogical extension of the ecological perspective (van Lier, 2004a; 2007; Piccardo, 2017). Its focus on contextualizing learning in real-life situations frames learning as collaborative, explorative and creative thereby expanding the perceptual landscape into these social and contextually-sensitive domains. Therefore van Lier (2004a) is cautious of concluding that isolating linguistic forms is always the ideal method of learning. If explicit instruction on linguistic forms is embedded within a larger focus on contextualized, action-oriented learning, a focus on form can supplement and enhance learning. Such focus on form though should only be supplemental to action-oriented learning. Classrooms that consist only of decontextualized, mechanical exercises on form severely restrict the perceptual landscape. This can hinder the development of MLA and identity formation in the target language.

Therefore the ecological perspective and the theory of affordances enhance the plurilingual approach. As previously seen, the social representation construct arising out
of the plurilingualism was not sufficient in explaining perception. Social representations were highly descriptive but did not provide the tools to understand specifically how these representations developed and could be changed over time. By being representational, they were also not fully compatible with a DST/ecological approach towards language learning. However, the affordance construct fully aligns with DST/ecological theory by providing a procedural account of perception and thus a detailed developmental account of a plurilingual asset (Piccardo, 2017).

Interpreting Perceptions of Language Proximity through the Theory of Affordances

We now take converging insights from the theory of affordances and plurilingualism to understand perceptions of language proximity. Below are three points of convergence that are important to consider in the empirical investigation of perceptions of language proximity: (1) multiple levels of analysis, (2) the training of subjective perceptions and (3) individual learner perceptions.

(1) **Multiple levels of analysis:** Language research and education are necessarily embedded within multiple and simultaneous levels of analysis. This is reminiscent of the three lenses of the plurilingual approach (Piccardo & North, in press-b), Rietveld and Kiverstein’s (2016) reference to Wittgenstein’s (1953) form of life and nested dynamical subsystems (de Bot et al., 2007a). Minimizing one’s perspective through one particular lens often limits the scope of the research and the insights that can be uncovered. This was demonstrated in the DMM where a focus on general-typical patterns without considering context and individual trajectories of development ultimately failed to be an adequate model of language learning and MLA. Therefore when investigating perceptions of language proximity, it will be important to look through and alternate between varying levels of context and environment as well as individual perspectives and progress.

(2) **Training subjective perceptions:** There is a standard of correctness for language education that is rooted in the educational values and assumptions of a country, a community, a school and a teacher. As is defined by this standard, learners are guided to selectively attend to affordances that are deemed important or right in language learning. Rietveld and Kiverstein (2014) highlight how this education of attention positively contributes to the development of expertise. However Piccardo and North (in
press-a) note that this guidance towards the norm while ignoring other affordances can potentially be detrimental if learners have negative experiences and the norms are restrictive and rigid. This converges with what has previously been demonstrated in research on psychotypology and social representations. With most institutions and teachers operating under the assumption of the native speaker ideal and/or the contrastive analysis hypothesis, perhaps learners are being trained to build psychotypological judgments that selectively ignore similarities among their languages, such as cognates, that may in fact enhance their learning. Conversely then, using cognates can also be trained, as shown in the studies implementing explicit cognate instruction (Molnar, 2010; Dressler et al., 2011; White & Horst, 2012; Helms-Park & Perhan, 2016).

(3) Individual learner perceptions: Contextualizing affordances within a form of life then situates the perceiver to individually engage with relevant affordances. This focus on the individual’s particular skills and needs in their ability to act upon relevant affordances highlights the importance of exploring individual perspectives in learning and research (Gabrys-Barker & Otwinowska, 2012). From an ecological perspective, investigating learners’ perceptions can help us discover more about how they engage with affordances and how specific affordances become solicitations for action.

Overall it is clear that the theory of affordances overcomes the social representational and psychotypological explanation of perception. It is a non-representational and procedural account detailing explicitly how perceptions of language proximity operate in language learning. Thus, the application of the theory of affordances to perceptions of language proximity entails specific research questions and guidelines. Previous studies on explicit instruction of cognates provide empirical support for the affordance-based explanation of (2) training subjective perceptions. The following section explores empirical work that more explicitly embraces the theory of affordances.

Research on Affordances in Applied Linguistics

Since van Lier’s publications in the early 2000s, empirical research on affordances in applied linguistics has not been particularly developed. Among the studies that have been done, it is quite reasonable to name Aronin and Singleton among the main advocates of the theory of affordances within the field. Aronin and Singleton (2012)
have discussed across various publications applying the theory of affordances to language learning research and teaching. They state that the theory of affordances can be applied to both abstract theorizations of learning and detailed, practical research. Aronin and Singleton (2010) also propose categorizations of types of affordances such as individual vs. social, surefire vs. probabilistic, goal vs. happening affordances. Thus to further theoretical research on affordances in multilingualism, they developed a triangle model dividing the user, setting and languages at each end of the triangle which creates a space full of affordances specific to any particular user and their combination of languages in any particular setting (Aronin & Singleton, 2012).

However, besides these two authors, work done on affordances in language learning appears to be quite scarce. Dewaele (2010) and Otwinowska (2016) draw on it briefly, suggesting that multilinguals at higher proficiencies perceive and take advantage of more affordances due to their cumulative language experience. In other instances, the theory of affordances is often limited to interpreting non-traditional learning settings such as the unique learning opportunities provided to students in technology-mediated classrooms, gaming environments, immersion contexts or general learning pursued outside of the classroom (Menezes, 2001; Lai et al., 2007; Kalaja et al., 2011; Rama et al., 2012).

This lack of application can perhaps be attributed to the fact that the aforementioned research that utilized the theory of affordances does not reflect van Lier’s (2004a) original vision. These studies utilize the affordance construct from a largely SCT lens rather than from a DST perspective and so it is often used as a description or interpretation of happenings rather than a focus on the process (de Bot et al., 2007b).

Also in SCT fashion, Aronin and Singleton (2010; 2012) have drawn distinct boundaries between the individual and environment by categorizing types of affordances (individual vs social) and separating the user from their environment such as in their triangle model. These divisions do not reflect van Lier’s (2004a) ecological approach, a plurilingual perspective (Piccardo, 2017) or Gibson’s (1979/1986) original vision in which the relationship between individual and environment is not separate but in dynamic interrelation. To date, there are very few studies that have attempted to apply van Lier’s
approach into empirical research. Brief summaries of these publications are presented below:

(1) Miller (2005) explored ESL learners and teachers in collaborative discourse as learners gained agency and self-regulation abilities in their L2 writing. She proposed that the affordances construct unites input, output and interaction into a dynamic feedback cycle in which learners learn to engage with affordances that enhance self-regulation. Thus an affordance-rich classroom is one that fosters organization, dynamic feedback loops in discourse and learner agency. In comparison, an affordance-constrained classroom does none of these.

(2) Darhower (2008) investigated how English-speaking learners of Spanish and Spanish-speaking learners of English create and engage with language learning affordances in bilingual chat sessions. These sessions were found to not be the most ideal learning situations for going in depth into linguistic forms and meanings since learners used them more for building intercultural relationships and co-constructive meaning-making. This highlights the importance of understanding learners’ perceptions as there is sometimes a discrepancy between learners’ focus on the task and teacher’s intentions.

(3) Thoms (2014) was a theoretical-exploratory study on how a Latin American literature instructor turned teacher-learner talk into affordances for both language and content learning for the whole class. The instructor’s success or failure of doing so was confirmed with learners’ stimulated recalls of the classroom sessions. Thoms (2014) emphasizes the role of teachers as mediators in collaborative meaning-making classrooms. The stimulated recalls were also important to understanding which discursive moves made by the teacher opened up more affordances and solicitations for learning. However Thoms (2014) makes it explicit that this study did not demonstrate whether learners’ interactions with affordances actually impacted their learning.

(4) Thoms and Poole (2017) explored how the theory of affordances illuminated the advantages and disadvantages of an online tool in an advanced L2 literature class. The tool provided a virtual and collaborative environment in which learners engaged with linguistic, literary and social affordances. Interviews with learners however showed somewhat negative perceptions of the tool such as that it fosters groupthink and incites anxiety to contribute a unique comment. Here too, the authors clearly state that
although they only investigate how learners engage with affordances, they cannot speak to whether or how learners used affordances to impact their learning.

These studies above have fully embraced and imported the theory of affordances into research in accordance with an ecological and plurilingual worldview. Affordances were used to re-interpret the dynamics of learning environments and made clear the importance of investigating learner perceptions. However as cited by the latter two studies, current work has not yet ventured into the process of how and which affordances affect learning. The ecological perspective and the affordances construct are highly attractive at the abstract level but lack specificity and understanding in application to empirical research. Perhaps this is why there is a dearth of in-depth affordance-based studies such as those summarized above while many more apply the theory only superficially. Thus more theoretical and applied work is needed to understand how learners engage with affordances and also the impact of that engagement on their learning.

THE STUDY

This study employs the theory of affordances from a plurilingual and ecological perspective to investigate learners’ perceptions about language and its impact on their learning. In particular, we use Rietveld and Kiverstein’s (2014) interpretation of the theory of affordances to understand the processes of psychotypology that influence cognate recognition. In Toronto, the context where this study takes place, English is a majority language and French is a commonly learned language due to its status as Canada’s second official language. This particular language pair contains many cognates, which allows us to investigate perceptions of language proximity among a diverse pool of learners.

Studying the process of perception from a plurilingual perspective implies the necessity of a methodology that focuses on development and change over time. Thus approaches such as case studies, ethnographies and action research are preferred since they are longitudinal and exploratory with a focus on individual trajectories (Larsen-Freeman, 2008a). In the case where conducting such studies is not feasible, another option to investigate process is to look at a product of that process (van Lier, 2004a). Through deep description and retrodiction, the influential factors on a developmental
process and the relationships between them can be inferred from the outcome (product) (Larsen-Freeman & Cameron, 2008). Although ideally, van Lier (2004a) notes that studies should look at process as process. In other words, the development of any phenomena should be directly investigated rather than inferred through its outcome. However due to the infeasibility of pursuing longitudinal research in a master’s thesis, this study has opted to explore the development of perceptions of language proximity by inferring key factors from participants’ histories and current perceptions.

Since perceptions of language proximity could not be tracked over time in this study, various methods will be used to investigate the current form of these perceptions (product). As previously seen in Otwinowska (2016), many different language-related, contextual and learner-related factors had enhancing or diminishing effects on psychotypology. However an explanation of how those factors interacted to impact psychotypology and the overall influence on learning was absent. In this study, the impact of perceptions of language proximity on learning is manifested in participants’ levels of cognate recognition. Cognate recognition is an indicator of which affordances participants can actually “see.” In addition to assessing cognate recognition levels, results from other methods will supplement insights in order to retroactively explore various influences on perceptions of language proximity.

Therefore this study will operate on three levels of analysis. First, at the level of the linguistic environment, I explore French-English specific factors that affect perceptions of language proximity. This is an important level of analysis for Gibson (1979/1986) as well who considered it essential to include aspects of the environment (in this case, linguistic) into accounts of perception. Second, the contextual level examines effects of contextual factors such as language learning environment on perceptions of language proximity. Finally at the third level, I use description and retrodiction (Larsen-Freeman & Cameron, 2008b) to delve in-depth into specific individuals and their unique combinations of factors to interpret their particular perceptions of language proximity. These three levels of analysis are summarized as research questions below:

RQ1) What are the characteristics of French-English cognates that are the most-often and least-often identified by learners?

RQ2) What are some commonly held perceptions about language proximity among
learners who are highly aware of cognates compared to learners who are not?

RQ3) How are individual learners’ perceptions of French-English proximity actualized through their recognition of French-English cognates?
III. METHODOLOGY

Overview

This is a mixed methods study in which data consolidation occurred at the analysis stage. Participants completed four tasks in this study. The first task was a drawing task where participants were prompted to draw themselves speaking the languages they know. The second task was a language background questionnaire used to collect information about general demographic variables, learning contexts and self-reported levels of proficiency. In the third task, cognate recognition was assessed through the identification of cognates in a French reading passage. The fourth and final task was a semi-structured interview, in which participants were prompted to describe their drawings, their learning experiences in French and their perceptions about the proximity between English and French. Findings from the four data sources were consolidated in order to investigate participants’ perceptions of French-English proximity. A more in-depth description of each phase of the research process is presented below.

Participants

Participants in this study were 23 undergraduate students enrolled in advanced French classes. Participants were not required to be native English speakers, but high proficiency in English was mandatory since all communication and instructions were conducted in English. Students with knowledge of additional languages were also welcome to participate, resulting in a sample of diverse French learners.

Sampling and Recruitment

Undergraduate students enrolled in French-language classes were selected through purposive sampling to achieve comparability (Teddlie & Yu, 2007). Since the nature of the study and the research questions necessitate the recruitment of French-language learners, students enrolled in third and fourth year level French-language classes were selectively chosen due to their moderate proficiency and experience with the language (at least 3 years, minimum B1 level). This allowed access to a range of students with different languages and perspectives. After discussion with the consenting French professors, I was given a few minutes of in-class time to describe the study and distribute
recruitment handouts to the students. Interested students then contacted me and individual data collection sessions were arranged for each student. At the beginning of each session, students were given consent forms and information letters prior to completing the tasks (see Appendix A).

**Data Collection Methods**

1. **Drawing task:** In a literature review of studies employing visual methods, Pain (2012) demonstrated that drawings promote reflection and facilitate the expression of abstract and/or difficult-to-verbalize concepts. It frees both the creator and the evaluator from linguistic constraints and reductionist thinking (Simons & McCormack, 2007). Thus the drawing task used in this study is adapted from Melo-Pfeifer’s (2015) study in which participants are given a blank paper and the short instruction to “draw yourself speaking the languages you know.” Although many visual methods in multilingual research tend to prefer the “silhouette” drawings such as in Dressler (2015), this type of blank drawing was chosen as it allows for more creativity and diverse visual representations.

   The drawing was the first task that participants completed among the four as to not inhibit creative thinking by situating it after other more traditional methods (see Appendix B). Participants were provided with coloured pencils and markers and were prompted with open-ended questions to make them feel comfortable with this unconventional research method. Participants who immediately criticized their own drawing skills were reassured that their artistic abilities would not be judged in any way and were asked to only put on paper their own personal visual representation of themselves and their languages. Example drawings or suggestions were not given due a possibility of inducing specific visual representations but any creative ideas that participants themselves suggested were encouraged. During the semi-structured interview section (described below), participants were prompted to explain their drawings and expand on any ideas they had drawn.

2. **Language background questionnaire:** A questionnaire was also administered to collect details about participants’ language learning histories and experiences (see Appendix C). This questionnaire is adapted from Li et al.’s (2014) Language History Questionnaire (LHQ 2.0) and the Council of Europe’s (2001) Self-
Assessment Grid based on the Common European Framework of Reference for Languages (CEFR) (see Appendix D). The full LHQ (Li et al., 2014) is an extensive 8-page questionnaire pertaining to all aspects of language learning history such as the length of stay in various countries, strength of foreign accent and the estimated number of hours engaged in various activities in the languages learned/studied. Three questions were taken from the LHQ (Li et al., 2014) based on their relevance to this study. These three questions pertained to the participants’:

- (1) native and studied/learned language(s)
- (2) age at which each language was used in various social environments
- (3) self-assessment of reception, production and interaction skills in each language

The original LHQ’s self-assessment question was based on a 7-point Likert scale according to the following scale: 1-very poor, 2-poor, 3-limited, 4-functional, 5-good, 6-very good, 7-native-like. This scale, while also being vague in description, invokes the native speaker ideal as seen in the negative framing of the lowest category (1-very poor) and the native speaker at the highest category (7-native-like). Therefore this scale was discarded and replaced with the Council of Europe’s (2001) Self-Assessment Grid based on the CEFR levels (A1, A2, B1, B2, C1, C2). Each language skill (listening, reading, spoken interaction, spoken production, writing) is given descriptions of what language learners can do at each CEFR level and participants were to select the level that best described their performance for each skill in each language.

