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Eschewing the "Bad" and Embracing the "New": How Previous Experiences, Critical Incidents, and Negativity Bias Shape L2 Continuance in US Post-secondary Language Learners

Stephanie Michelle Knouse, Furman University, Greenville, SC, USA, stephanie.knouse@furman.edu

Mia Freeman, Furman University, Greenville, SC, USA, mfreem45@eagles.nccu.edu

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Stephanie Michelle Knouse [1], Mia Freeman[2]

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ABSTRACT

The present investigation examines the impact of critical incidents (CI) and previous experiences in second or additional language (L2) learning, L2 learners' proclivity for negativity bias (NB) in the formal classroom setting, and how past experiences conditioned their continuance or discontinuance of L2s when transitioning to a collegiate setting in the United States. Because college-aged students attend to negative experiences more than positive ones of the same frequency and magnitude (Vaish et al., 2008), the researchers aimed to determine whether previous negative encounters conditioned students' choice to discontinue an L2 when entering post-secondary education. Through analyzing quantitative and qualitative data from 1504 learners attending a US post-secondary institution, students who chose to discontinue one L2 in favor of another when starting university reported more negative experiences in prior L2 learning settings, such as inhospitable L2 learning environments, not receiving enough encouragement from L2 instructors, or having to endure negative CIs.

[1] Department of Modern Languages and Literatures, Furman University, Greenville, SC, USA, stephanie.knouse@furman.edu
[2] Department of Modern Languages and Literatures, Furman University, Greenville, SC, USA, mfreem45@eagles.nccu.edu

The present investigation examines the impact of previous experiences and critical incidents (CI) in second or additional language (L2) learning of languages other than English, L2 learners' proclivity for negativity bias (NB) in the formal classroom setting in the United States, and how past experiences conditioned their continuance or discontinuance of L2s when transitioning to a collegiate setting. Continuance of L2 study and the uninterrupted building upon previously learned material and skills is paramount for L2 proficiency (Nikolov, 2017). Transitional periods between schooling are also critical and vulnerable junctures in L2 students' learning trajectories (Peng, 2011; Pfenninger & Lendel, 2017). This study is particularly salient at present, especially since United States is failing to produce a multilingual citizenry, despite its 68 million multilingual residents and the national desire to connect with others across the globe for political, economic, and social motives (Commission on Language Learning, 2017, p. viii; Dietrich & Hernandez, 2022). By critically analyzing numerous L2 students' experiences when entering into a post-secondary L2 context, our intent is to bring to the forefront the reasons learners elected to abandon the L2 they had been studying in K-12 settings, and especially how negative impressions with their particular L2s conditioned this decision. To do so, it is essential to discuss relevant concepts such as previous experiences, critical incidents (CIs), and NB to expound on the complex processes at play.

2. Literature Review

2.1. *Prior Experiences and Critical Incidents in Language Learning*

The term "experiences" can evoke a variety of meanings in L2 research and is a vague concept without context. In the present study, we adopt a comprehensive view, as did Csizér and Kálmán (2019), that language learning experiences include the immediate environment where the language is being taught and learned, the impact of the teacher and curriculum, the input received by learners, the interactions learners have with teachers and peers

when producing the language, and the degree of learner success with the language (p. 227). Scholars have delved into how learners' beliefs and mindsets have been influenced by previous experiences in language learning contexts. While much of the scholarship on previous experience relates to subsequent acquisition of languages (e.g., Elbaum et al., 1993; Golonka, 2010; Oxford et al., 1993), in the present study we explored how students' prior experiences, broadly speaking, in language learning affected subsequent actions and beliefs concerning the L2 itself. As Csizér and Kálmán (2019) pointed out, the role of L2 experience, one of three pillars of Dörnyei's (2005) L2 Motivational Self System theoretical framework, "has been undeservedly marginalized" (p. 226). Thus, we hope to add to this body of knowledge. Csizér and Kálmán further underscored that even though several scholars have dealt with the impact of past experiences on current L2 motivation (see p. 228 in Csizér & Kálmán, 2019), more work must be done to understand the construct itself. In their own study of 10 near-native English speakers in Hungary, Csizér and Kálmán (2019) determined that experiencing previous successes, having had frequent contact with native speakers, maintaining positive dispositions and high levels of self-efficacy, learning from affable L2 teachers, and learning via dynamic learning methods were key components of positive L2 experiences (p. 234-36).

Other investigations that explored impactful previous L2 experiences have framed them as critical incidents (CI), or events that make "a 'significant' contribution, either positively or negatively, to the general aim of the activity" (Flanagan, 1954, p. 339). The methodology of using CIs originally dominated fields like organizational psychology, healthcare, and the military, which experts utilized to gain greater insights into employees' thoughts and behaviors during impactful situations to enhance on-the-job training. Since then, numerous scholars have added onto this definition and have applied this concept in a wide-array of disciplines and research studies, such second language acquisition (SLA). Specifically, SLA scholars have analyzed how L2 learners processed these indelible moments as part of their

language learning trajectories and have defined CIs in similar, but nuanced ways to Flanagan's original delineation. For example, Sieglová (2022) explained that CIs in language learning are "highly significant, revelatory, or otherwise meaningful and vividly recalled life event[s] that 'deviate significantly, either positively or negatively, from what is normal or expected" (p. 108). The author stipulated that CIs evoke an intense emotional response from learners, both during the event itself and upon each subsequent recollection to the extent they exert a lasting influence on future dispositions and behavior (p. 108). In her investigation, Sieglová focused on the CIs of language learners in the Czech Republic studying business administration in a graduate program. These students were required to become proficient in 2 languages in addition to their native language (L1) per the European Union's educational programming. When interviewing participants about CIs in general, Sieglová discovered that 45 out of 183 narratives pertained to L2-related CIs. These vivid recollections with the L2 mainly took place when learners were studying abroad, traveling, socializing, and working in professional contexts. The author pointed out that during the evaluative process, students' CIs centered on noticing gaps in their actual and desired abilities. These CIs prompted intense negative feelings of fear of failing, embarrassment from mistakes, and the threat of social ridicule. In fact, one residual effect of negative CIs was to avoid engaging in the L2 altogether, which became a strategy to mitigate such negatively-charged feelings. However, other L2 learners found ways to persevere and self-regulate strong emotions, forging ahead bringing to bear lessons of failure to improve future performance.

In another study on CIs in L2 learning, Pigott (2019) opted for the term "significant incidents" and determined that these are important moments of self-awareness, lead to the questioning the status quo, have an emotionally charged element, are not planned or controlled, and are reflected upon later in the individual's life (p. 179). Additionally, Pigott claimed that CIs prompt a change from a state of ignorance to one of knowledge (i.e., anagnorisis or revelation) and are employed to make sense of one's

learning through the remembering of these events after the fact, a process known as retrospect narrative incorporation (p. 179). Pigott's (2019) analysis uncovered that these important encounters, especially during learners' younger years, had a deep-seated and lasting impact on their beliefs and actions years later. Specifically, the researcher conducted a CI analysis of 5 Japanese students learning L2 English in a post-secondary setting, interviewing each participant 3 times over the span of 18 months. The researcher ascertained that, even after attested transformative practice like study abroad (Kuh, 2008), participants repeatedly recollected memorable CIs that had taken place during their earliest years as having more persistent and significant influences on their present attitudes toward language learning. Pigott (2019) contended that CIs served as a catalyst for L2 motivation shortly after the event, especially if learners felt embarrassment or noticed gaps of knowledge. Yet, as participants recursively returned to these memories as they processed L2 encounters later, this iterative process paved the way for CIs becoming entrenched components of their worldview. By applying elements of Larsen-Freeman's and Cameron's (2008) complex dynamic systems theory, Pigott concluded that the incorporation of these noteworthy events is non-linear: early CIs left more of a long-term impact on the L2 learner's motivation, while numerous years of formal instruction in the L2 had a rather insignificant effect (p. 198).

Like Pigott, Finch (2010) emphasized the complexity of language learning, the importance of initial events, and language learners' CIs. After analyzing the journal and survey responses of 74 English language students in Korea, Finch asserted that students' early experiences in the language classroom formed learners' foundations that launched the unpredictable directions in which language acquisition would take. He found that students were primarily impacted by their teachers' dispositions, either positively or negatively, in their elementary schooling. Finch strongly advocated for teachers in these contexts to be sure to "offer a stress-free learning environment and [be] desirable role models," especially since it is impossible to

know which interaction will lead to a CI for a particular student (p. 430). Overall, in the body of research on CIs in language learning, scholars have found that CIs can lead to productive results and can be framed positively. However, many of the L2-related CIs featured in the body of research assumed a negative psychological orientation, which can be explained by ideas germane to negativity bias (NB).

2.2. *Negativity Bias*

One sociopsychological concept that illuminates the inclination to remember and pay attention to negative experiences is negativity bias (NB). Vaish et al. (2008) defined NB as "the [human] propensity to attend to, learn from, and use negative information far more than positive information" (p. 383). In Rozin and Royzman's (2001) extensive review of NB research in psychology, they described that "in most situations, negative events are more salient, potent, dominant in combinations, and generally efficacious than positive events" (p. 297). Rozin and Royzman explained that "the effects of the negative to dominate (or even utterly overwhelm) those of the positive when the two are blocked together to form a single configuration." Essentially, when stacked up against positive events, entities, or objects of equal magnitude, negative ones are "more threatening than positive ones beneficial," escalate more rapidly, "require more sophisticated appraisal," and are more transmittable (p. 314). Nevertheless, Rozin and Royzman recognized that previous research had likewise shown the prevalence and greater frequency of positive events, especially in specific domains. Yet, the authors teased out that, although positive events are more abundant and frequent, positive and negative biases both fall under "one conceptual umbrella," due to their relationship with human beings' adaptive mechanisms (p. 297). That is, humans have developed not only the evolutionary ability to efficiently process more frequent types of circumstances in their environments (i.e., positive stimuli), but also the tendency to pay greater attention to those stimuli that have the potential to be life threatening (i.e.,

negative stimuli). As Carstensen and DeLiema (2018) remarked, "[i]t makes logical sense: attending to the lion in the brush more than the puppy in the grass likely holds evolutionary advantages" (p. 8).

Luckily, in the modern world, our lives are not constantly in imminent danger from predators preparing to attack; however, NB still has a stronghold on how we react to stimuli in our social environments. Related to the role of NB in human development, Vaish et al. (2008) proposed that NB has a crucial role in the social-emotional development during the first months and years of life, in addition to survival. The researchers argued that, under healthy living conditions, infants and children attend more to negative emotions and are considerably more affected by threatening cues, so they can understand the significance of these events, can learn how to problem solve, and can better relate to other people. Complementing this research, Carstensen and DeLiema (2018) discussed that although there is "a large literature documenting a negativity bias" especially in college-aged adults, one's NB waned over one's lifespan and leads to a positivity effect starting in middle or late adulthood (pp. 7-8). They attributed this change to older adults realizing time is limited and, consequently, deciding to focus on the present, "emotional meaning, and satisfaction" (p. 8). In contrast, Carstensen and DeLiema explained that since younger adults do not perceive time as a limited resource, they are more likely to explore and learn through goal-oriented motivations, thus relying heavily on negatively-oriented evidence. Furthermore, neuroscientists like Ito and Cacioppo (2000) confirmed that through examining late positive potentials—a neural marker associated with heighted attention to emotional information—, participants processed negatively-oriented stimuli more deeply than positive stimuli. Thus, NB has been documented on the neurological level as well.

In sum, the literature of NB has elucidated how individuals quickly recognize and strongly react to threatening circumstances that endangers their physical, social, and emotional wellbeing and how younger individuals, like many of our college-aged language learners, are more likely to experience this inclination "that has been considered a fundamental

principle of human behavior" (Carstensen & DeLiema, 2018, p. 8). Given that previous research on NB has shown the prevalence of this inclination in post-secondary students, and since we know that the previous L2 experiences and CIs strongly influence L2 learners immediately and in the long term, we believed it was vital to examine how these constructs shaped important decision-making by L2 learners, especially as they evaluated which L2 to continue or discontinue in formal post-secondary educational contexts in the United States.

2.2. Research Questions

To examine how language learners' previous experiences through CIs, and the inclination for NB guided their choice of which L2 to study in post-secondary schooling in the United States, the following research questions (RQs) were posited:

RQ1. How many students changed their L2 of study when moving from a K-12 to a post-secondary context? What individual factors conditioned a change of L2 study?

RQ2. To what extent did previous experiences and negatively-oriented CIs in the K-12 L2 classroom impact students' decisions to continue or discontinue learning their L2s in post-secondary education?

3. Methodology

The data that formed part of the present study come from the broader research endeavor, "Language Learning Experiences" (LLE) (Knouse et al., 2021). The researchers received approval from their Institutional Review Board to conduct the study. All participants were enrolled in the same small, liberal arts post-secondary institution in the southeastern region of the United States. The 3 L2s included in the present investigation were French, German, and Spanish, as they were the languages offered in the researchers' home department. The participants were invited to take part in an online survey at the beginning of the term, which were collected from fall 2017 until spring 2021. Since all participants enrolled in an L2 course could take the survey at the start of each semester, only participants' first

responses were included in the analysis, which came to a total of 1504 survey responses from 1504 unique participants. Regarding participants' native languages (or L1s), 1437 (95.5%) listed English as their only L1, 43 (2.9%) indicated that their L1 was a language other than English, and 36 (2.4%) participants stated they acquired English along with another L1 since birth. Of the 1504 participants at the time of the study, 955 (63.5%) students were enrolled in L2 Spanish courses, 321 (21.3%) in L2 French courses, and 228 (15.2%) in L2 German courses. Data were only collected from learners enrolled in either novice or intermediate courses. In terms of gender identities, 999 participants (66.4%) identified as female, 493 (32.8%) identified as male, 5 (.3%) identified as non-binary or "other," and 7 participants (.9%) elected to not respond.