(3) Cognate recognition task: Participants’ cognate recognition was assessed using a French reading passage (see Appendix E). The passage used was a comprehension exercise taken from the French learning website, Bonjour de France, for its similar length to Otwinowska’s (2009) reading passage and appropriate target level for the participants (B2 level). The passage is 715 words long consisting of 154 instances of 113 different cognates throughout (see Validity Issues below to see how cognate status was determined). Participants were asked to read the passage and were given the instruction to underline any French words that look, sound and mean something similar to a word in English. This task is adapted from Otwinowska-Kasztelanic (2009) in which adult Polish learners of English were similarly assessed on their cognate recognition. As found by Otwinowska-Kasztelanic (2009), receptive rather than productive tests are more
valid measures of awareness since the construct is concerned with one’s understanding of the cognate relationship and not their ability to articulate that relationship. A task time limit of 6 minutes originally implemented in Otwinowska-Kasztelanic (2009) was discarded for the following reasons. First, Otwinowska-Kasztelanic (2009) did not explicitly justify the use of a time limit so it is unclear whether this was a necessary constraint. Second, if affordances do have an impact on participants’ ability to recognize cognates, time should not be an important factor.

(4) Semi-structured interview: A semi-structured format was used to elicit participants’ perceptions about language proximity and their learning experiences (see Appendix F). Participants were prompted to describe their drawings, language learning experiences, how they learn French and their views on the relationship between English and French. The semi-structured format was chosen because its flexibility. It allows the interviewer to adapt the pacing, order and style of the interview to elicit the most elaborate responses from the interviewee. The semi-structured format is particularly suitable in gaining insight into the way the interviewees perceive the social world (Qu & Dumay, 2011). This study also adapts a perspective that posits interviews as situated accounts inseparable from their social contexts (Qu & Dumay, 2011). The interview is not seen as an instrumental tool for data collection but as a reciprocal and participatory interaction between the interviewer and the interviewee that evokes insights into the interviewee’s experiences and the research themes (Kvale, 1996).

Data Analysis Procedure

(1) Semi-structured Interview: Audio files of the interviews were transcribed into text documents. The documents were then uploaded to NVivo for further analysis, excluding one participant did not consent to the interview being recorded. In this case, notes taken during the unrecorded interview were directly uploaded to NVivo. In order to develop the coding scheme, this study adopted a theoretically driven inductive approach, which requires coding to be informed by both data and theory in a multi-staged process (Syed & Nelson, 2015). The first step consists of creating a large list of exploratory, emergent and data-driven nodes. This first coding scheme consisted 63 nodes and 15 child nodes within 12 different node categories. Then in a recursive process of revisiting the interview responses, the list of emergent themes, results from the other methods and
the relevant literature, the list was reduced to 10 nodes and 28 child nodes within 2 categories (see Appendix G).

(2) **Drawing task**: The participants’ drawings were scanned and uploaded to NVivo. The drawings were viewed adjacent to participants’ explanations of their drawings by selecting relevant regions and inputting their explanations under the Content column in NVivo. The drawings were mostly analyzed deductively using a simplified version of Melo-Pfeifer’s emergent themes. The explanatory interview excerpts were included with all other interview responses and analyzed through a theoretically driven inductive approach as described above.

(3) **Language background questionnaire**: Participants’ responses to the questionnaire were input into an Excel spreadsheet. This data was then uploaded to NVivo as case attributes (e.g., proficiency levels in English and French, additional languages and learning contexts).

(4) **Cognate recognition task**: Participants’ underlined words were compared and tallied on an Excel spreadsheet based on a list consisting of the 154 cognates in the passage (see Validity Issues section below regarding how this list was aggregated). Each participant was then associated with a score ranging from 0-154, which was based on the number of cognates recognized. Scores were then divided into the following categories: Low CR (0 - 50% of cognates recognized), Mid CR (51 - 79%) and High CR (80 - 100%). This CR grouping was then added as a case attribute in NVivo. Cognates were described based on three categories: orthographic similarity (Schepens et al., 2012), French word frequency and word class (New et al., 2001; 2007). A more in-depth discussion of these categories is presented in the Discussion Part 1.

**Data Consolidation**

The research questions are repeated here for convenience:

RQ1) What are the characteristics of French-English cognates that are the most-often and least-often identified by learners?

RQ2) What are some commonly held perceptions about language proximity among learners who are highly aware of cognates compared to learners who are not?

RQ3) How are individual learners’ perceptions of French-English proximity actualized through their recognition of French-English cognates?
The first research question explores the descriptive characteristics of the most easily recognizable and the most obscure cognates within the passage. Cognates will first be ordered from most recognizable to least recognizable based on how many participants recognized each word. The top 25 cognates in both categories will then be compared based on their characteristics such as orthographic similarity, word frequency and word class.

As seen above, RQ2 requires investigation into the relationship between individual/contextual factors and cognate recognition. To address RQ2, matrix query coding feature of NVivo was used to compare and observe patterns among variables. The main advantage of matrix queries is that it transforms references coded into frequency counts to be compared against case attributes while also maintaining the option to switch back and forth between the frequency counts and the rich text (Sorensen, 2008). In order to perform matrix queries, each case attribute (e.g., learning context) was appropriately divided into 2-4 categories (e.g., Immersion/Extended, Core French, FSL etc.). After CR scores were finalized, CR group was also added as a case attribute with 3 categories (Low, Mid, High CR). The 10 nodes were categorized based on types of perceptions (e.g., perceptions about cognates), which further divided in child nodes based on participants’ particular perceptions (e.g., cognates are helpful or cognates are misleading). Each case was compared to each node category to uncover initial quantitative trends and explore coded excerpts more in-depth.

The third research question narrows the scope to focus on two individual participants and their specific perceptions of French-English proximity. This section will use description and retrodiction to integrate insights from the previous two sections to interpret the two cases.

Validity Issues

There are a number of potential validity threats in this study, which will be addressed below.

(1) Lack of control over and assessment of French proficiency levels: A few steps were taken to mediate this issue. First, third-year and fourth-year level classes were chosen due to their closest similarity in their targeted levels, which were B1 and B1+.
respectively (in comparison to a second-year level class which is targeted at a A2 level) (anonymous French professor, personal communication, May 10, 2017). Second, self-assessment of proficiency was included in the questionnaire to give an approximate measure of participants’ levels of proficiency in each known language. Although there are known issues with self-assessment measures, the Council of Europe’s (2001) Self-Assessment Grid has undergone a rigorous validation process (North & Schneider, 1998).

(2) Validity of arts-based methods: There is always the danger of misrepresenting a participant’s voice, especially in interpretive and creative designs. Rolling (2010) suggests that this internal validity threat can be reframed as interpretative validity. From an ecological perspective, any effect is caused by a dynamic interaction of multiple variables and thus it is not plausible to tease out one specific cause for one effect. Therefore as a way to supplement the trustworthiness of my interpretations of the participants’ drawings, these interpretations were built based on coherence with participants’ responses from the interview, questionnaire and the cognate recognition task (Simons & McCormack, 2007).

(3) Lack of control over selected cognates: Since an existing passage was chosen, there was no control over what cognates were included or the characteristics of these cognates (e.g., word frequency, word class, orthographic similarity). However in accordance with DST/ ecological framework exploring contextualized affordances, this study aims to focus on cognate recognition in context. Although the reading of the passage was somewhat of a decontextualized task, it is important that cognates are embedded in sentences in naturalistic text (Van Hell, 2005; Otwinowska, 2016). Therefore in order to address this issue, a three-step process of creating a cognate list was implemented (see below). Language-factors (word frequency, word class and orthographic similarity) were then retroactively determined and investigated to see if they had any significant impact on cognate recognition.

(4) Cognate selection criteria: Although cognates are generally known to be words with identical or similar spelling and meaning in two languages, there are no exact criteria to determine whether or not a word is considered a cognate. This study adopts Potapova et al.’s (2016) approach to cognate identification methods to resolve this issue. In Potapova et al.’s (2016) methodological comparison study, the most accurate criteria
of determining cognate status combined both objective and subjective methods of identification. In this study, my hybrid criteria consisted of two different sources to determine cognate status. As a preliminary step, a list of words was compiled from the participants’ judgments of cognates from all words they had underlined in the cognate recognition task. Following this, the subjective criteria was provided by back-translations (BT) by six C2 level English speakers with no knowledge of French, as was done in Potapova et al. (2016). Second is the objective criteria. Although Potapova et al. (2016) used a phonological similarity scale as their objective criteria, I have decided to use normalized Levenshtein distance (NLD) (Schepens et al., 2012; Otwinowska, 2016). NLD calculates the orthographic similarity between two words on a scale of 0 to 1, with 1 noting an orthographically identical pair (table-table) and 0 representing no overlap (dog-chien). Since this study requires both the participants and C2 English back-translators to only read silently, a scale focusing on orthography was preferred. The NLD has also been reliably validated as scale of orthographic similarity by Schepens et al., (2012) (see further description of NLD in Discussion: Part1). Therefore words were deemed cognates if they surpassed the following criteria: an NLD score of 0.5 or higher and a BT score of 4 (out of 6) or higher. Words that satisfied only one criteria and not the other were not selected as cognates. This resulted in a list of 113 unique cognate pairs and a total of 154 instances of cognates in the passage.

False and ambiguous cognates were not included in the cognate list. Although investigation into how participants perceive such cognate pairs would perhaps provide important insights into language perception, this was beyond the scope of this study and so these cognate pairs were discarded. However English to French or French to English loan and borrowed words were included in the cognate list. Jarvis (2009) suggests that genetically-related cognates and cognates derived from language contact are processed and used similarly by learners (as cited in Otwinowska, 2016).
### Research Questions

<table>
<thead>
<tr>
<th>RQ1</th>
<th>What are the characteristics of French-English cognates that are the most-often and least-often identified by learners?</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ2</td>
<td>What are some commonly held perceptions about language proximity among learners who are highly aware of cognates compared to learners who are not?</td>
</tr>
<tr>
<td>RQ3</td>
<td>How are individual learners’ perceptions of language proximity actualized through their recognition of French-English cognates?</td>
</tr>
</tbody>
</table>

### Participants

Undergraduate English-speaking enrolled in third and fourth year level French language course

### Data Collection and Analysis

1. **Drawing task**
   - Code based on Melo-Pfeifer’s (2015) categories and emergent themes

2. **Language background questionnaire**
   - Categorize language background characteristics (e.g., French learning context, proficiency level) into case attributes

3. **Cognate recognition task**
   - Calculate participants’ CR scores and assign group (Low, Mid, High)
   - Determine descriptive characteristics of selected cognates (e.g., word class, frequency, orthographic similarity)

4. **Semi-structured interview**
   - Code using a theoretically-driven inductive approach

<table>
<thead>
<tr>
<th>Table 1: Overview of Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cognate Recognition Task</strong></td>
</tr>
<tr>
<td>Select cognates based on inclusion criteria</td>
</tr>
<tr>
<td><strong>Language Background Questionnaire</strong></td>
</tr>
<tr>
<td>Categorizations of language background characteristics</td>
</tr>
<tr>
<td><strong>Semi-structured Interview</strong></td>
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<tr>
<td>Code using theoretically-driven inductive approach</td>
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<tr>
<td><strong>Drawing Task</strong></td>
</tr>
<tr>
<td>Code based on Melo-Pfeifer (2015) and emergent themes</td>
</tr>
</tbody>
</table>

**Figure 2: Data consolidation process**
IV. RESULTS

Descriptive characteristics of participants

Descriptive information about the 23 participants was aggregated from their responses from the language background questionnaire. The tables below and the following discussion of categories reflect the importance of understanding the impact of individuals’ diverse language learning histories on cognate recognition (Otwinowska, 2016). All names are pseudonyms. See below for descriptions of the categories.

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>French level</th>
<th>French learning context</th>
<th>English level</th>
<th>English learning context</th>
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<td>1</td>
<td>April</td>
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<td>Core French</td>
<td>C2</td>
<td>ESL</td>
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<td>C2</td>
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</tr>
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</tr>
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<td>University</td>
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Table 2: Participants’ French and English proficiency levels and learning contexts
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<tr>
<th>#</th>
<th>Name</th>
<th># of additional languages</th>
<th>Additional Languages</th>
<th>Typological closeness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>April</td>
<td>1</td>
<td>Cantonese</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Megan</td>
<td>1</td>
<td>German</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Haley</td>
<td>0</td>
<td>None</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Jacqueline</td>
<td>1</td>
<td>Greek</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Paula</td>
<td>0</td>
<td>None</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Peter</td>
<td>1</td>
<td>Mandarin</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Krystal</td>
<td>3</td>
<td>Cantonese, Mandarin, Spanish</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Chelsea</td>
<td>2</td>
<td>Serbo-croatian, Spanish</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Sophia</td>
<td>1</td>
<td>Russian</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>Ryan</td>
<td>2</td>
<td>Mauritian Creole, Hindi</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>Grace</td>
<td>1</td>
<td>Spanish</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>Samantha</td>
<td>3</td>
<td>Turkish, Macedonian, Spanish</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>Ashley</td>
<td>1</td>
<td>Spanish</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>Leah</td>
<td>4</td>
<td>Korean, German, Mandarin, Japanese</td>
<td>2</td>
</tr>
<tr>
<td>15</td>
<td>Caleb</td>
<td>1</td>
<td>Italian</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>Ian</td>
<td>1</td>
<td>Nepali</td>
<td>1</td>
</tr>
<tr>
<td>17</td>
<td>Vivian</td>
<td>2</td>
<td>Latin, Ancient Greek</td>
<td>1</td>
</tr>
<tr>
<td>18</td>
<td>Wes</td>
<td>3</td>
<td>Cantonese, Mandarin, Spanish</td>
<td>3</td>
</tr>
<tr>
<td>19</td>
<td>Evelyn</td>
<td>2</td>
<td>Spanish, German</td>
<td>4</td>
</tr>
<tr>
<td>20</td>
<td>Tyler</td>
<td>2</td>
<td>Mandarin, German</td>
<td>2</td>
</tr>
<tr>
<td>21</td>
<td>Brittany</td>
<td>2</td>
<td>Japanese, Mandarin</td>
<td>1</td>
</tr>
<tr>
<td>22</td>
<td>Dianne</td>
<td>2</td>
<td>Macedonian, Ukrainian</td>
<td>2</td>
</tr>
<tr>
<td>23</td>
<td>Wendy</td>
<td>2</td>
<td>Ukrainian, Spanish</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 3: Participants’ additional languages and typological closeness scores

1) English and French Proficiency levels:

<table>
<thead>
<tr>
<th>English proficiency level</th>
<th>French proficiency level</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1 3 (13.0%)</td>
<td>B1 6 (26.1%)</td>
</tr>
<tr>
<td>C2 20 (87.0%)</td>
<td>B2 13 (56.5%)</td>
</tr>
<tr>
<td></td>
<td>C1 1 (4.3%)</td>
</tr>
<tr>
<td></td>
<td>C2 3 (13.0%)</td>
</tr>
</tbody>
</table>

Participants identified their English and French levels (A1 to C2) in the five categories listed on the self-assessment page (listening, reading, spoken interaction,
spoken production, writing). The single proficiency score here is represented as an average of those five categories. As anticipated and required, all participants showed a high level of proficiency in English. In French, the majority of students also fell into expected proficiency categories, mainly B1 and B2 as the classes that were recruited from were targeted at the levels B1 and B1+. Surprisingly there were three students who reported that their French level was C2. It would be reasonable to assume that these students have overestimated their abilities since the class they are currently enrolled in would not be at an appropriate level. MacIntyre et al. (1997) relate an overestimation of abilities to learners who have less language anxiety while those with higher levels of language anxiety tend to underestimate their abilities. Although investigation into this issue is beyond the scope of this paper, it provides a preliminary explanation for some of the inflated self-reports of proficiency level.