Regarding the types of data, the online surveys contained both closed- and open-ended items. Participants could skip any survey item they did not wish to answer, which was an obligatory stipulation from the researchers' Institutional Review Board. The closed-ended survey questions included Likert-like questions that required participants to read statements (e.g., "My previous L2 teachers were effective") and provide their opinions based on the scale "strong disagree" (1) to "strongly agree" (5). Cronbach alpha and Spearman-Brown tests confirmed strong reliability for these two items (= .79; Spearman-Brown = .79). Open-ended questions invited participants to elaborate on their ratings, providing them the opportunity to add relevant details. The quantitative measures were analyzed via various statistical tests, such as chi-squared and independent samples t-tests, with SPSS Version 28.

Qualitative analyses were incorporated in the study to triangulate the findings of the quantitative analyses and to provide more robust validity. The open-ended survey questions were analyzed qualitatively using MAXQDA (VERBI, 2020), a software platform that houses and facilitates the coding and visualization of complicated data. To capture important themes and to analyze the open-ended responses in MAXQDA, the researchers used a version of grounded theory, called a multi-grounded theory (MGT). Researchers in applied

linguistics are increasingly applying grounded theory to enhance and give more credibility, consistency, and legitimacy to qualitative analyses (Hadley, 2017). Commonly employed by social scientists to interpret qualitative data (Hadley, 2017, p. 4), grounded theory is known for its rigorous methodology of iterative rounds of reading the data, memoing transcripts, creating coding schemas, and the coding itself. The hallmark of grounded theory is allowing trends to emerge exclusively from the data, rather than imposing pre-set coding schemas that could lead to biased or erroneous conclusions. Multi-grounded theory is a moderate form of grounded theory in that researchers apply deductive codes based on previous literature memos conjointly with the memos and coding schema that emerged inductively (Goldkuhl & Cronholm, 2010). This approach is the one adopted in the present investigation. While MGT is a very rigorous qualitative approach by itself, each researcher coded the data for inter-rater reliability.

Focus group interviews were additionally conducted to triangulate the survey data and corresponding quantitative and qualitative analyses. The researchers recruited post-secondary students that had taken the aforementioned survey to participate in two different focus groups with the goal of exploring students' in-depth perspectives. The researchers used a list of pre-prepared questions to spark dialogue among the participants. Once these focus groups were completed, the audio recordings were transcribed, edited, and uploaded to MAXQDA for analysis via MGT as well.
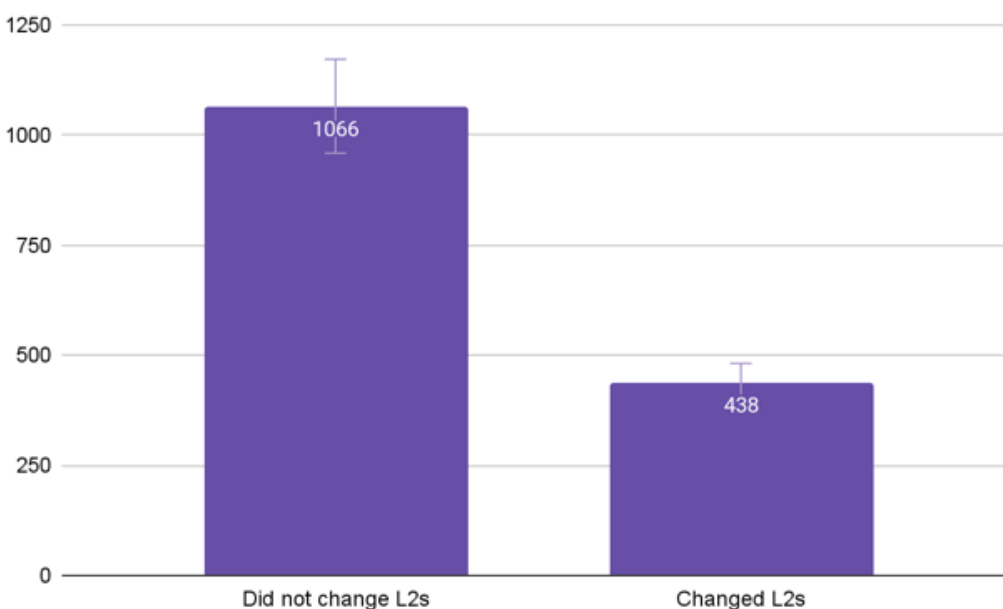
4. Results

4.1. RQ1: Frequency of Changing L2s from K-12 to Post-secondary Contexts

To respond to RQ1— How many students changed their L2 when moving from a K-12 to a post-secondary context? What factors seemed to condition a L2 change or L2 continuance?—first, the number of participants that changed languages was calculated. Of the 1504 learners included in the present investigation, 438 (29.1%) students changed their L2 when transitioning into post-secondary education and 1066 (70.9%) continued formal study of the same L2 in a post-secondary setting (Figure 1).

Figure 1

Distribution of L2 post-secondary learners by change or continuance of formal L2 study in post-secondary language study (N = 1504)
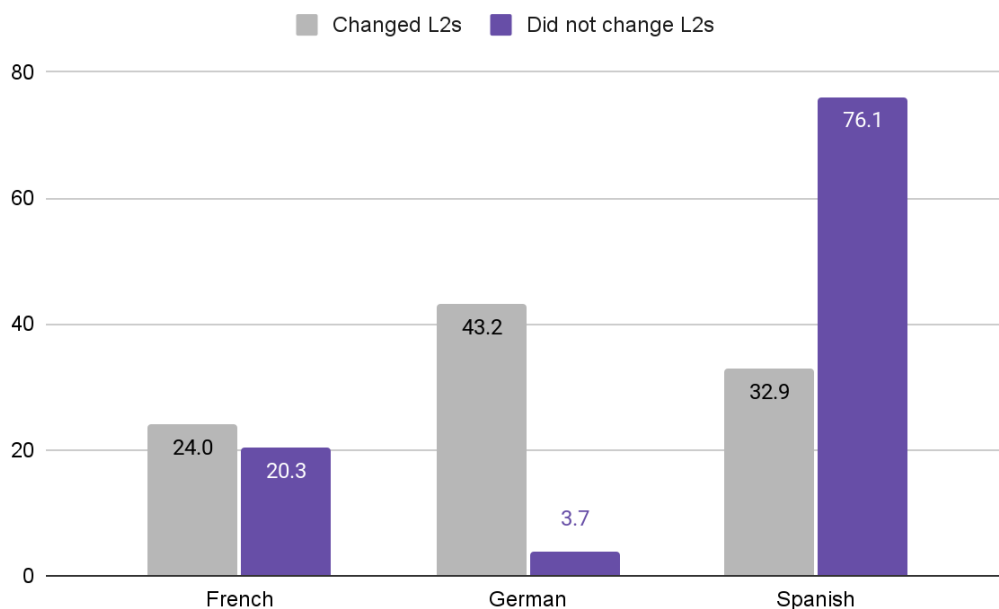
Gender identity did not condition a change or continuance in L2 study. Of those learners that identified as female, 28.6% changed L2s in a post-secondary context and, of those learners that identified as male, 30.0% changed L2s when transitioning to college-level L2 study. None of the 5 students identifying as non-binary or "other" gender identities changed languages. Due to such small numbers of this latter group of students, no conclusive findings can be offered.