2) English and French learning contexts:

<table>
<thead>
<tr>
<th>English learning context</th>
<th>French learning context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native 16 (69.6%)</td>
<td>Core 8 (34.8%)</td>
</tr>
<tr>
<td>ESL 5 (21.8%)</td>
<td>FSL 5 (21.7%)</td>
</tr>
<tr>
<td>EFL 2 (8.7%)</td>
<td>Immersion/Extended 8 (34.8%)</td>
</tr>
<tr>
<td></td>
<td>University 2 (8.7%)</td>
</tr>
</tbody>
</table>

The majority of participants were educated and lived in Ontario thus contributing to the high number of native English speakers. Those who learned English as a Second Language (ESL) reported that they started learning it between the ages of 3-8. The two participants who learned English as a Foreign Language (EFL) reported that they started learning it within the ages of 6-9.

Participants’ French learning contexts were divided into four categories. Core includes all participants who were enrolled in Core French programs in Ontario and other provinces as well as participants who learned French as a Foreign Language outside of Canada. The French as a Second Language (FSL) category includes participants who learned French in a French-speaking area as well as those who attended a French public school in Ontario. The Immersion/Extended category includes participants who were enrolled in French Immersion schools as well as those enrolled in extended French
programs. The University category includes participants who began their French studies at the undergraduate level.

3) *Linguistic repertoires:*

<table>
<thead>
<tr>
<th>Number of additional languages</th>
<th>Typological Closeness</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2 (8.7%)</td>
</tr>
<tr>
<td>1</td>
<td>9 (39.1%)</td>
</tr>
<tr>
<td>2</td>
<td>8 (34.8%)</td>
</tr>
<tr>
<td>3 or more</td>
<td>4 (17.4%)</td>
</tr>
<tr>
<td></td>
<td>1 (39.1%)</td>
</tr>
<tr>
<td></td>
<td>4 (17.4%)</td>
</tr>
</tbody>
</table>

On the language background questionnaire, participants, in addition to French and English, reported all other languages that they knew and their corresponding proficiency levels in each. As demonstrated in the chart, the majority of the participants reported knowing 1 or 2 additional languages resulting in a linguistically diverse pool of French language learners. It is also important to note that since many of the additional reported languages were used with family and/or in the home, reported levels of proficiency in five categories on the self-assessment page were often imbalanced so averaging out proficiency levels in these languages was not appropriate. Thus all reported languages were included in the chart and no threshold of proficiency for inclusion was implemented.

The typological closeness score was taken from Dewaele (2010). Since it is very difficult to determine exact typological proximity among languages, Dewaele (2010) developed this “relatively crude” method to numerically compare the typological proximity of individual’s linguistic repertoires based on language families (p. 114). In this study, participants were given an “affordances score” based on all of their known languages in comparison to French. Romance languages (e.g., Spanish) were granted the highest score (+2) due to their typologically closeness to French. Germanic languages (e.g., English) although more distant, share many similarities and were given a score of +1. All other languages were given a score +0 (e.g., Japanese). The participants’ total typological closeness score was the sum of all of their languages. As demonstrated in the chart above, typological closeness scores went up to a maximum of 4 and a minimum of 1 due to all participants having at least English (+1).
General Drawing Analysis

The drawings provided participants with a creative and non-verbal method of articulating perceptions about their own plurilingual minds. These drawings were analyzed based on condensed themes from Melo-Pfeifer’s (2015) drawing analysis of children’s drawings. The themes from Melo-Pfeifer (2015) are (1) language in context and (2) integration vs. juxtaposition of languages. A third theme, (3) affect in language use, emerged from participants drawings and is also discussed. Although extensive art-based analysis was not conducted, participants were given the opportunity to verbalize and justify their creative choices while elaborating on their language learning experiences. Quotes from participants supplement the images below.

1) Language in context:

Figure 3: Chelsea’s drawing: “This is my family. Here someone is saying ‘hello’ and someone is replying in Serbian. It says dobar dan it means good morning, good day, hello. Those are the languages I speak at home. And then I drew the school and there I have French, Spanish and English because that’s where I spoke them and I learned them at school. And then everyday life, I speak in English.”

Many participants’ decided to visualize their languages within specific contexts as Chelsea did in Figure 3. This was the most common form of imagery invoked in the
drawings with eight participants choosing to depict their language use in context. As it was also a common representation in Melo-Pfeifer (2015), this implies that many learners perceive their language learning and use as fundamentally tied to their respective contexts. Also in Melo-Pfeifer (2015), school was often not represented as a learning context. In comparison, four out of the eight participants that chose to depict their languages by context included a visual of a school or classroom in their images such as in Figure 3. For those that did not include the classroom, they often tied learning to more immersive contexts such as conversations with friends or leisure/extra-curricular activities as the young children also did in Melo-Pfeifer (2015). It is difficult to draw any conclusions from this discrepancy (if it is even one) however based on their drawings and interview responses (see Discussion Part 2), we can tentatively say that young adults value the classroom and consider it an important context for language learning.

2) Integration vs. Juxtaposition of Languages: (Melo-Pfeifer, 2015)

Figure 4: Sophia’s drawing: “I put them all together to show that I speak all of them kind of at the same time, like everyday I speak a little bit of Russian, a little bit of English and a little bit of French.”
Another significant theme that arose in Melo-Pfeifer’s (2015) drawings was how the children positioned the languages in their pictures. The children in Melo-Pfeifer (2015) and the participants in this study either represented their languages with text or flags in a juxtaposed and/or integrated fashion. Four participants chose to integrate their languages (e.g., Figure 4) and 13 chose to separate them (e.g., Figure 5). As in Melo-Pfeifer (2015), juxtaposition of languages was more common. This juxtapositioning represented the common perception of plurilingualism as a sum of separate languages that are interchangeable (Melo-Pfeifer, 2015). This idea is clearly demonstrated by Leah (Figure 5) in her description of her drawing. Although integration and juxtaposition here are compared in contrast to each other they are not exclusive categories. Perceptions of both can co-exist as is shown in Sophia’s drawing (Figure 4). The flags contained within one speech bubble demonstrate integration and the translation equivalents in her three languages demonstrate juxtaposition through the inter-changeability of language.
3) Anxiety and Identity:

Figure 6: Ashley’s drawing: “I am very at ease speaking English… so I’m smiling, it’s easy, this is just talking easily. In French, I’m still smiling but I have to concentrate much harder on what I’m saying when I’m speaking French and it’s much slower and more laboured even though I’ve spoken French for so many years… I get nervous, especially when I’m speaking in class, I don’t know why. Which is probably one of the reasons why it’s more difficult speaking because I’m shy and I have to work at pushing myself to actually volunteer to speak in class.”

Among the drawings that depicted multiple selves, another theme that emerged was affect in language use. Affect plays a significant role in language learning since “language is a vehicle for communication and expression of self” (Gabrys-Barker & Otwinowska, 2012). Three drawings explicitly drew multiple selves showing different emotions based on their confidence in those particular languages. As demonstrated in the two figures above and below, different languages seemed to evoke differing levels of language anxiety with higher levels of anxiety typically being associated with a lower level of proficiency.
Figure 7: Megan’s drawing: “In the English one I’m a bit happier and I’ve got a hand gesture because I feel much more free to express and I’m not as afraid of making mistakes because it’s just the language that I normally speak. And then second I drew myself speaking French and it’s supposed to be me looking more hesitant because I’ve studied it since I was 6 and now I’m 20 but I’m not so confident with my skills in it and so my mouth is open in that slightly because I’m able to communicate a bit but not as much as I’d like to and not that much in general. And I drew myself speaking German, which is very uptight looking. In German class I just sit and smile because I don’t really know what’s going on. Well, I do know what’s going on but I can’t really express that with the language yet.”

This separation of languages based on language anxiety also demonstrates a division of selves and identities in each language. Megan, as pictured above in Figure 7 and quoted below, explains how she is able to express herself differently in different languages. However a learned or lower proficiency language did not always entail restriction of self-expression. Somewhat contradictorily, she expresses that she feels the most comfortable but also pressured in English. Also despite being less confident in her abilities in French, the language grants her more creativity and freedom in enacting different personas.

“I feel like when I speak a different language I do feel like there’s something in whatever language I’m speaking that brings out another part of me. Like in English I feel a bit less restricted but also more self-critical. In general, I’m pretty quiet. I really worry about what I say and since it’s my first language, it should be something of quality since I’ve been speaking it my whole life but I also feel more at ease. When I speak French… I don’t know, in high school I
acted pretty weird in talking exercises. I would be François, this sexy guy, because we’d do skits and I’m just hitting on these people.” - Megan

Overall the drawing task was an unconventional research method that prompted participants to think about and represent their own plurilingualism in a unique way. The drawings created by the participants demonstrated the diverse and multifaceted perceptions learners held about their languages as well as the complex and contextualized nature of language learning. Again, analysis of drawings was not particularly in-depth but done to demonstrate broad visual themes that emerged across this group of learners.

Cognate Recognition

Following the creation of the list of cognates as determined by the hybrid criteria (see section Methodology), each participant’s passage was examined and all underlined words were compared to this cognate list. Participants were then assigned a score, which was based on the number of cognates they were able to identify, including repeated cognates. These scores are ordered from lowest to highest in the graph below. In order to make comparisons across groups, participants were grouped into categories of Low, Mid and High cognate recognition (CR) as indicated by the scores as percentages.

<table>
<thead>
<tr>
<th>CR Grouping</th>
<th>CR Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low CR group (0-50%)</td>
<td>43 - 73 (27.9 - 47.4%)</td>
</tr>
<tr>
<td>Mid CR group (51-79%)</td>
<td>79 - 118 (51.3 - 76.6%)</td>
</tr>
<tr>
<td>High CR group (80-100%)</td>
<td>124 - 141 (80.5 - 91.6%)</td>
</tr>
</tbody>
</table>

Table 4: CR grouping criteria and participants’ CR scores

As previously stated, all cognates, including those that were repeated two or more times within the passage, were included in this score. When only unique cognates (cognates that only appeared once in the passage) were considered and repeated cognates were excluded from the score, the order of participants’ scores from lowest to highest did vary slightly. However this did not change any participant’s grouping (Low, Mid, High) as determined by their score that included repeated cognates.
Figure 8: Cognate recognition scores (including repeated cognates) ordered lowest to highest (total number of cognates=154). Numbers on x-axis refer to Participant ID Numbers as seen in Tables 1 and 2.

<table>
<thead>
<tr>
<th>CR group</th>
<th>Total</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low: 43-73</td>
<td>8</td>
<td>Wes, Paula, Chelsea, Krystal, Tyler, Ryan, Grace, Dianne</td>
</tr>
<tr>
<td>Mid: 79-118</td>
<td>8</td>
<td>Wendy, Sophia, Evelyn, Ian, April, Brittany, Leah, Vivian</td>
</tr>
<tr>
<td>High: 124-141</td>
<td>7</td>
<td>Jacqueline, Megan, Samantha, Peter, Ashley, Haley, Caleb</td>
</tr>
</tbody>
</table>

Table 5: Participant names and total number of participants within each CR group

**Cognate Recognition and Descriptive Characteristics**

CR grouping, as an indicator of perceptions of French-English proximity, was then compared to participants’ descriptive characteristics. Since the characteristics are individually contrasted with CR group, these results cannot definitively point to any particular characteristics as having an influence on their CR scores. However these categorizations will be used to supplement findings in the Discussion section.

<table>
<thead>
<tr>
<th>English C2</th>
<th>English C1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low CR</strong></td>
<td><strong>Mid CR</strong></td>
</tr>
<tr>
<td>Wes, Dianne, Paula, Krystal, Chelsea</td>
<td>April, Leah, Ian, Vivian, Evelyn, Brittany, Wendy, Sophia</td>
</tr>
<tr>
<td>Ryan, Grace, Tyler</td>
<td></td>
</tr>
<tr>
<td><strong>High CR</strong></td>
<td></td>
</tr>
<tr>
<td>Samantha, Ashley, Caleb, Megan, Haley, Jacqueline, Peter</td>
<td></td>
</tr>
</tbody>
</table>

Table 6: CR group and English proficiency level
<table>
<thead>
<tr>
<th>CR Level</th>
<th>French B1</th>
<th>French B2</th>
<th>French C1</th>
<th>French C2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low CR</td>
<td>Dianne, Paula</td>
<td>Tyler, Krystal, Chelsea, Wes</td>
<td>Grace</td>
<td>Ryan</td>
</tr>
<tr>
<td>Mid CR</td>
<td>Vivian, Brittany, April</td>
<td>Evelyn, Wendy, Ian</td>
<td></td>
<td>Leah, Sophia</td>
</tr>
<tr>
<td>High CR</td>
<td>Peter</td>
<td>Samantha, Ashley, Caleb, Megan, Haley, Jacqueline</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7: CR group and French proficiency level

<table>
<thead>
<tr>
<th>CR Level</th>
<th>Native</th>
<th>ESL</th>
<th>EFL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low CR</td>
<td>Grace, Dianne, Paula, Krystal, Chelsea</td>
<td>Wes</td>
<td>Ryan, Tyler</td>
</tr>
<tr>
<td>Mid CR</td>
<td>Vivian, Evelyn, Brittany, Sophia</td>
<td>April, Leah, Ian, Wendy</td>
<td></td>
</tr>
<tr>
<td>High CR</td>
<td>Samantha, Ashley, Caleb, Megan, Haley, Jacqueline, Peter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8: CR group and English learning context

<table>
<thead>
<tr>
<th>CR Level</th>
<th>Immersion/Extended</th>
<th>Core French</th>
<th>FSL</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low CR</td>
<td>Wes, Krystal, Chelsea</td>
<td>Dianne</td>
<td>Ryan, Grace</td>
<td>Tyler, Paula</td>
</tr>
<tr>
<td>Mid CR</td>
<td>Evelyn, Wendy</td>
<td>April, Vivian, Brittany</td>
<td>Leah, Ian, Sophia</td>
<td></td>
</tr>
<tr>
<td>High CR</td>
<td>Ashley, Haley, Peter</td>
<td>Samantha, Caleb, Megan, Jacqueline, Peter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9: CR group and French learning context

<table>
<thead>
<tr>
<th>CR Level</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low CR</td>
<td>Paula</td>
<td>Grace</td>
<td>Ryan, Tyler, Dianne, Chelsea</td>
<td>Wes, Krystal</td>
</tr>
<tr>
<td>Mid CR</td>
<td>April, Ian, Sophia</td>
<td>Vivian, Evelyn, Brittany, Wendy</td>
<td>Leah</td>
<td></td>
</tr>
<tr>
<td>High CR</td>
<td>Haley, Ashley, Caleb, Megan, Jacqueline, Peter</td>
<td></td>
<td>Samantha</td>
<td></td>
</tr>
</tbody>
</table>

Table 10: CR group and number of additional languages

<table>
<thead>
<tr>
<th>CR Level</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low CR</td>
<td>Dianne, Paula</td>
<td>Tyler</td>
<td>Ryan, Grace, Wes, Chelsea, Krystal</td>
<td></td>
</tr>
<tr>
<td>Mid CR</td>
<td>April, Ian, Vivian, Brittany, Sophia</td>
<td>Leah</td>
<td>Wendy</td>
<td>Evelyn</td>
</tr>
<tr>
<td>High CR</td>
<td>Haley, Peter</td>
<td>Megan, Jacqueline</td>
<td>Samantha, Ashley, Caleb</td>
<td></td>
</tr>
</tbody>
</table>
V. DISCUSSION

In accordance with DST/ecological theory, this discussion section is divided into three parts with each focusing on one research question that operates at a specific level of analysis. Part One begins at the most macro level of investigating the characteristics of the most and least recognizable cognates. Part Two narrows the focus onto commonalities within participants’ perceptions in order to see any patterns that may arise among participants with similar cognate recognition levels. Part Three narrows further to focus on two participants to integrate findings from the previous two parts and explore the development of particular perceptions in context.

PART 1: CHARACTERISTICS OF RECOGNIZED COGNATES

This section explores the first research question:

RQ1) What are the characteristics of French-English cognates that are the most-often and least-often identified by learners?