Next, we explored if there was an association between the L2s in which students were enrolled and their decisions to change languages. Figure 2 presents all students' post-secondary L2s of study at the time of data collection. Of those learners that changed L2s, many students opted for German (43.2%), followed by Spanish (32.9%), and lastly French (24.0%). Of those students who continued with their L2 from secondary education, Spanish learners most frequently continued the same language of study in secondary schooling (76.1%), followed by L2 French (20.3%), and lastly with German (3.7%). There was a significant association between changing languages and the current L2 in which learners were enrolled at the post-secondary level ($\chi^2(2) = 412.6$, $p < .001$).

Figure 2
Percentages of learners enrolled in post-secondary L2 French, German, and Spanish, by L2 continuance (N = 1504)
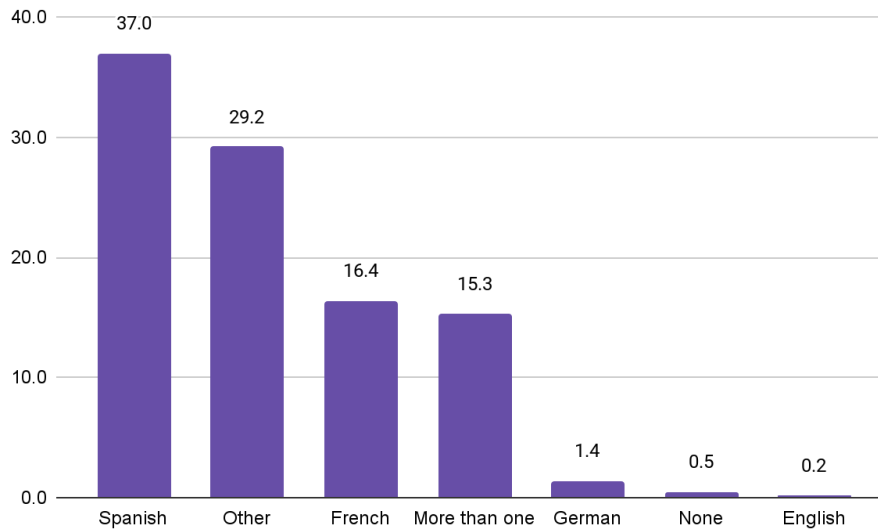

Complementing these findings, it was of interest to examine trends based on prior L2s taken before the post-secondary context. Figure 3 shows the distribution in percentages of the L2s taken in high school exclusively by the L2 students that decided to change L2s in higher education. Figure 3 shows that most students took Spanish in a high school setting (37.0%), followed by "other language" (29.2%). These "other" languages included American Sign Language, Chinese, Greek, Japanese, Italian, and Latin. Of students who switched L2s in college, 16.4% had taken high school L2 French and 15.3% had taken more than one language. Few students that changed languages had enrolled in L2 German in high school (1.4%). There was a significant association between changing languages and the L2 that had pursued in a secondary context ($\chi^2(6) = 548.1$, $p < .001$).

Figure 3

Percentages of L2s studied in secondary contexts by learners that changed languages in a post-secondary context (N = 438)
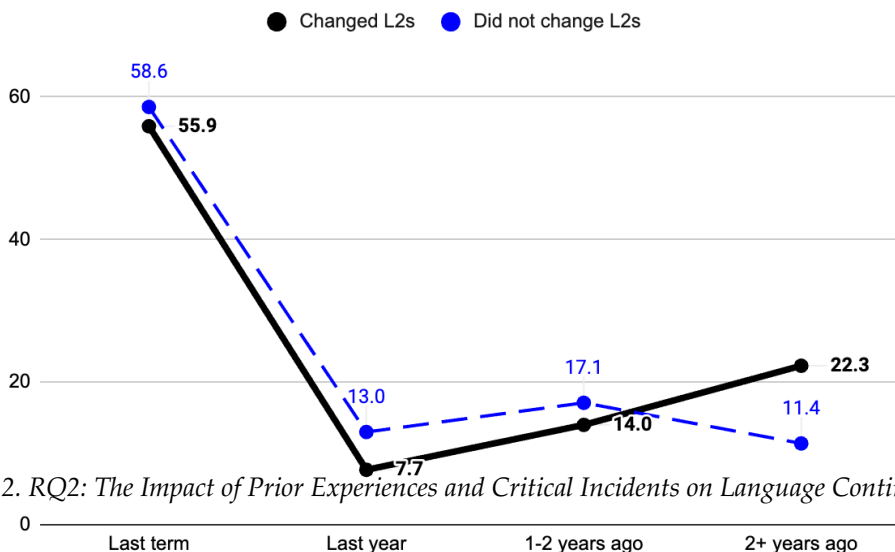

Moreover, we examined if this L2 continuance was correlated in some way to L2 learning *continuity*. To clarify, L2 continuance refers to students learning the same L2 in a formal setting throughout their K-16 educational journeys, while we define L2 continuity as enrolling in a formal L2 class in consecutive semesters without a significant break. Conversely, L2 discontinuity is experiencing a substantial gap in formal L2 study longer than a summer, a semester, or a few months. Figure 4 displays the language continuity patterns based on L2 continuance. The proportions of students by L2 continuance are fairly comparable until a 2-year break from language study. However, there is a noteworthy difference in the proportions of students who reported 2 or more years of language learning discontinuity: 22.3% of learners that changed L2s had a learning gap of 2 or more years, compared to 11.4% of learners that did not change L2s. There was a significant association between changing languages and language discontinuity ($\chi^2(3) = 33.6$, $p < .001$). Thus, the longer L2 learners waited to enroll in formal language study, the more frequently they changed L2s in a collegiate setting.