The purpose of this question is to explore participants’ perceptual landscapes. Within the task of looking for cognates, what do they perceive and moreover, what do they not perceive? As previously summarized by Otwinowska (2016), it is suggested the following factors have an effect on cognate recognition: orthographic similarity, word frequency in the target language and word class. A brief description of these factors is presented first, followed by a discussion of the findings.

Orthographic Similarity

As previously mentioned in the Methodology section, normalized Levenshtein distance (NLD) was used to calculate orthographic similarity between cognate pairs. Raw Levenshtein distance is defined as the minimal number of changes (insertions, deletions, substitutions) needed to make the two words orthographically identical. For example, the English-French cognate pair ordinary-ordinaire would have a raw Levenshtein distance of 2. Thus identical cognate pairs (e.g., table-table) would have a score of zero while higher numbers denote more dissimilar pairs. However, raw Levenshtein distance does not account for word length. Therefore Schepens et al. (2012) propose normalized Levenshtein distance (NLD) as a reliable method of calculating orthographic similarity. NLD was found to highly correlate with language users’
judgments of cognate status across pairs of six languages: English, German, Dutch, Spanish, French and Italian (Schepens et al., 2012). NLD is represented in the formula below where distance is the minimum number of insertions, deletions and substitutions and length is the number of letters of the longest word in the pair (Schepens et al., 2012). An NLD score ranges from 0 to 1 where a score equal to 1 denotes identical cognate pairs and scores closer to 0 denote pairs that are more orthographically dissimilar.

\[ \text{NLD score} = 1 - \frac{\text{distance}}{\text{length}} \]

Based on the existing literature (Nagy et al., 1993; Dressler et al., 2011; Otwinowska, 2016), I predict that cognate pairs with NLD scores closer to 1 will be more highly recognized by the study participants. However as only a measure of orthographic similarity, NLD does have some apparent weaknesses in determining cognate status. Other factors beyond orthographic similarity may influence word similarity. For example, NLD does not take into account of phonological similarity that may not be captured by the orthography. NLD also does not consider morphemic clues (e.g., -ly and -ment) or orthographic changes due to verb conjugations. To account for these issues not captured by NLD, the minimum NLD score for the cognate selection criteria was set relatively low (0.5).

**Word frequency**

Lexique 3 is a free, online French-language database compiled by New et al. (2001). In order to account for frequency of both written and spoken French, Lexique 3 draws on books and film subtitles. The written text database consists of 31 million words and is drawn from the Frantext corpus of public texts within the years 1950-2000. The spoken corpus utilizes French subtitles from 9474 movies and TV series resulting in a corpus of 50 million words. Despite the bias of American and police-related vocabulary due to the nature of the media, using a subtitle corpus was found to be an economical, efficient and reliable measure of spoken frequency (New et al., 2007).

In Lexique, word frequency is represented as the number of instances per one million words. There are four different categories of frequency. Two refer to the root word (lemma, e.g., choisir) and the other two refer to the exact instance of the word
(lexeme, e.g., choisi). For both the lemma and the lexeme, frequencies of written and spoken texts are given, resulting in four different results for word frequency. Since this study focuses on cognate recognition in context, I chose to investigate the frequency of the lexeme in both modes rather than the lemma.

Despite the various frequency measures provided and accessibility of Lexique, there are some disadvantages of the database. It is not able to take into account the varied and multiple meanings that a single word (of the same word class) may carry. Arguably the written corpus in comparison to the spoken one is also quite dated and may not be an accurate and modern database of written French. There is also low inclusion of colloquial terms, loanwords and highly domain-specific vocabulary.

**Word class**

Word class is another category that can be generated by Lexique 3. Cognates were categorized as nouns, adjectives, verbs or adverbs. For any single word belonging to multiple word classes, Lexique 3 considers each word class as a separate entry. For example, the word, “inverse” is listed as an adjective, noun and a verb with three different corresponding frequency counts. Words that belonged to multiple word classes were rechecked with the original article and with results from WordReference.com to determine its word class in context. In the case of the word “pratique,” the article used both the noun (“practice”) and adjective (“practical”) forms. However the adjective form did not meet the NLD or back-translation criteria so only the noun form was included in the cognate list.

**Characteristics of cognates in context**

Highly recognized cognates in the reading passage were defined as being identified by at least 6 participants per CR group (High, Mid and Low CR). The top 25 words that fit this criteria are presented in the table below. Characteristics of these highly recognized words are also shown including the word class in context, frequency rates from Lexique 3, calculated NLD, the total number of participants who recognized the word and the number of participants per CR grouping. On average, 21.07 out of 23 (91.6%) participants recognized all of these words.
In contrast, the top 25 words with the lowest total recognition score comprise this list of less recognizable cognates. The average recognition rate of these words was 6.63 out of 23 participants (28.2%) with the High CR group recognizing 56.3% of these words, the Mid CR group recognizing 25.1% and the Low CR group recognizing 7.0%.

<table>
<thead>
<tr>
<th>French word</th>
<th>Word class</th>
<th>Frequency (films)</th>
<th>Frequency (books)</th>
<th>NLD Total /23</th>
<th>HIGH CR /7</th>
<th>MID CR /8</th>
<th>LOW CR /8</th>
</tr>
</thead>
<tbody>
<tr>
<td>attitudes</td>
<td>NOM</td>
<td>1.66</td>
<td>10.41</td>
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<td>7</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>brunch</td>
<td>NOM</td>
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<td>0</td>
<td>1 20</td>
<td>7</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>budget</td>
<td>NOM</td>
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<td>5.34</td>
<td>1 19</td>
<td>7</td>
<td>6</td>
<td>6</td>
</tr>
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<td>buffet</td>
<td>NOM</td>
<td>6.63</td>
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<td>1 20</td>
<td>6</td>
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<tr>
<td>café</td>
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<td>6</td>
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<tr>
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<td>NOM</td>
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<td>1 23</td>
<td>7</td>
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<tr>
<td>condition</td>
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<td>45.81</td>
<td>1 22</td>
<td>7</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>culturel</td>
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<td>5.14</td>
<td>0.875</td>
<td>19.5</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>développement</td>
<td>NOM</td>
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<td>10.2</td>
<td>0.8461</td>
<td>22</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>différences</td>
<td>NOM</td>
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<td>5.81</td>
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<td>7</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>diversité</td>
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<td>13.18</td>
<td>0.8888</td>
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<td>7</td>
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<td>8</td>
<td>6</td>
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<td>48.45</td>
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<td>6</td>
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<td>9.73</td>
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<td>6</td>
<td>8</td>
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<td>7</td>
<td>8</td>
<td>7</td>
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<td>7</td>
<td>8</td>
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<td>5</td>
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<tr>
<td><strong>AVERAGE</strong></td>
<td></td>
<td><strong>23/25</strong></td>
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<td><strong>27.9088</strong></td>
<td><strong>0.95718</strong></td>
<td><strong>21.07</strong></td>
<td><strong>6.92</strong></td>
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</table>

Table 12: Characteristics of the most recognizable cognates
<table>
<thead>
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<th>French word</th>
<th>Word class</th>
<th>Frequency (films)</th>
<th>Frequency (books)</th>
<th>NLD</th>
<th>Total /23</th>
<th>HIGH CR /7</th>
<th>MID CR /8</th>
<th>LOW CR /8</th>
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<td>tendance</td>
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<td>14.26</td>
<td>0.75</td>
<td>10</td>
<td>5</td>
<td>3.5</td>
<td>1.5</td>
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<tr>
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<td>ADJ</td>
<td>0.39</td>
<td>1.01</td>
<td>0.8181</td>
<td>10</td>
<td>6</td>
<td>3</td>
<td>1</td>
</tr>
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<td>(en) charge</td>
<td>L-ADV</td>
<td>24.98</td>
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<td>4</td>
<td>4</td>
<td>1</td>
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<td>(de)</td>
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<td></td>
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<td>5</td>
<td>1</td>
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<td>4</td>
<td>3</td>
<td>2</td>
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<td>0.5454</td>
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<td>6</td>
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<td>0</td>
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<td>6.76</td>
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<td>9</td>
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<td>4.5</td>
<td>0</td>
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<td>84.42</td>
<td>136.01</td>
<td>0.3333</td>
<td>9</td>
<td>2</td>
<td>6</td>
<td>1</td>
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<td>NOM</td>
<td>55.43</td>
<td>134.66</td>
<td>0.7142</td>
<td>8.5</td>
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<td>0.8571</td>
<td>8</td>
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<td>2.5</td>
<td>0.5</td>
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<td>(fait) figure (de)</td>
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<td>5</td>
<td>2</td>
<td>0</td>
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<tr>
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<td>2.23</td>
<td>0.8</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>effet</td>
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<td>173.18</td>
<td>0.8</td>
<td>7</td>
<td>5</td>
<td>0</td>
<td>2</td>
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<td>renforcer</td>
<td>VER</td>
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<td>0.7777</td>
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<td>5</td>
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<td>1</td>
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<td>0.5</td>
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<td>3</td>
<td>3</td>
<td>0</td>
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<td>0</td>
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<td>3.5</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
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<td>44.26</td>
<td>0.75</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>révèle</td>
<td>VER</td>
<td>6.32</td>
<td>8.31</td>
<td>0.6666</td>
<td>5.5</td>
<td>4</td>
<td>0.5</td>
<td>1</td>
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<tr>
<td>choisis</td>
<td>ADJ</td>
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<td>5.14</td>
<td>0.5714</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>face (a)</td>
<td>L-PREP</td>
<td>124.33</td>
<td>262.16</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>habitude</td>
<td>NOM</td>
<td>89.71</td>
<td>128.51</td>
<td>0.625</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>sujette (a)</td>
<td>ADJ</td>
<td>0.7</td>
<td>1.42</td>
<td>0.5714</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>part</td>
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<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>facilitant</td>
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<td>0.09</td>
<td>0.14</td>
<td>0.8</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>comprendre</td>
<td>VER</td>
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<td>148.51</td>
<td>0.6</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
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<tr>
<td><strong>AVERAGE</strong></td>
<td><strong>11/25</strong></td>
<td><strong>43.2954</strong></td>
<td><strong>65.3854</strong></td>
<td><strong>0.7648</strong></td>
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<td><strong>3.9375</strong></td>
<td><strong>2.01</strong></td>
<td><strong>0.5625</strong></td>
</tr>
</tbody>
</table>

Table 13: Characteristics of the least recognizable cognates
Orthographic similarity: Cognates in the Most Recog category had an average NLD score of 0.96 including 17 pairs that are orthographically identical. On the other hand, Least Recog cognates had an average NLD score of 0.77 with only 7 identical pairs. Overall the findings support previous literature that cognates with lower orthographic similarity are less likely to be recognized. However, looking beyond the average scores, the 7 identical pairs on the Least Recog list seem to be in direct conflict with this finding. How could these word pairs, despite being orthographically identical, not be recognized by participants? Some studies Dijkstra et al. (2010) and Dressler et al. (2011) suggest that recognition of orthographically identical pairs is further facilitated by high phonological overlap (Dijkstra et al., 2010; Dressler et al., 2011; Kelley & Kohnert, 2012). In the Least Recog list, the pronunciation of the consonant clusters in French for identical pairs such as part and aspect deviate from their English counterparts. Although phonological similarity was not a measure used in this study, a preliminary look at these examples aligns with these findings.

Frequency: On average, the frequency of the Least Recog cognates was higher than those in the Most Recog list. This finding seems to be inconsistent with Dijkstra et al.’s (2010) results where higher frequency words were more likely to be recognized. However while Dijkstra et al.’s (2010) study investigated cognate pairs isolated from any context, this study required participants to recognize cognates within an unmanipulated reading passage. One possible explanation for this outcome, in accordance with van Hell’s (2005) findings, relates to the modulating effects of sentence context. Perhaps the Least Recog words were embedded within more highly constrained sentences thus reducing or, for most participants, completely obscuring the English cognates. Another possibility, in line with Dressler et al.’s (2011) findings on Spanish to English cognate inferencing, is that frequency was not a sufficient condition for the
cognate strategy to be used. Instead, the structural similarities between cognate pairs were more predictive on successful inferencing, regardless of word frequency.

**Word class:** Among the top 25 highly recognizable words, 23 are nouns. Comparatively, less than half (11/25) in the Low Recog category are nouns. This converges with Otwinowska’s (2016) prediction that cognates that are nouns are more likely to be recognized. This is due to the fact that nouns tend to have more semantic overlap with their translation equivalents compared to other word classes (Otwinowska, 2016). Another possible effect of word class that emerged was the overall low recognition of three words within *locutions* (labeled with “L-” in the Low Recog category). In French, these are groups of words that, together, function as another word class (e.g., as an adverb). In addition to the factors discussed above regarding low recognition despite identical orthography, perhaps the embedment of these words within locutions further obscures recognition. On the other hand, perhaps these three words cannot be categorized as cognates since locutions function and are defined as wholes and not as sums of their parts. More in-depth research will be needed to explore the recognition and learning of cognates in context.

In congruence with the existing laboratory research on cognates, the cognate facilitation effect can be seen in the following two examples: *développement* vs. *développe* and *préparation* vs. *préparé*.

![Table 15: Characteristics of *développement* vs. *développe* and *préparation* vs. *préparé*](image)

<table>
<thead>
<tr>
<th>French word</th>
<th>Word class</th>
<th>Frequency (films)</th>
<th>Frequency (books)</th>
<th>NLD</th>
<th>Total /23</th>
<th>HIGH CR /7</th>
<th>MID CR /8</th>
<th>LOW CR /8</th>
</tr>
</thead>
<tbody>
<tr>
<td>développé</td>
<td>NOM</td>
<td>6.63</td>
<td>10.2</td>
<td>0.8461</td>
<td>22</td>
<td>7</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>développe</td>
<td>VER</td>
<td>4.09</td>
<td>4.05</td>
<td>0.7777</td>
<td>15</td>
<td>7</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>préparation</td>
<td>NOM</td>
<td>5.17</td>
<td>9.73</td>
<td>1</td>
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<td>6</td>
<td>8</td>
<td>7</td>
</tr>
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<td>préparé</td>
<td>VER</td>
<td>25.19</td>
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<td>1</td>
<td>12.5</td>
<td>7</td>
<td>4.5</td>
<td>1</td>
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</table>

All four words were categorized as cognates but the noun forms (*préparation* and *développement*) had higher rates of recognition. However this effect cannot be completely attributed to word class. Transforming the verbs into nouns also increases their orthographic similarity to English, which also affects their rates of frequency in
French. Although it is clear that the three factors (word class, frequency, orthographic similarity) do not have isolated effects on cognate recognition, investigation into the specifics of the interrelations of these factors is beyond the scope of this study.

In general, the High CR and Mid CR groups tended to have similar scores across cognates while the Low CR group was consistently lower. However, among the Low Recog cognates, there emerged a particular case where some cognates were highly recognizable for the High CR group but quite low for the Mid CR and Low CR groups.

<table>
<thead>
<tr>
<th>French word</th>
<th>Word class</th>
<th>Frequency (films)</th>
<th>Frequency (books)</th>
<th>NLD</th>
<th>Total /23</th>
<th>HIGH CR /7</th>
<th>MID CR /8</th>
<th>LOW CR /8</th>
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</thead>
<tbody>
<tr>
<td>transitoire</td>
<td>ADJ</td>
<td>0.39</td>
<td>1.01</td>
<td>0.8181</td>
<td>10</td>
<td>6</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>directement</td>
<td>ADV</td>
<td>26.73</td>
<td>39.12</td>
<td>0.5454</td>
<td>9</td>
<td>6</td>
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<td>contraints</td>
<td>ADJ</td>
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<td>0.8</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>0</td>
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</table>

Table 16: Characteristics of cognates highly recognizable only by High CR group

As seen in the chart above, these three words were highly recognizable only for the High CR group. Orthographic similarity was not particularly high thereby masking the cognate status for the Mid CR and Low CR groups. However the High CR group seems draw on other factors in order see the similarities. For example, in transitoire and directement, the High CR participants use their knowledge of suffixes to deem these words as cognates (“transitory” and “directly”) while the majority of both Mid CR and Low CR groups do not. For contraints as well where phonological similarity is low, its cognate status is obscured for most participants except for those in the High CR group. From an affordance-based perspective, it is possible that the High CR group are better able to perceive highly recognizable cognates but also these more obscure similarities due to their less distant perceptions of French-English proximity. This will be the focus of the following section.

**Summary of Part 1**

Overall this preliminary and crude investigation of the most and least recognized cognates in contexts demonstrated a facilitative effect of orthographic similarity and cognate nouns as predicted by similar findings in the existing literature. Word frequency patterns were not as consistent but further research will be needed in this domain.
Phonological similarity, which was not measured in this study, could perhaps further explain what was not captured by these three factors. The next step in this investigation would then be to include phonological similarity as a fourth measure and employ statistical analysis to explore how these four factors cumulatively affect cognate recognition. However from the results of this study, we can tentatively say that non-nouns and orthographically and phonologically dissimilar words are often the most obscured types of cognates and that learners’ can benefit from cognate instruction that draws their attention to these types of words.

PART 2: PATTERNS IN PERCEPTIONS

The following section addresses RQ2, which is restated here:

RQ2) What are some commonly held perceptions about language proximity among learners who are highly aware of cognates compared to learners who are not?

The three subgroups of learners are based on the groupings (low, mid, high CR) determined by their cognate recognition score on the French reading task. Responses from the semi-structured interview were then corroborated with the three subgroups through NVivo matrix coding (see Methodology - data consolidation section). Findings from the matrix queries are represented as quotations from individual responses that articulate a common view within particular subgroups. In this discussion, I demonstrate that participants that recognized more cognates also have different perceptions about language learning compared to those that recognized less. I discuss three trends that emerged from the data: awareness of language learning, cross-linguistic similarity training and perceptions of French-English proximity.

Awareness of Language Learning

To review, this study’s interpretation of MLA transcends the traditional sense that mainly refers to the arbitrary manipulation of rules and signs. Instead MLA is defined as cognitive flexibility, creativity, curiosity and strategic use of skills in language learning (Bono & Stratilaki, 2009; Piccardo, 2013, 2017). As demonstrated by various studies, perceptions of language proximity are believed to impact MLA. Positive and closer perceptions of proximity facilitate the development of MLA while negative and distance perceptions have a hindering effect. The perceptions themselves are mediated through a
variety of factors such as the number of languages known, the typological proximity of those languages, classroom and societal context. We will explore this hypothesis and the potential influences of these factors below.

1) Plurilingual potential asset: Again, Bono and Stratilaki (2009) stress the importance of the “potential” nature of this asset as it can be awakened or hindered through perceptions of language proximity. Investigating participants’ awareness of their own plurilingual potential asset can reveal their perceptions of language learning that align more or less with a monolingual/rigid or plurilingual/fluid perspective (Bono & Stratilaki, 2009).

The notion of plurilingualism as an asset in participants was assessed with the prompt, “do you think you have an advantage over monolinguals when it comes to language learning?” All but two participants responded positively, citing their own facilitated experiences learning typologically similar languages, having enhanced knowledge of vocabulary, grammar, pronunciation and/or familiarity with the language learning process. The two participants, Ryan and Grace, did not perceive their plurilingualism as an asset and claimed that “I would be at the same starting point as the others” and “as long as you can compare it to the one language that you know and are good at memorizing, there is no advantage.” Both Ryan and Grace earned an identical CR score of 70, thus placing them in the Low CR group. However it is difficult to say anything conclusive about CR group and the plurilingual potential asset from the results of this question.

Another question, “are you a good language learner?” was asked to further tap into participants’ awareness of their plurilingual potential asset and of the process of their learning. As relatively advanced learners of at least one learned language (French), the majority of participants (15) regardless of CR grouping tended to say that they were good language learners. However the participants’ justifications provided more insight into their perceptions more than their agreement or disagreement to the question. Within the minority of participants (8) who said that they were bad language learners, those in the high CR group were more likely to give more detailed metalinguistic justifications for their answers. The scale of increasing descriptive metalinguistic detail is demonstrated in the quotes below:
“I wouldn’t say so. I haven’t really tried to learn a new language it’s just that I’ve been taught these languages at a young age so that’s why I’m kind of familiar with those. I have this desire to learn Spanish but I haven’t really put myself to it yet so far.” - Ryan (Low CR)

“No, I tend to forget a lot of grammar and words so I have to constantly keep myself learning it. So keep reviewing things I’ve already learned. But I think if I use it enough, if I learn it enough, I will eventually just remember it. Maybe I just haven’t found the right techniques.” - Brittany (Mid CR)

“I’d say I cheat very effectively and that I’m not actually that good of a language learner… Because a lot of the way I get around Romance language vocabulary is, as you can see [in the passage], there’s a lot of carry-over. But then going to Korean, there’s virtually-- well, 10% of vocab is English loanwords. But even then there are phonological processes that determine what vowels are epenthesized so it’s kind of cheating as well.” - Caleb (High CR)

This trend between CR score and explicit metalinguistic detail is convergent with Dressler et al.’s (2011) findings about young Spanish-speaking English-language learners. Those who had been taught the cognate strategy were more likely to use it, explain how they used it and elaborate on how “knowing both Spanish and English could help someone to be a better reader.” (Dressler et al., 2011, p. 253). In the Low CR quote above, Ryan perceives his role as a learner in more of a receptive light (“I’ve been taught” but “I haven’t really tried to learn a new language”) despite citing three learned languages, including English (EFL) and French (FSL). This perspective of receptive and passive learning limits the amount of reflective detail given to justify his answer to this action and person-oriented question. Brittany, in the Mid CR group, demonstrates some awareness of her learning by recognizing her weaknesses. However she has yet to discover strategies that can help her compensate for these weaknesses. In the High CR quote Caleb, who also knows Italian, demonstrates a high level of awareness of how his Romance language background grants him an advantage in learning certain languages over others (“cheating”). He cites his difficulty in learning Korean, a language typologically distant to English, French and Italian. Despite the distance, he is also aware of how his knowledge of English can still be applied to learning Korean.

In comparison, the majority of participants that mentioned that they were good language learners all drew on some metalinguistic or metacognitive skill to justify their aptitude with languages. However with increasing CR, there is an increasingly plurilingual dimension to their responses:
Wes and other participants in the low CR group showed positive perceptions of language learning, citing enjoyment of working at the metalinguistic level and in building connections. Leah (Mid CR) also shows interest in word etymologies and draws on her experience of living in ten different cities to connect language to culture. Haley (High CR) provides a response that clearly aligns with the plurilingual vision, mentioning empathy and curiosity as key characteristics of good language learning (Piccardo & Aden, 2014). She recognizes the inherent social and practical use of language. The contrast represented in the above quotes demonstrates the essential plurilingual dimension of MLA that is situated and interactive (Bono & Stratilaki, 2009). Both sets of quotes above suggest that cognate recognition levels are related to MLA. However the latter set highlights that a positive perception of language learning is empowering, motivating and stimulates further reflection on language learning.

In Bono and Stratilaki’s study (2009), many students educated in plurilingual settings grew to recognize their plurilingual potential asset. However some students who were taught in more traditional settings were also able to develop awareness of their plurilingual potential if they had had some kind of immersive language experience or extended contact with French-speakers. In the context of this study, five of the top seven scorers in the high CR group, despite coming exclusively from French Immersion and Core French backgrounds, reported participation in the Explore program, a similar immersion experience or work/study in a French-speaking environment. This convergence with Bono and Stratilaki’s (2009) results allows us to tentatively comment
on the malleability of perception. Despite the lack of acknowledgement of plurilingualism as an asset in French Immersion/Extended French and Core French settings, participants were still able to develop awareness of their asset. Although it is not clear how exactly these experiences affected their learning, the impact of these experiences is noticeable in their responses about their own plurilingualism and in their high CR scores.

2) **Role of plurilingual resources**: Another question directed at implicitly drawing on participants’ awareness of language learning was one that asked them to imagine their ideal English and French learning process. Descriptions of their living environments (e.g., ESL, EFL), learning environments (e.g., classroom and/or conversational) and learning focus (e.g., receptive skills and/or interactional skills) would reveal participants’ perceptions about the language learning process. One relevant theme that emerged from participants’ responses was the use of their own plurilingual resources within their ideal learning. While explaining their ideals, the Mid and High CR groups often spoke of scenarios where they would mobilize their plurilingual knowledge to help them in their new learning situations.

| “I would first relocate myself to an area where they only speak English and/or French. And in that area I kind of expect there to be a few people who speak Nepalese… so I can carry out my day to day activities in a proper way but also having a need to learn those two languages… Yeah Montreal would be a perfect place where people know English and French but you need both to really function in society.” - Ian (Mid CR) |
| “Probably move to like, St Clair because that would be pretty cool, getting to learn English and talk with Italian speakers. But I’d probably go for English in class because English is really difficult to learn from the perspective of a native Italian speaker… and French is much more similar so I’d probably try to learn that on the side, probably through French culture programs and courses… French is very similar and it would be super easy in comparison to English. It would almost be like the dessert to the fruit-and-vegetables main course of trying to learn English.” - Caleb (High CR) |

Most participants in the Mid and High CR group such as Ian and Caleb suggested mobilizing their plurilingual resources by moving to and living in cultural and/or linguistic communities that could support them. Another example of Caleb’s acknowledgement of plurilingual resources is his preference in the order of learning English and French. Caleb’s food analogy demonstrates he does not perceive French as facilitative towards learning English but he does understand that learning English first
would transform his plurilingual repertoire. Since French is similar to both Italian and English, French would be much easier to learn after learning English. By situating themselves in these environments both Ian and Caleb show that they perceive their plurilingual resources as valuable affordances. Living in these communities is a strategic way of facilitating learning in the target language.

In comparison, no one in the low CR group mentioned the use of any kind of background knowledge when learning new languages:

<table>
<thead>
<tr>
<th>“I would have to live in an English or French speaking country. I would learn English first because more people speak English than French, just kind of based on its importance. I would immerse myself in some kind of English environment, be it maybe the UK or US or Canada. I wouldn’t stay in say, a Mandarin or Spanish-speaking country.” -- Wes (Low CR)</th>
</tr>
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<tbody>
<tr>
<td>“Well I guess like how I know English and then I learned to speak French and then German. I think that is the same situation. So I know how to speak German then I learned English and then French. I guess just like when the first time I learned to speak French, it is quite difficult. You have to change almost all of our mind, like forget all of what you have already learned to get a new language.” -- Tyler (Low CR)</td>
</tr>
</tbody>
</table>

As seen in Wes’ quote above, he stresses the importance of being in an immersion context while explicitly uprooting himself from cultural and linguistic communities that could support him. Also, unlike the Mid and High CR groups who tended to strategically choose either English or French depending the languages that they knew, the Low CR group tended to choose English as the language to be learned first, citing its predominance and privileged global status. Tyler also mentions the need to “forget everything you already have” in order to learn a new language. Thus this implies starting from a “blank slate” for English and then returning to another “blank slate” to learn French. This learning approach also contrasts with the Mid and High CR quotes above that rely on plurilingual resources to support learning. In the Low CR group, plurilingual resources are perceived to have a negative impact on the learning of a new language.

As stated by Coste and Simon (2009, p. 174), plurilingual repertoires are “subject to a person’s changing perceptions.” Here we can see that participants who perceive more similarities (as demonstrated by their CR score) can also perceive more affordances within potential learning environments where they can mobilize their plurilingual resources to support their learning. Again, this finding only presents a static picture of participants’ current perceptions in that moment. However as noted by various studies
(Coste & Simon, 2009; Bono & Stratilaki, 2009), perceptions are continuously and dynamically in a state of change. What then, are some of the factors that have shaped participants’ perceptions into what they currently have become?

**Cross-linguistic Similarity Training**

Participants were asked about their experiences with learning true cognates in the classroom. As demonstrated by various studies, students benefit from cognates only through explicit instruction and not mere exposure (Otwinowska-Kasztelanic, 2009; Otwinowska, 2016; Helms-Park & Perhan, 2016; Dressler et al, 2011; Molnar, 2010; White & Horst, 2012).

1) **A focus on false cognates:** Unsurprisingly, all participants responded negatively when asked if true cognates were taught as a strategy in the classroom. True cognates were often introduced at the high school or university level mainly for pronunciation practice or in a thematic unit (e.g., similarities between English and French). The focus was mostly on false cognates in a comparative manner. This is reminiscent of Lado’s (1957) contrastive analysis approach that emphasizes differences between languages and views the native speaker as the normative standard of language learning. From an ecological perspective, this guidance towards noticing the differences has a cumulative effect on students’ perceptions. Learners are trained to notice relevant affordances as determined by the contrastive analysis approach (differences) and discouraged from making connections between languages in order to pursue the goal of native-like perfection. Thus learners are guided towards building and refining perceptions of the two languages as distant and separate entities (Bono & Stratilaki, 2009; Helms-Park & Perhan, 2016). Selected and specific student perceptions as shaped by the contrastive analysis approach are discussed below in the Perception of French-English proximity section.

2) **Linguistics education as cross-linguistic similarity training:** Since participants were never taught true cognates as a strategy, no comparison across CR groups could be made. As discussed in the literature review, it is proposed that explicit cognate instruction would be related to the High CR group. When exploring commonalities within the High CR group, this explicit instruction advantage, although not cognate instruction, emerged as a background in linguistics. Four out of the top five
scorers of CR mentioned their background in linguistics (Caleb, Haley, Ashley, Samantha).

Linguistics is essentially the study of the mechanics and structures of human language. Arguably then, linguistics education can increase MLA and enhance future language learning. This idea is supported by a study by Mozejko (2014) who investigated MLA in Polish advanced learners of English majoring in either linguistics or American history. The results showed that the linguistics students were better than the American history students at recognizing linguistic ambiguity and providing clear, understandable explanations of linguistic phenomena. These linguistics students were able to verbalize their enhanced understanding of MLA without having to reference any discipline-specific terminology. Based on this finding, Mozejko (2014) suggests that pre-service language teacher education should include linguistics courses to help teachers build MLA and skills in verbalizing MLA concepts.

This enhanced level of MLA can be seen in Caleb, Haley, Ashley and Samantha’s high CR scores and detailed interview responses (although Caleb specifically uses his linguistics vocabulary to verbalize certain concepts - see Plurilingual potential asset section). Thus it seems plausible that linguistics education can act as the sort of training needed to expand and reveal more of the affordance landscape. By studying the generalities of human language, linguistics education potentially helps to reduce distant perceptions of language by guiding learners to perceive similarities that would otherwise have been ignored or remained ambiguous.

Based on this emergent finding of a linguistics background contributing as explicit instruction, backgrounds in Greek, Latin and language teaching were also investigated. However a similar facilitative effect was not seen in the data. Additionally, knowledge of linguistics emerged in interviews with Evelyn (Mid CR), Krystal and Chelsea (Low CR). However this suggested facilitative effect of linguistics was not found in their CR scores or interview responses. The details of these experiences, including linguistics, were not explicitly inquired in the interview or questionnaire but the nature of the interview questions often led to participants revealing this information themselves. Since this effect was not previously anticipated, more research will need to
investigate the possibility of various experiences enhancing perceptions of language proximity.

**Perceptions of French-English Proximity**

Finally, CR scores are compared to their perceptions of French-English proximity. Based on the theory of affordances, it is proposed that participants that view French and English as distinct and separate will have a lower CR score and those that can see the similarities between the two languages will be able to notice more cognates and therefore have a higher CR score.