Figure 4

Percentage of L2 students by the last time they enrolled in a formal L2 course, L2 change vs. L2 continuance (N = 1504)
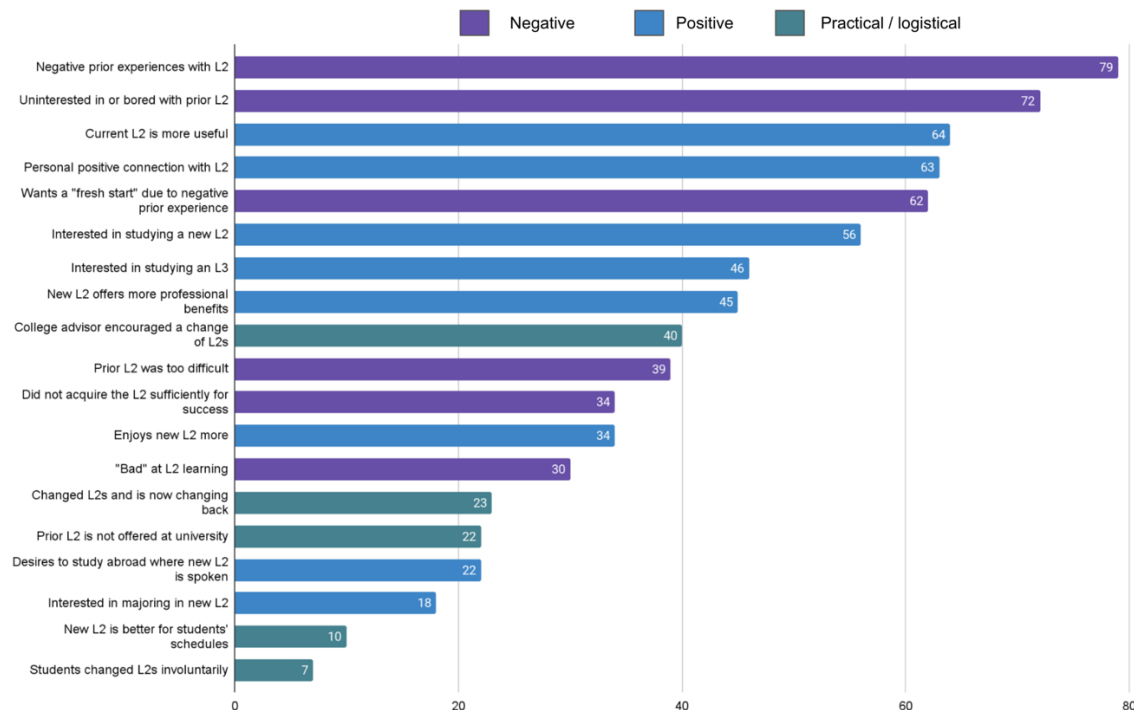

4.2. RQ2: The Impact of Prior Experiences and Critical Incidents on Language Continuance

To respond to RQ2— To what extent did previous experiences and negatively-oriented CIs in the K-12 L2 classroom impact students' decisions to continue or discontinue learning their L2s in post-secondary education?—different sources of data were extracted and analyzed.

Figure 5
Distribution of themes for changing L2s from K-12 to post-secondary settings (N=766)

First, students' responses to the open-ended survey question, "What were the reasons for why you switched languages [in college]?" were counted, after which 766 discrete reasons were identified. After applying MGT methodology to the analysis of the qualitative data, these reasons were categorized into 19 different themes, with participants often citing more than one theme in their responses (Figure 5).

As highlighted in dark purple in Figure 5, out of these 19 subcodes 6 themes emerged that directly connected to learners' negatively oriented previous experiences before post-secondary L2 study, which comprised 41.3% (316/766) of all responses. Notably, the top 2 most frequently reported reasons for switching languages—"negative experiences with prior L2" and "uninterested in or bored with prior L2," as demonstrated in (1) and (2)—were linked to negative academic experiences and comprised 19.7% (151/766) of all mentions. The remaining 4 negatively-oriented reasons students cited for

switching—"wants a 'fresh start' due to prior negative experiences," "prior L2 was too difficult," "did not adequately acquire prior L2," and "'bad' at L2 learning"—are featured in examples (3) – (6).

(1) "I hated Spanish and wanted to try something new and I thought Germany was a cool country." (F2017432)

(2) "I had always wanted to learn German and was tired of learning Spanish." (F2017108)

(3) "I switched from Spanish to German because I was ready for a change." (S2020063)

(4) "I switched from Latin to Spanish because Latin became very complicated." (F2017208)

(5) "I knew that my French was not good enough for [the level] that I was placed into, so I decided to try something new. (F2019275)

(6) "I switched from Spanish to French because I was bad at Spanish." (S2019006)

The other reasons learners cited for changing L2s in college pertained to perceived benefits and positive expectations with the L2 (in blue), such as

"I have a positive personal connection with the L2" as well as logistical reasons (in green), such as "prior L2 not offered at current university." Positive, forward-thinking rationale made up 45.4% of the responses (348/766), while practical or logistical rationale comprised 13.3% (102/766) of the responses.

To further respond to how students' previous experiences shaped L2 continuance, responses from 2 closed-ended survey questions asking learners to rate their previous L2 instructors in K-12 settings were analyzed. Figure 6 features the mean scores of learners' ratings of L2 instructor effectiveness and how much encouragement they received to continue learning the L2 upon completing secondary study. Independent *t*-tests were conducted to determine if there were significant differences between these survey items and students' L2 continuance or discontinuance. There were statistically significant differences between these groups in terms of how students rated their instructors on effectiveness and preparedness ($t(1478) = -4.238$, $p < .001$, $d = .25$), with a small to moderate effect size, and levels of encouraging them

to continue L2 study ($t(1477) = -5.327$, $p < .001$, $d = .31$), with a moderate effect size.

To uncover additional noteworthy trends in students' perceptions of prior L2 instruction, the data were disaggregated in Figures 7 and 8. Since the number of students continuing their L2 was much greater than those that changed L2s, percentages were calculated for each interval to facilitate a comparison between the groups. In Figures 7 and 8, each respective group displays a skewed distribution, with the largest percentage of both groups of students rating both survey items "agree." However, if each interval is compared by group, other important and systematic trends are observed: students that changed L2s in post-secondary instruction chose "strongly disagree," "disagree," and "neutral" more frequently than those learners that continued studying the same L2 from secondary to post-secondary schooling. Furthermore, the two largest proportion disparities are observed in Figure 7 in the responses for "agree" with a 7.1% difference and in Figure 8 in the responses for "strongly agree" with a 9.6% difference.