1) **Perception of the relationship between English and French**: This section explores participants’ perception between the similarities and differences between French and English in general. In the Low CR group, there was a lack of consensus with the slight majority (5 out of 8 participants) perceiving French and English as more similar than different.

| “I think I’ve heard over the years that English and French aren’t terribly different, compared to English and Japanese or something.” - Paula (Low CR) |
| “English and French are similar. When you know English, it helps you understand French grammar faster and easier. I had a roommate in China and he almost never attended French lectures. But actually he was very good at English so he passed every French final test all by himself. It’s easy for him to use English to learn about French. You just translate and sometimes, it makes sense.” - Tyler (Low CR) |

As demonstrated in Paula’s (Low CR) quote, many recognized the general distance between French and English compared to others, particularly Asian languages. Others across all CR groups also noted the potential difficulty of specifically learning Mandarin because of their mainly English backgrounds. Tyler (Low CR) presents an interesting perspective as the only native Mandarin-speaking participant who learned both English and French as foreign languages in China. Compared to his native language, he found English and French to be much more similar. Overall in the Low CR group, there seems to be an understanding of language proximity in general. They recognize similarities between French and English through external comparisons to other Asian languages but they do not go in depth to specifically describe the relationship between French and English.
In the Mid CR group, there appeared to be even less of a consensus. Among the eight participants, four stated that English and French were similar and the other four stated that they were not.

“I’ve known a lot of people around me who have attempted to learn French and they think that it’s just a whole other world, it’s just too new, too different, they don’t understand it. But it does take a certain level of proficiency and mastery of French to actually be able to make those connections and see the resemblances between the two.” - Sophia (Mid CR)

“English is quite different from French. There are a few anglicisms in French but they’re very different in terms of grammatical structure, how to write, speaking and how to pronounce the different consonant and vowel sounds that don’t exist in English.” - Leah (Mid CR)

Sophia (Mid CR) draws on the effect of proficiency level, which coincides with research demonstrating that participants with higher levels of proficiency tend to have higher levels of MLA (Molnar, 2010). However Leah (Mid CR) states the opposite opinion. She is quite detailed in pointing out how French and English are different. Although these two perceptions differ, this is not to say that Leah has not reached that level of “mastery” that Sophia mentions. Both participants rate their French at a C2 level. Overall the Mid CR group seems to describe their perceptions of French-English proximity and justify them with more detail but investigating the patterns within this group does not reveal why some perceive more differences and others perceive more similarities. This will be a point of discussion in Part 3.

In the High CR group, most participants commented on the similarities between French and English.

“I’ve spoken to a lot of people who just, especially if they were monolingual, found French really difficult. They’ve had negative classroom experiences with French so they kind of have a struggle against it. In that [passage] there’s so many words that I underlined there and there’s a lot of crossover but I don’t think that’s necessarily something that people think about.” - Ashley (High CR)

“When you get to French, you’re like, “Oh what is an adverb? Why are we conjugating verbs? Why are there irregular verbs? What’s a past participle?” But those exist in English and pretty much every language but people don’t get it because we don’t learn it the same way. I think if we learned it the same way, you would see the similarities. Because people who do well in French and understand the grammar, their English improves because they get it. I passed an English exam for my job and I knew all the grammar stuff because of French, not because of my English. Most people would say that they’re different, because of the way they learn it.” - Jacqueline (High CR group)
Ashley (High CR) acknowledges that many French-English similarities, such as the cognates in the reading passage, often go unnoticed by learners. She also mentions the difficulty and struggle of English-speaking monolinguals in their French learning experiences. Perhaps expanding the affordance landscape to guide learners towards perceiving and acting upon these similarities would facilitate the learning process for English speakers.

2) Perception of true cognates as intuitive and automatic: As expected, most participants regardless of CR group held the assumption that true cognates are easily and automatically learned. This is consistent with existing research on learner perceptions about cognates (Otwinowska-Kasztelanic, 2009).

<table>
<thead>
<tr>
<th>quote</th>
<th>participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>“No they actually never taught us [the true cognates] they only taught us the wrong ones! The right ones, you just already know, right?”</td>
<td>Krystal (Low CR)</td>
</tr>
<tr>
<td>“If you know which ones are the faux amis you’ll automatically assume that the others are vrais amis after, if you learn the list of them. So I think learning the faux amis first are more important than learning which ones are the same.”</td>
<td>Brittany (Mid CR)</td>
</tr>
<tr>
<td>“They don’t teach [cognates]. They just assume you know them. There was one boy in my Explore program who didn’t speak English. It was very hard for him because the teacher would not explain ‘situation’ or ‘tradition.’ She just didn’t bother. But he wasn’t always aware of what these words meant.”</td>
<td>Samantha (High CR)</td>
</tr>
</tbody>
</table>

Although the three groups generally share the same view, here we can also see the gradation of metalinguistic detail in their responses. Krystal (Low CR) demonstrates her perception of cognates as easily learned and thus not requiring instruction, stating, “you just already know them.” In the Mid CR group, Brittany justifies learning false cognates first. She believes that focusing on the differences will then facilitate the process of learning and using true cognates. Samantha (High CR) on the other hand demonstrates a higher awareness of the lack of cognate instruction. In her quote she recognizes teachers’ assumptions about cognates (“They just assume you know them”) and that recognizing cognate vocabulary is highly dependent on knowledge of English.

It is important to note that the approach outlined by Brittany, which highly coincides with the contrastive analysis approach, is not an effective way of learning cognates. As demonstrated by various studies, the assumption of cognate learning through mere exposure is false (Otwinowska-Kasztelanic, 2009; Helms-Park & Perhan,
From a plurilingual and affordance-based perspective, focusing on the differences heightens learners’ perceptions towards noticing more differences, deeming similarities irrelevant to learning. Thus this approach leads to learners being less likely to notice true cognates and more cautious when attempting to make connections between languages. In Dianne’s case, her low CR score is reflected in her exaggerated perception of distance where she believes that her English actually impedes her progress in French:

“Because I know English, I know the word’s original meaning in English but I needed to learn their meaning in French. I think that makes it harder for me as a learner compared to if I had just learned French when I was really young… So that’s where English kind of misleads me. And it kind of slows me down too because I have to go look up that word after.” - Dianne (Low CR)

3) Perception of the usefulness of cognates: Based on the literature reviewed, it is hypothesized that those who recognize more cognates (higher CR score) will have more positive perceptions of cognates. The impact of participants’ CR group was clearly seen on their perceptions of the usefulness of cognates. First are excerpts from participants in the Low CR group:

“When I started learning French I’d say it helped me more but now I’d say that it’d be a bit more misleading. Because there’s so many words in French that look like English words but they don’t actually mean the same thing. I feel like that might sort of be like a trap.” - Krystal (Low CR)

“I just remember faux amis. If I think in English and attempt to Frenchify the word, maybe at a “e” or “a” or what have you, that’s a situation in which this English thinking would not be helpful… I suppose it would be the reverse when Frenchifying would work. I read somewhere that 50% of French and English is the same in terms of vocabulary. So sometimes guessing is worth it.” - Wes (Low CR)

Participants in the Low CR group such as Krystal and Wes quoted above, tended to have quite divided and mixed opinions about cognates. Krystal recognizes the facilitative effects cognates had on vocabulary learning in the beginning stages of learning but her focus on false cognates prevents her from considering them as useful. She also sees cognates as a “trap” which was a word that was commonly used by participants who shared this view. Wes also focuses on false cognates but also acknowledges the amount of shared vocabulary and that the “Frenchifying” strategy can often be helpful. Overall the Low CR group contains most of the participants who
similarly deal with conflicting and/or unclear perceptions of French-English proximity and are unable to reconcile them. These responses may be related to the Low CR group tending to demonstrate lower levels of MLA in their responses (see Awareness of Language Learning section above). Considering the argument that perceptions of language proximity are a crucial aspect of a plurilingual vision of MLA, perhaps their lack of a heightened level of MLA is the result or a contributing factor to their unresolved perceptions.

In comparison the Mid CR group tended to state, with more certainty than the Low CR group, that cognates were misleading. This coincides with many in the Mid CR group perceiving French-English proximity as very distant. Ian (Mid CR) makes a conscious decision to keep English and French as separate as possible. In the second quote Leah (Mid CR) mentions that relying on cognate vocabulary can even be “dangerous” if used incorrectly.

| “I try to keep them as separate as possible... I just wanna focus on the French when I’m focusing on French and focus on English when I’m doing English.” - Ian (Mid CR) |
| “Most people, with English, they don’t necessarily try to translate the word in terms of how it should be translated. They mostly try to think of a French version of the English word and I think that’s where things can get kind of dangerous because there are certain colloquialisms that are quite inappropriate if you mess it up.” - Leah (Mid CR) |

In the High CR group, perceptions are also stated without conflicting opinions but all seven participants in this group perceived cognates as useful.

| “If I see a word that looks like an English word I’m like, “Oh that’s probably like that English word.” That’s just what happens. Like sociabiliser-- didn’t know what that French word was, I’ve never seen it before but I speak English so I could take a wild guess. Directement, -ly becomes –ment, so even if you don’t know French words, a lot of the time you could say, “oh that’s probably that English word”, fairly confidently.” - Caleb (High CR) |
| “Sometimes when we’re reading a political passage, there will be words that I know because I have specialized knowledge of them in English but they’re not common French words... I can read in French and think in French but if there’s a word I don’t know and it’s similar to a word in English, I’ll just assume it means the same thing and then move on especially if it’s a specialized like... le dictatorial, or dictatorial.” - Samantha (High CR) |

Caleb specifically draws on examples in the CR reading passage, highlighting an instance where his English background helped him understand the word, “sociabiliser”. He also demonstrates his knowledge of French and English morphology.
by drawing a connection between “directement” and “directly.” Although the English equivalents seem quite apparent, only 10 and 9 participants in particular noticed these two words, respectively (out of 23 participants). All High CR participants noticed both words while all Low CR participants noticed neither. Thus Caleb’s positive perception of the usefulness of cognates is strongly tied to his ability to notice and engage with similarities between the two languages.

Samantha’s quote above describes a phenomenon investigated by Petrescu et al. (2014) in which knowledge of cognates of particular language pairs can facilitate the learning of low-frequency, discipline-specific vocabulary. Her awareness of the usefulness of cognates even at her relatively advanced level in French contrasts with many Low CR participants like Krystal who saw the utility of cognates only in the beginning stages of learning.

The High CR group also demonstrated a deeper understanding of the relationship between English and French word pairs:

| “I noticed from the [passage], there’s a lot of words in French and English that use each other’s words. And what I found in the past is that the real difference between English and French is that English uses a lot of French words but it’s like, fancy or elongated. And the shorter words are taken more from German type words so... if I were to write in English I would probably think, what’s a French word I could use to describe it? And then it might work?” - Peter (High CR) |
| “Your vocab has to be good in English for your vocab to be good in French... Because I think [teachers] wanted to keep [English and French] different and I always find that the words that are similar are longer, more complex words. Like chien and dog-- totally different. But accessibilite! Accessibility! Very similar, right?” - Jacqueline, (High CR) |

Overall the High CR group who recognized the most cognates out of all participants also perceived cognates as useful to their learning. They were able to explain their reasoning for connecting more obscure cognates together and were aware of the facilitative effect even in their quite advanced stage. Peter and Jacqueline also demonstrated awareness of the particular relationship between French-English cognates. Their insight is congruent with findings from the more prevalent Spanish-English cognate research. Common Spanish words tend to be low frequency and more academic in English and thus cognates are usually explored in terms of English vocabulary building for Spanish-speakers (Nagy et al., 1993; Dressler et al., 2011). However as seen in Peter
and Jacqueline’s responses above, English low frequency cognates tend to be more common words in French. Thus it does not necessarily support vocabulary learning since English proficiency needs to be quite high to draw on the similarities.

However cognate awareness raising, regardless of the language pairs involved, can be useful beyond vocabulary building. As seen in previous studies, cognate awareness training or plurilingual teaching approaches in general can help students reduce negative and hindering perceptions of language proximity and heighten levels of MLA. Fostering positive and closer perceptions of language proximity can expand the affordance landscape and guide learners towards noticing and strategizing in ways that could not be perceived before. An example of this is Peter who in the quote above, recognizes the similarities and particularities of the French-English relationship and mobilizes this knowledge into a strategy to use his learned language (French) to influence production in his native language (English).

Summary of Part 2
The following section is a summary of the main points above.

(1) Awareness of language learning: The High CR group demonstrated higher MLA and awareness of its plurilingual dimension. The Mid CR and High CR group also showed greater understanding of the multifaceted and developmental nature of plurilingual resources and how to mobilize them to support language learning. The Low CR group did not perceive their plurilingual resources as useful or helpful to learning.

(2) Cross-linguistic similarity training: All participants experienced more emphasis on false cognates in their learning experience and true cognates were never taught as a strategy for vocabulary learning or awareness-raising. Linguistics education emerged as a possible form of training that can increase MLA and reduce perceptions of language proximity. Similar effects for backgrounds in Greek, Latin and language teaching experience were not found but more research will be needed in this area.

(3) Perceptions of French-English proximity: The Low CR and Mid CR groups tend to give divided responses about French-English proximity while in the High CR group there was greater consensus on their close proximity. Low and Mid CR groups tend to perceive cognates as easy to learn and focus instead on false cognates. On the other hand, the High CR group demonstrates awareness that the facilitative effect of cognates is
tied to their knowledge of English. Also, the Low CR and Mid CR groups tend to perceive cognates as misleading and/or harmful to their learning at their current French level while the High CR group perceive cognates as useful even now and throughout their language learning experience.

Overall, commonalities among the CR groups revealed important insights about perceptions of language proximity. However individual participants did not always follow these trends exactly, resulting in some variation and contradictory cases. As per the DST, plurilingual and ecological approach, it is important to explore some of these individualities to reveal more about particular perceptions. This will be investigated in the following section.

PART 3: PERCEPTIONS IN-DEPTH: LEAH AND CALEB

The final section of the discussion focuses on the third research question: RQ3) How are individual learners’ perceptions of French-English proximity actualized through their recognition of French-English cognates?

The development of perceptions is highly complex, unpredictable and highly individual. Thus in this section I use description and retrodiction in light of the theory of affordances to investigate how distant and close perceptions were shaped and influenced by potential factors (Larsen-Freeman & Cameron, 2008b). I highlight two individual participants, Leah and Caleb. Leah is suggested by the existing literature to have the highest MLA due to her cumulative language experience. However her CR score places her only within the higher end of the Mid CR group. I focus on her story to investigate the discrepancy between her projected and actual CR score. Caleb, as one of the two top CR scorers among all participants, was selected in order to explore individual factors that possibly contributed to his particularly high CR score. Both participants also gave particularly rich responses during their interviews.

Distant perceptions of French-English proximity: Leah

Leah’s native languages are Korean and German. At age 2, she learned French at school when she moved to a French-speaking neighbourhood in Switzerland. There, she also learned English but as she states, “it was never enough to fully write an essay or fully converse in a conversation without difficulty.” Leah began to learn English more
intensely when she moved to the U.S. at age 8. Being a part of a very mobile family, Leah has lived in Korea, Germany, Switzerland, the U.S., England and Canada, as well as in China and Japan where she also learned Mandarin and Japanese. She reports having previous experience using French to communicate with French speakers for a part-time job and internship and still regularly keeps in contact with friends from Switzerland.

Leah CR score was 115 out of 154 instances of cognates in the passage. Although Leah’s CR score was in the higher range within the Mid CR group, Leah’s perceptions were quite distant. Based solely on the above description of her language learning experiences, previous research would have predicted her to be in the High CR group with closer perceptions. Leah knows the most languages among all participants with all languages reported to be at intermediate to advanced levels and her French learning environment was the highly idealized (among participants) immersive French-language learning experience at a young age. However her Mid CR grouping and interview responses show otherwise. Contributing factors are discussed below.

(1) Complete separation of languages: All participants reported code-switching either regularly with family or in other appropriate situations. They either were comfortable with communicating by code-switching or had negative opinions about it and tried to restrict doing it as much as possible. However Leah reports never having to code-switch and demonstrates difficulty even comprehending the phenomenon. She first interprets the meaning of “mixing languages” as using different languages with different people within the same environment. When further clarified, she comments on switching from one language to another to purposefully include or exclude others from the conversation. When she finally understands the question, she says:

“I don’t think there’s ever an instance where I would speak more than one language in one sentence. I’ve never really had to mix anything.” - Leah

Leah mentions a few instances where she used Korean colloquialisms with other non-Korean speakers because of the aptness of the word/phrase for that situation that could not be captured by any other language that she knew. She would then have to explain the meaning of the colloquialism to the other non-Korean speakers but never reports doing this with others who share the languages that uses. Thus despite having all of these different languages in her repertoire, she does not perceive the existence of
partial competences or the use of code switching. This is further supported by the justification she gives for her drawing.

“I drew them separately because they’re all in different parts of my life and I consider them as separate things that I do and separate things that I speak. I never really associate them altogether.” - Leah

Another issue that supports Leah’s perception of the separation of languages is her experience learning Spanish. She learned it briefly and did not write it down on the questionnaire with the other languages she knows. Leah does not expand beyond “I tried learning Spanish but it just didn’t work.” Many participants similarly reported pursuing Spanish in high school or university but often not maintaining their studies. However all of these participants often reported on the ease of learning Spanish, particularly attributing it to their French knowledge. Although it is not clear how long, when and where Leah learned Spanish, this contrasts significantly with other participants’ Spanish language learning testimonies.

(2) “Survive-or-die” experience and the native-speaker ideal: Leah’s development of such distant and distinct perceptions among her languages can perhaps be attributed to her unique language learning experience. As the only Asian and non-native speaker of French in her neighbourhood, Leah often felt pressure to perform as well as her peers. She mentions the need to “assimilate” in order to fully express herself, to do well in school and make friends. When she moved to the U.S., learning English was a similar process. In her French and English language learning environments, Leah was highly self-motivated to overcome these pressures to perform like her native-speaking peers. She reiterates her familiarity with this intensive language learning process when considering Russian, the next language she wants to learn.

“I think I would say that I would probably learn faster because I’ve been through this process so many times of being assimilated into an environment where you survive-or-die kind of situation. I have to learn this language or things aren’t going to work for me at all… So because I’ve done this before many times, I think I would be near the top of the class, maybe not the best person because of pronunciation and how difficult the language is and because there’s a completely different alphabet.” - Leah

Here Leah recognizes that this process of “survive-or-die” language learning that she experienced multiple times would be beneficial to learning Russian. She also points out aspects such as pronunciation and the different alphabet as particular hurdles for her.
Noticeably, she does not make any mention of the potential of her rich plurilingual asset to help learn another language. Instead, she prefers to follow this learning method and completely submerge herself within the particular rules and patterns of that language. This is related to her disapproval of English-speakers using cognates and specifically false cognates when communicating with native French speakers. While other participants who share her view commonly used terms such as “misleading” or “trap”, Leah comments on the “dangers” of relying on English knowledge.

“Most people, with English, try to think of a French version of the English word and I think that’s where things can get kind of dangerous. Because there are certain colloquialisms that are quite inappropriate if you mess it up. I guess a really good example would be the word “exciter.” In French it’s a euphemism for the word “horny.” So yeah I think that’s a very good example of how things can go completely downhill.” - Leah

Halfway through the interview, Leah also reveals that she knows more languages than the four she listed on her questionnaire and drawing (Korean, German, English, French). After being encouraged to write down all of the languages she knows, Leah adds Japanese and Mandarin, self-rated at a B2 and B1+ level, respectively. This initial exclusion of some languages in her repertoire is similar to one participant in Oliveira and Ançã’s (2009) study. The authors attributed this finding to the participant’s harsh self-assessment of her language abilities against the native speaker ideal. Leah seems to hold a similar perception since she mentions that the first four languages she lists are only the languages she is “completely fluent in and confident in speaking.”

Overall, Leah does not seem to perceive the richness and usefulness of her own plurilingual repertoire. Her experience in French and English-speaking environments at a young age motivated her to pursue the native speaker ideal in both languages and all others subsequently learned after. Munoz (2014, p. 37) emphasizes the role of environment on even young learners’ beliefs about language learning, stating, “from very early on learners construct their own views about [language] learning and that these are influenced by their personal development, school experience, and also the attitudes of parents and teachers and the community at large. In that sense, these views, like older learners’ beliefs, seem to be emergent, dynamic and context-dependent.” Thus Leah trained to perceive and act upon specific affordances that aligned with this perception of the native speaker ideal. These affordances dealt more with the particularities of the
target language (i.e., a contrastive analysis approach) such as pronunciation, orthography, and colloquialisms. Therefore this interaction with affordances towards the native speaker ideal builds perceptions of distance and separation between French and English and among her other languages. In the cognate recognition task then, Leah does not perceive many cognates since they were often irrelevant or harmful to her learning.

Close perceptions of language proximity: Caleb

Caleb is a native English speaker and also has high comprehension of several Italian dialects. He learned French through the Core French program and continued his studies by enrolling in French language learning classes in university. Caleb is also involved in various extra-curricular activities in French with mostly Francophones, which require him to do public speaking but he notes that his French conversational skills are still lacking. He is a Linguistics major who also studied Latin for three years and at the time of data collection, was enrolled in an Italian language-learning course at the university.

Caleb’s total CR score was 141, thereby missing only 13 instances of the total 154 words designated as cognates in the passage. Among these 13 unperceived words, all except one were words on the list of the Least Recognizable cognates (see Discussion Part 1). In congruence with his High CR score, Caleb reveals perceptions of French-English proximity that are quite close. This is demonstrated by some of this quotes presented in Part 2 and by also being the highest CR scorer (along with Haley) among all participants. Below I attribute his close perceptions to his acknowledgement of his own plurilingualism and his enhanced MLA due to his experience in linguistics.

(1) Acknowledgement and mobilization of partial competences: Caleb also reports communicating regularly with more than one language in conversation, particularly with relatives.

“When I had to give the competency in the table, Italian is probably kind of wonky like C1, A2, A1, A1, A1. Because I would be spoken to in Italian and then respond in English. So I can understand fairly well. I can understand foreign films without subtitles but if you ask me to respond I’m like no, maybe English right now… like you go to a family reunion, half the people will talk to you in Italian, half the people will talk to you in English and you respond in English either way. As long as you understand.” - Caleb
He also points out his partial competence in Italian where spoken reception is his main strength. He does not display any pressure towards achieving the native speaker ideal and states that as long as there is mutual comprehension among all parties, his partial, “wonky” Italian does not limit him in any way. Also, despite not having, nor pursuing, native-like competence in Italian, Caleb still considers Italian as an important part of his plurilingual repertoire.

“It’s basically English, Latin and other romance languages that just kind of make this big pool that you can draw on. Which is why certain languages are a lot easier to learn than others.” - Caleb

Caleb recognizes that all of the languages he knows form a diverse repertoire and that the particular languages included in that “pool” can facilitate the learning of other similar languages. He is aware of the similarities that Italian and French share due to both being romance languages and that his particular repertoire, although still helpful, does not have the same facilitative effect on learning more distant languages.

(2) Experience in linguistics: Caleb specifically attributes his capacity for learning languages to his background in linguistics.

“I think I would do a bit better, in part because I’m doing linguistics. And that just kind of helps in general. If you can read IPA then it’s easier to pick up a new language because pronunciation is not like this weird mystical thing, you can just pick up a transcription and you know how everything is pronounced. It kind of demystifies a lot of languages.” - Caleb

Here, Caleb comments on how his knowledge of the International Phonetic Alphabet (IPA) helps him learn the pronunciation and particular phonemes used by any given language. IPA is an alphabet that provides a one-to-one mapping of a sound to a written letter and can notate the sounds of any human language. For Caleb then, pronunciation is an aspect of language learning that becomes transparent and easier to learn with knowledge of IPA. This contrasts with Leah who specifically notes pronunciation as a key obstruction that impedes her learning of Russian.

Caleb was selected as one of the two cases for this section mainly for his detailed justifications and examples of using his metalinguistic knowledge to draw connections between French and English. Below are two more specific examples of how he is able to perceive more of the obscure similarities between French and English.
“I think if you’ve never really tried to get into French vocab then they seem really different because everything is pronounced differently. They look at accents in French and are like, “Oh what’s this stupid little hut?” And if you look into it, the circumflex shows where there used to be an ‘s.’ That’s why *forêt* has no ‘s’ and it’s actually the exact same as “forest” in English. So it feels a lot more similar if you go into both.” - Caleb (High CR)

“I think I’ve tried to erase all the faux amis from my memory… because they hurt and I don’t wanna keep making those mistakes. But yeah, I even underlined things like jeune even though it isn’t really directly related, phonetically it is. I don’t know, just words that are very similar although they may not mean exactly the same in the same context, they may not be the same part of speech. Like *jeune*, I process as young because I did Latin and ‘j’ and ‘y’ are the same character and they’re both pronounced as [j]. I’m like oh so if I pronounce “young” and “jeune” as “yeung” and “yeun”, and [n] and [ng] is just a place of articulation difference, they’re basically the same thing, right?

In the first quote, Caleb draws on the proficiency factor, in which higher proficiency in the known languages coincides with higher MLA. However “going into both” does not refer only to proficiency but also a deeper understanding of the structures of both languages. For Caleb, this understanding allows him to perceive more similarities between French and English, as he describes in his example.

In the second quote, Caleb uses both his Latin and linguistics knowledge to perceive similarities between young and *jeune*. Caleb was the only participant who underlined *jeune* in the passage. Due to the standards of cognate selection criteria, *jeune* was not chosen as a cognate. However his justification for selecting this word portrays the depth of his MLA and how that allows him to perceive and acknowledge the similarities. Again, it is important to repeat here that Latin education did not seem to be a potential contributing factor to CR score in the previous section (Discussion Part 2). As Caleb demonstrates here, it is possible that learners can mobilize both Latin and linguistics knowledge to draw similarities between French and English, however, other participants who reported knowing Latin did not demonstrate the same results. More research will be needed in this area.

In the first sentence of the second quote above, Caleb voices his dislike of keeping a mental list of false cognates. This contrastive analysis approach that focuses on false cognates appears to be at odds with his close perceptions of language proximity. His background in linguistics helped to “demystify” language and trained him to perceive and act on affordances that focused on the structural similarities of language. On the other
hand, a focus on false cognates reinforces false assumptions about true cognates (that they are learned automatically) and draws learners’ attention to the differences between languages. Thus, a focus on false cognates is not just another aspect of vocabulary learning. It guides learners to selectively notice the differences between languages and develop a cautious mindset towards mobilizing their plurilingual resources. Caleb demonstrates the very opposite of these perceptions and I argue that his linguistics education acted as a similar form of implicit training of perceiving affordances that instead focused on similarities and contributes to his high level of MLA.

**Summary of Part 3**

Leah, a higher end Mid CR scorer, carried very distant perceptions of language proximity despite her extensive language learning experience. She perceives her languages as completely separate entities and neither code-switches nor perceives the need to do so among her six languages. These perceptions are attributed to her multiple, intensive language learning experiences towards the native speaker ideal. This leads to a focus on differences and caution towards utilizing cross-linguistic similarities thus further solidifying the perceived boundaries among her languages. On the other hand, Caleb, the top CR scorer among participants, does not strive towards the native speaker ideal and instead acknowledges his partial competences. He demonstrates awareness of his plurilingual asset and of how to mobilize that knowledge to facilitate the learning of typologically similar languages. His experience in linguistics also acted as a sort of cross-linguistic similarity training that fostered close perceptions of language proximity. This was demonstrated by his perception of more obscure French-English similarities.
VI. CONCLUSION

Summary of Research

The three research questions and findings for this study are summarized below:

RQ1) What are the characteristics of French-English cognates that are the most-often and least-often identified by learners?

The findings from the first research question are in line with previous research that details the low awareness of cognates in even advanced adult learners (Otwinowska, 2016). Thus as a way to investigate their perceptual landscape, participants were asked to recognize cognates in context to reveal which cognates were more perceivable than others. The results converge with the existing laboratory research, noting the facilitative effects of nouns and words with high orthographic and phonological overlap. However frequency effects demonstrated the opposite, perhaps being the most impacted by context. The least recognizable cognates tend to be more obscured by less orthographic and phonological overlap, verb conjugations and/or suffixes. Thus learners may benefit from cross-similarity training that allows them to perceive and make use of these more obscured similarities.

RQ2) What are some commonly held perceptions about language proximity among learners who are highly aware of cognates compared to learners who are not?

The High CR group tended to demonstrate greater metalinguistic detail in their interview responses. This included a better understanding of their own plurilingualism and how to mobilize it to facilitate further language learning. Although all participants reported a focus on false cognates in their classes, six out of seven High CR participants reported having some knowledge of linguistics, which may have acted as a sort of cross-linguistic similarity training. A similar pattern for Greek and Latin backgrounds was not found however more research would be needed in this area. The High CR group also perceived cognates as more helpful to learning rather than misleading or harmful.

RQ3) How are individual learners’ perceptions of French-English proximity actualized through their recognition of French-English cognates?

Knowing many languages and obtaining high proficiency in all of them are not the only factors that contributed to MLA, as was seen in Leah’s case. Her perception of the complete separation among her languages developed through her intensive and
multitude of language learning experiences towards the native speaker ideal. This inhibited her recognition of many cognates and in general, her recognition of cross-linguistic similarities that could facilitate learning. On the other hand Caleb, who had the highest CR score acknowledges and mobilizes his plurilingual asset in learning French and other languages. He also explicitly draws on his knowledge of linguistics and sometimes Latin to draw connections between French and English.

**Pedagogical Implications**

“Given that all of these value-rich affordances are publicly available, is it our ignorance or lack of skill that limit our tapping into these potentially valuable resources for our practices? If so, such an insight might require us to rethink our educational practices.” (Rietveld & Kiverstein, 2014, p. 349)

In light of the literature reviewed and the findings from this study, four implications arise for changes to the language classroom. They are (1) sociocultural practices in language education, (2) understanding and enhancing contextually sensitive learning and (3) the importance of learner perceptions and agency. These three points are discussed below.

1. **Sociocultural practices in language education**: The findings from this study suggest a significant change in the normative standards in language education. As seen in many participants’ responses and in the literature (Otwinowska, 2016; Helms-Park & Perhan, 2016) the native speaker ideal and the contrastive analysis approach are still very prevalent. These normative standards limit the range of affordances that can actually be beneficial for learners. Thus instead of conceptualizing learning as a focus on differences towards the native speaker ideal, education practices should embrace a view of language learning that is dynamic, plurilingual and ecological. Otwinowska (2016) and Oliveira and Ançã (2009) suggest that curricula focus on cross-linguistic comparisons such as cognates and emphasize the role of learners’ plurilingual repertoires. This would then provide learners with a “rich landscape of affordances” through which they can interact and develop metalinguistic skills to enhance their learning (Rietveld & Kiverstein, 2014; Piccardo, 2017).

2. **Understanding and enhancing contextually sensitive learning**: Due to the individuality of perception and the complex interaction with affordances, it is unclear if detailed and strict guidelines for language education are appropriate. As stated by Thoms
(2014, p. 739), a pedagogical change that embraces concepts of DST, plurilingualism and ecology is not about “ready-to-hand classroom tricks” but about “building up over an entire course, a classroom culture rich of affordances for learning.” How then can cross-linguistic similarity training be appropriately implemented in the language classroom? Van Lier (2004) suggests that isolating features such as cognates can be useful when they occur naturally and/or used to promote MLA. An example of this is given in Darhower’s (2008) bilingual chat study where students were more focused on the co-construction of meaning rather than correct linguistic form. Since bilingual chats were not particularly effective in raising learners’ awareness towards linguistic affordances, Darhower (2008) suggests that the chat could be further supplemented with other pedagogical activities such as looking at the chat transcripts to guide learners’ attention to linguistics forms and develop their MLA. Similarly in my study, the level-targeted reading comprehension passage could be enhanced with a similar cognate recognition activity. Thus the same materials can be used to help learners tap into previously unperceived affordances and foster MLA. Here are two comments from participants after completing the cognate recognition activity.

| “I felt like it was intentionally written to have a lot of *vrais amis*. It wasn’t? Then I guess I never realized that French has so many things that are in English.” - Samantha |
| “Reading it with the intention to find words that are similar to English, I think it made me realize, oh the languages are more similar than I thought.” - Megan |

(3) **Learner perceptions and agency:** Within a plurilingual and ecological perspective that promotes contextually sensitive learning, learner perceptions and agency become a key focus in the classroom (van Lier, 2008). Therefore action-oriented learning is a compatible approach that helps to foster these two aspects in language learning (Piccardo & North, in press-a). It abandons the conceptualization of a linear learning pathway in which learners merely passively receive information. Being grounded in *action*, the action-oriented approach promotes exploration and opportunities to actively navigate the affordance landscape. Thus this interconnected and cyclical process of perception and action is crucial to understanding whether and how certain affordances enable or restrict action.
Limitations of Study and Suggestions for Future Research

Despite advocating for a DST/ecological approach to language research, this study does not completely encompass all of what is needed in this type of research. This is because the study was (1) not longitudinal or time-sensitive, (2) it was not action research and (3) it explicitly excluded other perspectives. Suggestions are provided for future research in these areas.