Figure 6
Mean ratings of prior L2 instructors' effectiveness and prior L2 instructors' encouragement to continue, by L2 continuance (N = 1480, 1479)

Figure 7
Interval percent values of the survey item on prior instructors' effectiveness, by L2 continuance (N = 1480)
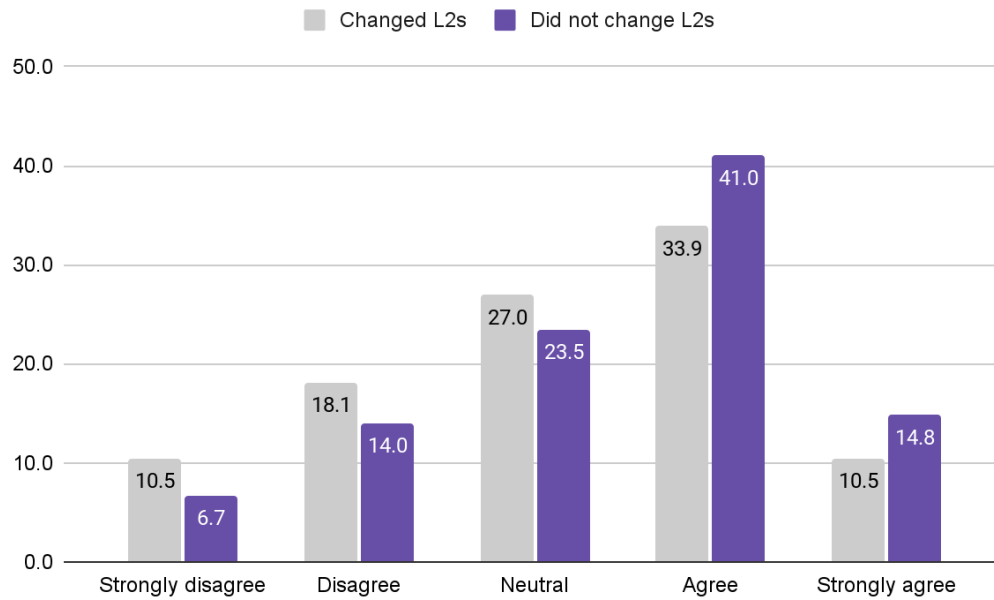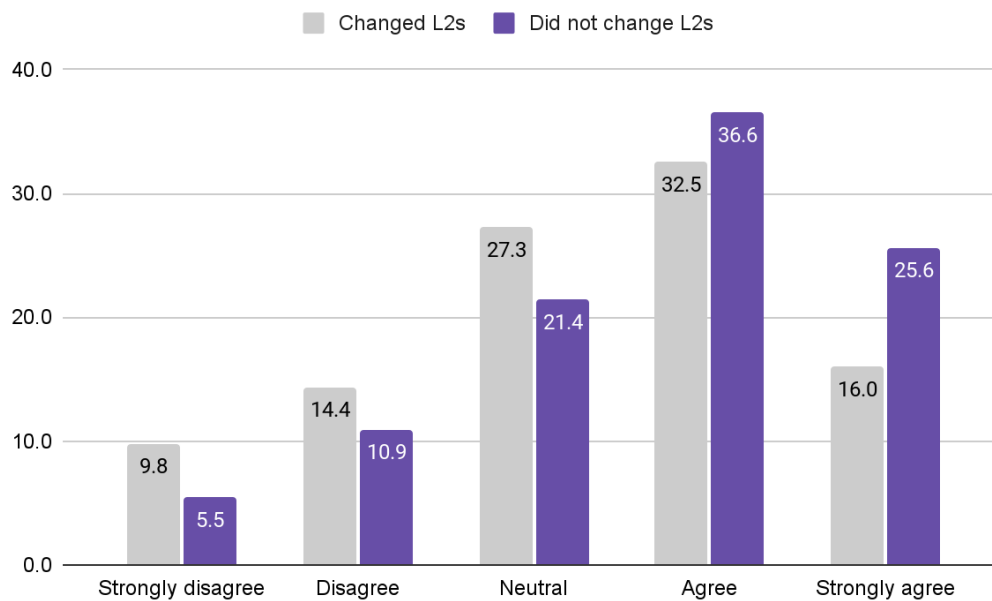

Figure 8
Interval percent values of the survey item on prior instructors' encouragement to continue to L2, by L2 continuance (N = 1479)

To better understand these quantitative findings, we present extracted student responses from the open-ended questions in which they explained the ratings of the quality of K-12 instruction and the amount of encouragement by their L2 educators. Responses represent both L2 discontinuance and L2 continuance groups for each survey item related to prior K-12 L2 instructors and experiences.

(7) [My K-12 L2 teachers] definitely weren't the best. Taught just well enough for a lot of us to get by in the class. (S2020284, discontinued L2)

(8) Quality of instruction was very high – [L2] classes were challenging and engaging, and teachers encouraged continuous review and study. (S2019026, continued L2)

(9) Very discouraging [L2] teacher who actively discouraged students from further [pursuing] language on the grounds that we didn't have the capacity to learn another language. (S2020127, discontinued L2)

(10) My Spanish classes, especially in high school, prepared me well for college level classes and encouraged me to continue studying the language. (S2019023, continued L2)

Moreover, transcripts from the 2 student focus groups were reviewed several times, memoed, and categorized by a coding schema, per MGT methodology. Out of the 2 student focus groups 12 CIs were isolated. Eight out of the 12 CIs were directly tied to negative K-12 language learning experiences that impacted students' language learning attitudes and future decisions about pursuing L2s. For instance, in (11), the participant recounted humiliating interactions with their L2 teacher and how these CIs led them to change L2s after transitioning to a post-secondary learning context.

(11) I'm very much the kind of person where I'll do better if I like the teacher and they're encouraging me to do my best. I had an experience where I was excited to start learning the language, but then it wasn't going very well, and I lost motivation, and I felt like the teacher was just making fun of me at that point. Every time they asked me to speak in class and I like the joke of the class, and I stopped talking because I didn't want that kind of environment anymore. And I very like went inside myself at that point and stopped trying.

Additionally, another L2 learner reported that the L2 they studied in high school was seen as a non-rigorous academic endeavor, which led them to become uninterested in the language itself and to change L2s in college (12).

(12) The Latin class at my high school was kind of considered the joke. The joke language. We only had one teacher teach all the different levels. He is a great guy and a really good teacher. But it was known for being easier. Our major project was anything that had anything to do with Latin. So, you could paint a canvas and write "SPQR" on it. And that is automatically like, "[…] you're great, you're good." Yeah. We took field trips to the zoo […]. I think he called it "a senior field trip". You go to this big restaurant, and you eat like a Roman, which just means you eat a bunch of food on the school's budget. [Laughter] And that was a field trip. […] And so, […] when you did have to do your translations and turn it in, you wouldn't care if you turned it in three weeks late. So, it was very different, which is why I didn't really remember anything [laughter] from it.

Furthermore, in (13, another L2 learner disclosed a CI from an experience in middle school that negatively impacted their intrinsic motivation and willingness to succeed in any L2 classroom in which they would have to verbally communicate.

(13) I tried to take Spanish in eighth grade, and it was just a mess, because I sounded like an American trying to speak Spanish. It was really bad. So, I just decided to go to Latin because […] I didn't think I was going to be able to pronounce anything [in any language].

Moreover, another student discussed a CI in high school which left them uninterested in the language because their instructor was not excited to teach the language (14).

(14) I think it helps a lot whenever professors are enthusiastic about like teaching, [be]cause in high school, I know my teacher, he was a really good teacher, but he wasn't very excited to teach. So, all throughout high school I didn't really strengthen my like Spanish, what I had learned in middle school.

Overall, these examples of negatively-oriented accounts represent how students remembered these prior experiences, incorporated them into their retrospective narratives, and used them to make decisions pertaining to post-secondary L2 learning.

5. Discussion

The findings in the previous section revealed salient relationships between L2 learners' previous experiences and their decisions to change or not to change L2s. Approximately 30% of the 1504 students chose to abandon their previously studied languages when embarking on post-secondary L2 learning. Of those students who changed L2s in when entering a post-secondary language learning context, many of them had taken L2 Spanish in a K-12 setting, they had experienced negative CIs related to L2 instructors, they perceived a deficiency in their L2 abilities, they evaluated their previous learning context as suboptimal or mediocre, and they experienced a longer gap between K-12 and post-secondary language learning. Furthermore, students that changed L2s often enrolled in post-secondary L2 German.

Regarding RQ1, the finding that almost 30% of students changed which L2 they were pursuing in their post-secondary studies in and of itself is revelatory and merits further consideration. As a reminder, all students enrolled at the institution had to take a L2 as part of their graduation requirements. Since students could not simply opt out of language education, it is possible that high rate of L2 change in this post-secondary setting is attributed to having more L2 choices that ever before and wanting to take advantage of the new options. In terms of language learning options in the United States, The National K-12 Foreign Language Enrollment Survey Report (American Councils for International Education, 2017) revealed that L2 Spanish by far was the most commonly offered language for high school students (46.0% of all US L2 programs), followed by L2 French (21.0%), L2 German (8.7%), and L2 Latin (8.5%). Thus, it makes sense that, of the students that changed L2s in their post-secondary setting, the majority was enrolled in L2 German (Figure 2); likewise, of those students that changed

L2s, the majority had taken L2 Spanish in high school (Figure 3). Since student agency—or the ability to become "active learners who can make choices and take actions to fully participate in their learning communities"—is fundamental for motivation and success in educational contexts (Willis, 2019, p. 1), it seems quite feasible that these learners wanted to capitalize on the ability to become the choice-makers at a critical juncture in their educational careers, as more options were available to them. Many of the qualitative responses, such as those in (1) – (6), lend support to this conjecture. Additionally, students' reasons for changing languages did not center around already having attained an advanced level of oral proficiency upon completing secondary schooling, hence desiring further opportunities to enhance their multilingual repertoires. While 15.3% of participants indicated they had taken more than one L2 prior to college and possibly changed due to a penchant for learning L2s (Figure 3), students more frequently attributed their perceived lack of proficiency as a major reason for changing L2s when transitioning to a collegiate setting (Figure 5). Furthermore, as Pigott (2019) stated, when learners move "into a new life phase, [this transition] was found to instigate a revision of learning goals" and different sources of motivation (pp. 180-1). Peng (2011) also found that the transition from high school to higher education was a "critical period" (p. 314), one in which beliefs shift and exhibit dynamism. Thus, along with having more varied L2 opportunities, it is possible that students that had more potent negative experiences and negative CIs felt compelled to leave the L2 baggage to reformulate and reclaim their L2 learning narratives, distancing themselves from prior demotivating negative experiences and moving toward exciting and "interesting" opportunities better aligned with their newly adjusted learning and career goals (Figure 5). Lastly, those students that had significant time gaps in L2 learning—specifically 2 years or more—were those learners that most frequently changed languages. It is not exactly clear why students exhibited such a lag in L2 enrollment. On the individual level, this discontinuity of L2 study could be attributed to

students completing their L2 requirements in their first or second year of secondary schooling and opting not to continue due to a lack of opportunities or desire. Likewise, another possible explanation of this hiatus could be a testament of students' general lack of enthusiasm for L2 study or possessing different academic priorities in their educational trajectories.

While we understand a bit more about the profiles of the learners that changed languages, it is nonetheless crucial to highlight the central role of negative previous experiences and CIs based on the quantitative and qualitative findings in the prior section (RQ2). Indeed, it is encouraging that students that changed L2s in college indicated that their future goals were linked to the new L2s—such as having a personal connection with the new L2, wanting to study abroad where the new L2 is spoken, and that the new L2 is better for their future professions (Figure 5). Yet, substantiating the tenets of NB theory, students cited negative prior L2 experiences and negatively-oriented CIs as the most frequent motivation for changing L2s. Since young learners and young adults remember, give more attention to, and experience more intensely negative entities when compared to positive ones (Carstensen & DeLiema, 2018), the former type of experiences could have skewed their overall opinions of the L2s broadly speaking and their perceived abilities in the L2s. In fact, Müller-Pinzler et al. (2019) remarked that, even if children are capable in a particular skill, not believing they are not capable distorts their perception of their actual abilities, negatively influences feedback, and demotivates their efforts (p. 2). It is true that for some learners paying more attention to the negative information prompted positive directions and productive actions—similar to some of the learners in Sieglová's study that used negatively-oriented CIs to plan for future scenarios in the L2 for enhanced outcomes—, we found that the participants in the present study that experienced negative CIs were eager to avoid future moments of embarrassment, feelings of insecurity, and general negativity by switching languages all together and starting anew. They did so because they had the opportunity to change, as previously explained, and

were not required to reach a particular level of proficiency for graduation.

Moreover, post-secondary students that opted to change L2s notably differed in how they perceived their prior K-12 language learning experiences. Those that changed L2s felt more strongly that their prior L2 instructors were not as effective, did not prepare them sufficiently, and did not encourage them enough to continue studying the L2 in a higher education setting (Figures 6, 7, and 8). Additionally, this subset of students offered insights in both the survey responses and focus group interviews that included more powerful, negatively-oriented sentiments like "hated," "bad at," "not good enough," "discouraging," "tired of learning," "lost motivation," and "the joke language" when compared to positively-oriented sentiments. When openly discussing K-12 language learning in the focus group interviews, and without leading students toward these types of answers, two thirds of what students recounted was negative in nature. Although some students that recounted negative CIs did not change L2s and continued with the same L2 from K-12, a relationship was found between negative past experiences and the desire to change languages in college.