(1) Not longitudinal/time-sensitive: Since data was collected in one session for all participants, the data provides only one (and arguably inaccurate) “snapshot” of perceptions. However the perception of affordances is a developmental process that is continuously shaped over time (Rietveld & Kiverstein, 2014). For this study, the product (i.e., the snapshot) was used to retroactively investigate the process of the interaction with affordances and development of perceptions. However ideally, the process should be studied as process (van Lier, 2004a; 2004b).

Examples of process-oriented studies include Darhower (2008) and Thoms (2014) who looked at transcripts of chat logs and recordings of teacher-student talk in the classroom, respectively. These two examples capture the time-sensitive nature of affordances. By investigating real-time interaction, it becomes possible to track the discursive moves made by teachers and learners that transform the affordance landscape and which affordances are acted upon to promote learning and which ones are not. However both studies cannot definitively say that the investigated perceptions actually have an impact on learning (Darhower, 2008; Thoms, 2014). Thus ideally, further research should be longitudinal in order to track the development of perceptions and related changes over longer periods of time.

(2) Not action research: Van Lier (2004a) outlines key stages of the development of ecological, process-oriented research. These stages are intertwined in a cyclical process of:

a) Asking questions and narrowing the scope of investigation
b) Criticizing and interpreting existing literature
c) Conduct empirical research and develop a theory
d) Implementing an intervention
e) Evaluating and reflecting on the outcomes of the intervention
Therefore a study from a DST/ecological perspective is necessarily contextualized and intervention-focused action research. However this key aspect is clearly absent in this study. The next step is then to conduct action research by manipulating particular affordances within a classroom. This could be done by implementing language similarity training such as cognate-awareness raising activities or related tasks that reduce perceptions of language proximity.

(3) **Explicit exclusion of other perspectives:** The focus of this study is on learner perceptions and thus does not go in depth into the macro-level. Although equally deserving of empirical investigation, the socio-political situation, sociocultural context and teachers’ perceptions of why the use of cognates many be discouraged were not investigated in this study.

Pauwels (2014) conducted interviews with university language teachers and asked them about their students’ plurilingual profiles and their opinions on the presence of plurilingual learners in class. She found that most teachers did not know and did not show any interest in knowing about their students’ other languages unless they demonstrated native-like competence. The majority of the teachers also revealed their negative attitudes towards plurilingual students, believing that these students disturb class dynamics, have bad habits that are difficult to undo and were too self-confident in their language learning abilities. These findings from Pauwels (2014) provide a preliminary context to the particular learner perceptions revealed in this study. However further research into teachers’ perceptions about language proximity and beyond into the sociocultural and socio-political context will be needed to better situate these findings.
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Multilingualism, 6(2), 137–153.


Dear ________________________________ (participant’s name)

My name is Kimberly Cho and I am a Masters of Arts student in the Language and Literacies Education program in the Department of Curriculum, Teaching and Learning at OISE. I am inviting you to participate in my study that focuses on French learners’ awareness and perceptions of language. To learn more about the study, please read the following information. If you would like to participate, please complete the consent form below. Thank you.

**Title of Study (tentative):** Exploring the role of social representations of language proximity in cognate awareness

**Purpose of the Study:** This study investigates French students’ cognate awareness and their perceptions of language distance. The goal of this study is to better understand the relationship between these two aspects and its impact on students’ metalinguistic connections and their orientation towards language learning.

**Time & Location:** This study will take place in the OISE building (252 Bloor Street West) in Room ____ at _________(time) on ____ (date). The study will take about 1 – 1½ hours to complete.

**Participants:** To participate in this study, you must be a university student who is:
- highly proficient in English
- currently enrolled in a French-language class (3rd/4th year level class)

**Procedures:** You will complete four tasks in about 1 – 1½ hours. The first task requires you draw a picture depicting yourself speaking the languages you know. The second task is a language background questionnaire. The third is a French passage that you will read and underline words that are similar in English. The fourth is an interview with me (Kimberly Cho) about your experiences learning French. The first three tasks will be done on paper. All tasks will be conducted in English with the exception of the French reading passage. The interview will be audio-recorded.

**Potential Benefits:** By participating in this study, you will have the opportunity to reflect on and gain insight about your experience, perceptions and practices regarding language learning.
**Foreseeable Risks:** There are no foreseeable risks associated with this study.

**Compensation:** You will have the opportunity to enter your name in a draw to win one of three E-gift cards from Tim Hortons or Starbucks ($20, $15 or $10).

**Participants’ Rights:**

**To Confidentiality:** All personal information collected from you will be kept secure and private. Only my supervisor, Dr. Enrica Piccardo, and I will have access to your personal information. All of your responses will be associated with a pseudonym to protect your identity. This study will have no effect on your grades and you will not be judged/evaluated in any way. Your audio-recorded interview data will be deleted once transcription is complete. Your written responses will be kept in a locked cabinet at OISE and your interview transcripts will be maintained in a secure server environment for five years. After this time, all of your data will be destroyed. Data collected from you will only be used in this specific study and your personal information will not be present in any future publication.

The research study you are participating in may be reviewed for quality assurance. If chosen, (a) representative(s) of the Human Research Ethics Program (HREP) may access study-related data and/or consent materials as part of the review. All information accessed by the HREP will be upheld to the same level of confidentiality that has been previously stated.

**To Withdraw:** Your participation in this study is completely voluntary. You may decline to answer any question you do not want to answer. If you wish, you may leave the study for any reason and at any time up until one week after your participation in this study. This is because data aggregation and analysis will commence during that period, making it difficult to remove individual data from the data set. Please note that there are no negative consequences of leaving the study.

**To Ask Questions:** If you would like to know more about this study, please contact me (Kimberly Cho) at [contact information]. You may also contact my supervisor, Dr. Enrica Piccardo at [contact information]. To learn more about participants’ rights in research you may also contact the Office of Research Ethics at 416-946-3273 or ethics.review@utoronto.ca.

Please read and sign the consent form below if you would like to participate in this study.

Sincerely,

Kimberly Cho
OISE

PLEASE KEEP A COPY OF THIS LETTER FOR YOUR RECORDS
I have read Kimberly Cho’s information letter about this study and I understand that my participation will include the following activities and conditions.

Activities:
- Individually complete four tasks (three on paper, one audio-recorded)

Conditions:
- My interview will be audio-recorded
- Kimberly will keep my information private
- I may leave the study for any reason and at any time up until one week after my participation

___ YES, I agree to participate in the research
___ NO, I do not agree to participate in the research

☐ I would like to receive a summary report of the study once it is complete

Name: ______________________________ Email: _______________________
Signature: __________________________ Date: _______________________

Please return the completed form to the researcher. Thank you.
Appendix B
Drawing Task

Draw yourself speaking the languages you know:
Appendix C
Language Background Questionnaire

1. Name: __________________________________________

2. Class: _________

3. Indicate your native language(s) and any other languages you have studied or learned.
   
   Native language(s): _________________________________________________

   Language(s) studied/learned:________________________________________

4. Indicate the age at which you started using each of the languages you have studied or learned in the following environments.

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5. Please comment below to provide more information about your learning environments.

   ____________________________________________________________
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   ____________________________________________________________
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6. Rate your current ability in terms of listening, reading, spoken interaction, spoken production and writing in each of the languages you have studied or learned, according to the self-assessment grid (see next page).

<table>
<thead>
<tr>
<th>Language</th>
<th>Listening</th>
<th>Reading</th>
<th>Spoken Interaction</th>
<th>Spoken production</th>
<th>Writing</th>
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7. Please comment below to provide more information about your current ability in each of the languages you have studied or learned.

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
works.

Experiences.

and reviews of professional or literary

in mind.

personal significance of events and

Writing

significant points. I can write summaries

select a style appropriate to the reader

recipient to notice and remember sig-

logical structure which helps the

or a report, underlining what I con-

giving reasons in support of or against

significant points.

I can write letters highlighting the

my interests. I can write an essay or

I can write clear, smoothly-flowing text

I can write clear, detailed text on a

I can explain a viewpoint on a topical

I can present a clear, smoothly-flowing

I can present clear, detailed descrip-

I can write short, simple notes and

I can write a short, simple postcard,

I can write simple connected text on

I can write short, simple notes and

I can write short, simple postcard,

I can narrate a story or relate the plot

I can explain a viewpoint on a topical

I can present a clear, smoothly-flowing

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Appendix E  
Cognate Recognition Reading Passage

La commensalité chez les jeunes adultes français, allemands et espagnols

La commensalité - en latin cum : avec et mensa : table - définit le fait de partager un repas. Un repas dont la forme et l’intérêt diffèrent selon les âges des convives, la diversité des situations alimentaires, les appartenances socioculturelles, les époques, les styles et conditions de vie...

Pour mieux comprendre l’évolution des pratiques alimentaires de la société, il est nécessaire de saisir les manières dont on se retrouve pour manger ensemble. A l’heure où beaucoup annoncent la fin du repas commensal, une tendance à l’individualisation des pratiques alimentaires et un hypothétique lien avec le développement de l’obésité, il semble que le partage alimentaire retrouve des nouvelles modalités et une nouvelle intensité, même chez les jeunes…

En effet, les jeunes adultes représentent une classe d’âge particulièrement concernée par les prises alimentaires hors foyer et par un style alimentaire que l’on peut qualifier de désorganisé, sujette à une phase transitoire de leur vie et caractérisée par l’expérimentation. De plus, bien que géographiquement proches, les pays choisis sont éloignés d’un point de vue culturel et des traditions alimentaires.

L’étude s’est appuyée sur les résultats d’interviews de 83 jeunes adultes de différents profils résidant à Barcelone, Berlin, Lyon, Madrid et Paris. Au-delà d’une meilleure connaissance des pratiques alimentaires en Europe, cette étude souligne que la population des « jeunes adultes » est loin d’être homogène même si des tendances communes liées en particulier aux styles et conditions de vie au cours de cette période de leur vie peuvent être soulignées.

Cette étude révèle ainsi que les jeunes adultes, en pleine phase d’émancipation et d’expérimentation et contraints par leur budget, explorent de nouvelles cuisines, de nouveaux lieux de restauration, de nouvelles formes de sociabilité et développent de nouvelles manières de recevoir : cuisiner ensemble, apporter un plat préparé chez les amis pour le partager, inviter les amis pour des apéritifs dînatoires, des buffets, des tapas, assis autour d’une table, par terre, sur le canapé, debout dans le salon…

Les espaces de vie des jeunes adultes et leurs équipements ne permettent pas
toujours de recevoir de façon formelle autour d’une table et au-delà de cet aspect pratique, l’étude souligne qu’il n’y a pas non plus l’envie de la part de ces jeunes de recevoir de cette manière. Pour partager leur repas, les jeunes investissent les espaces publics qui deviennent des lieux pour rencontrer ses pairs, se sociabiliser et se restaurer autour d’un barbecue, d’un pique-nique avec des aliments préparés à domicile, achetés dans des « take-away » ou directement issus des supermarchés... Les règles changent donc au profit d’une volonté forte : être ensemble et partager l’expérience du repas dans une forme sociale la plus adaptée possible au style de vie de cette classe d’âge.

Il apparaît sinon des différences dans les pratiques commensales et les attitudes face à l’alimentation entre les jeunes adultes français, allemands ou espagnols liées à des traditions et des modèles alimentaires et culturels différents selon les pays. Ainsi, l’étude révèle que le type de repas, les occasions, les lieux, l’organisation sociale, les modalités de partage et le rôle du partage ne sont pas les mêmes:

- En Allemagne, les jeunes ont l’habitude de se retrouver avec leurs amis autour d’un brunch, dans un café ou à la maison, ou pour cuisiner ensemble alors que les français et les espagnols ont plutôt l’habitude de se retrouver pour des dîners au restaurant ou chez eux pour des apéritifs dinatoires, des tapas ou des réceptions où l’hôte prendra en charge davantage la préparation.

- En France et en Espagne, la convivialité est donc essentielle. La cuisine est un prétexte pour se rassembler, manger et discuter en même temps. Le repas fait figure de « repas loisir ». A l’inverse, en Allemagne, ce sont les activités qui accompagnent le repas qui sont prétextes à rassembler les personnes et sont symboles de convivialité comme cuisiner ensemble, les jeux de table, le visionnage d’un film... Le repas fait ici figure de « repas nutrition ».

L’alimentation et la restauration moderne ne semblent pas être simplement au service des besoins du « grignoteur » pressé et nomade facilitant ainsi les prises alimentaires désocialisées, mais son usage peut être également détourné afin de renforcer de nouvelles formes de partage et de communication.
# Appendix F
Semi-structured Interview Guide

<table>
<thead>
<tr>
<th>Topic</th>
<th>Prompt</th>
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</table>
| Language learning background & explanation of drawing               | Can you tell me about your drawing?  
- How did you learn? Motivation/goal for learning French?  
- How do you use your languages? in social contexts/specific purposes  
- if separation: how other languages come into others, ask about boundaries |
| Metalinguistic awareness (in general)                               | As someone who knows all of these languages, do you consider yourself to be a good language learner? Why?  
- What attributes does a good language learner have?  
- Better than monolingual? What do you have that they don’t? |
| Plurilingual-monolingual perspective                                | Imagine that you couldn’t speak English or French but your goal is to learn both languages. In your perspective, what would be the best way to learn the two languages?  
- as a child vs now as an adult  
- separately or together?  
Do you ever switch between your languages in speaking/writing/thinking?  
Person who knows all of your languages? Do you use some or all to communicate?  
- Do you think this switching is useful/good or a problem/negative? |
| Language proximity                                                   | Do you think most people think English and French have more similarities or differences?  
Which languages do you think are the most similar to English? Why?  
- Most similar to French? Why? |
| French-English proximity                                            | When you’re learning French in your French class, “where” are your other languages/what are they “doing”?  
Overall, do you think that your knowledge of English helps you more or misleads you more when you’re learning French?  
- Can you describe a situation where it helped/misled you?  
- What is your experience with the faux/vrais amis? |
| Cognate awareness                                                    | What was your experience/thought process while reading the passage?  
Thoughts about cognates in general when you are learning French?  
- Do you notice it?  
- Useful/misleading?  
- Have you used it before? Do you use it now? |
### Appendix G
Coding Scheme

<table>
<thead>
<tr>
<th>1 – PERCEPTION OF LANGUAGE LEARNING EXPERIENCE</th>
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<tbody>
<tr>
<td>Good language learner</td>
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<td>Explicit instruction</td>
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<td>Language learning advantage over monolinguals</td>
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<td>French processing</td>
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<td>Mixing</td>
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<thead>
<tr>
<th>2 – PERCEPTION OF FRENCH-ENGLISH PROXIMITY</th>
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<tbody>
<tr>
<td>Perception of cognates</td>
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<td>Others’ perceptions of French and English</td>
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<td>Similar languages to French and English</td>
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<td>Vision of French and English language learning</td>
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