Two other vital components that perhaps impacted students attending to negative CIs and not persevering with the same L2 are (1) the status of the L2s themselves and (2) the specific the geopolitical context where the L2s are studied. As featured in the review of the literature (Finch, 2010; Pigott, 2019; Sieglová, 2022), the participants in these studies that successfully self-regulated and persevered were learning English as one of their additional languages, which is the current de facto lingua franca worldwide which, for many learners, provides an embedded source of motivation to continue. Also, Sieglová's investigation was situated in the Czech Republic, a country that enforces more robust top-down language education policies and maintains a higher rate of multilingualism. Yet, in the present study, the findings could very well have been shaped by learners' sociolinguistic profiles: most were United States citizens, 95% spoke only L1 English, and all studied L2s other than English. In addition, in the

United States hegemonic language ideologies like normative monolingualism, or the belief that Americans only need to speak English and it is abnormal to be multilingual, proliferate (Fuller & Leeman, 2020). As such, many L1 English speakers in the United States often see their additional language requirement as another box to check off. Furthermore, even though over 20% of US residents speak a language other than English at home, little is being done to nurture home languages in the United States and the shift to English in multilingual families is happening faster than before (Spolsky, 2011, p. 3). Hence, it is uncontroversial to point out that the United States maintains weak national language education policies that do not successfully promote multilingualism nor the acquisition of languages other than English.

It is also important to underscore that changing L2s is not inherently bad, especially if this change brings students a heightened sense of excitement and bolstered motivation to pursue the new L2, which hopefully will result in advanced communicative competence. Yet, what is of great concern is that most students in the United States are not reaching levels of proficiency that allow them to apply languages other than English in professional or social settings upon graduation from either secondary or post-secondary contexts (see ACTFL, 2023). To prepare a multilingual and multicultural citizenry that is languishing in the U.S., actions on both the micro and macro levels must be taken. For L2 practitioners, and per Finch's (2010) recommendation, the findings of the present study reinforce the need to remember that not only are early positive experiences crucial for L2 continuance and motivation, but perhaps more vital is the avoidance of early negative experiences. In the realm of language pedagogy, it is not clear the extent to which educators are aware that learners, especially during their formative years and even at this early stage of adulthood, have a biological and neurological tendency to strongly attend to negative experiences. For decades, pre-service language instructors have learned that, if their L2 students hold high affective filters when in their L2 classrooms, language acquisition cannot fully take place (Krashen, 1982). Additionally, we argue that

understanding the inherent human propensity for NB and its impact throughout L2 learners' trajectory need to be more widely incorporated in L2 teacher education programs. Likewise, L2 educators need to intentionally and frequently encourage learners to imagine the L2 as being an integral aspect of their futures selves, which, according to the findings of this study, can be highly effective in promoting L2 continuance. Our study also corroborates Csizér and Kálmán's conclusion that empathetic and encouraging teachers "do have a lasting impact on their students' experiences, primarily not by what they teach but how they teach and what personality they have" (p. 238). Furthermore, it could be very productive to also educate L2 learners, not just L2 practitioners, on NB tendencies. This way, we could promote greater self-awareness and self-regulation among our students, and we could encourage, when appropriate, a reframing of prior negative experiences in their retrospective narratives. Incorporating more consistent critical reflection amongst learners may help them process impactful CIs so they can apply these experiences in fruitful ways and integrate them productively. Many US students, as reflected in this study's open-ended responses, adopt black-or-white thinking when remembering CIs. Hence, working closely with learners to help them espouse a growth mindset would be enormously beneficial as they rebrand negative prior experiences and CIs, which could potentially promote L2 perseverance and L2 continuance.

With that said, the onus of processing prior language experiences and establishing ideal language conditions should not be placed heavily and exclusively upon L2 educators and learners. At the policy level in the United States, to truly have a chance at creating a future generation of proficient multilinguals—which is critical for business, research, international relations, and to serve shifting domestic populations (Commission on Language Learning, 2017, p. viii)—, educational curricula should be modeled after those akin to the European Union that require students to learn at least 2 additional languages from an early age (see Spolsky, 2011 for a list of further recommendations). The fact that only 20% of US K-12 students were

enrolled in L2 study compared to 92% of European students of the same ages is testament to these divergent approaches to language education policy (Geiger, 2018). Furthermore, policies at the district, state, and federal levels in the United States need to move away from mere course completion or testing out of language requirements and to emphasize professional-level proficiency throughout the entire K-16 experience. Finally, leaders in the United States in different educational levels should make concerted efforts to closely collaborate, so L2 students receive enhanced continuity and guidance during delicate and crucial transition periods. Only after US institutional efforts highly prioritize and integrate language learning beyond English throughout primary, secondary, and post-secondary education, the United States can then transcend the dominance of English monolingualism. Until then, L2 learners in the United States will be swayed by negative biases that naturally prevail during critical transition periods and, subsequently, will decide to change L2s before attaining sufficient communicative competence.

6. Conclusion

In this study, we identified the reasons why approximately 30% of L2 students at one US institution chose to change their language of study when transitioning to a post-secondary context. Factors such as having taken K-12 Spanish, wanting to enroll in post-secondary L2 German, having a significant break in L2 study, enduring negative L2 experiences, perceiving a lack of L2 abilities, and not having to achieve a particular level of communicative competence prompted students to engage in new educational endeavors with language learning. Although in the present investigation we have exposed the impactful nature of negative CIs and NB, it is necessary to point out the study's limitations. First, it is difficult to generalize and apply these findings to all settings, be them in the United States or internationally, even though many sources and ample amounts of data

formed part of the present investigation. We strongly encourage other scholars to conduct replication studies to confirm similarities and uncover differences in a variety educational milieu. In future iterations, we also aspire to include the perspectives of learners studying other L2s—such as Chinese, English, Japanese, and Korean— along with French, German, and Spanish, in different US post-secondary institutions. This will help us determine if these findings are more generalizable. Lastly, it would be productive to incorporate direct measures of learners' proficiency to ascertain if there is a relationship between competence and L2 (dis)continuance. Perceived ability can differ substantially from actual ability, and fruitful directions regarding CIs and NB in L2 learning could result with the incorporation of this component.

While there are indeed limitations, this study nonetheless provides valuable insights for L2 practitioners and policymakers alike on the role of CIs and NB in L2 learners' trajectories. We hope that these stakeholders will apply the findings of this investigation in productive ways so all L2 learners—not only those residing in the United States, but in other geopolitical settings as well—may effectively process prior language learning experiences, persevere in their L2s, and, ultimately, achieve multilingual competence with greater frequency. To reiterate and to conclude, we enthusiastically invite researchers from other geopolitical contexts to contribute to the discussion of CIs and NB in language learning with the aim of understanding more robustly the decision-making process of our L2 learners and establishing the most optimal conditions for our learners throughout the entirety of their language learning journeys.

Acknowledgment

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