

Preservice Teacher Study Abroad Language Immersion and Implicit and Explicit Beliefs About Dual Language Learners

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Abstract

This study uses an Implicit Association Test and a self-report instrument of explicit beliefs to explore implicit and explicit beliefs and attitudes of pre-service teachers about DLLs. Study participants from one United States University in the Southeast were comprised of participants and non-participants of a study abroad language immersion experience. Overall, pre-service teachers in this study (n = 53) held balanced implicit attitudes about DLLs and positive explicit attitudes. Non-study abroad participants held negative explicit views of second language acquisition and lacked understanding of appropriate pedagogical choices for DLLs as compared to their study abroad participant counterparts.

Keywords: dual language learners, bias, implicit association test, preservice teacher beliefs, study abroad, language immersion experience, practicum

1. Introduction

Dual language learners (DLLs) now comprise 9.6% of the total K12 student population (National Center for Education Statistics, 2018, Table 204.20), a 1.5% increase from fall 2000 (National Center for Education Statistics, 2019). Yet less than half of U. S. states have any requirements for DLL training for general classroom teachers beyond the basic federal law and of those, only ten have detailed specific requirements for DLL training for teacher certification (“What ELL training”, 2014). Nevertheless, schools and districts are requesting more and more that graduates of teacher education programs be prepared to meet the needs of linguistically diverse learners as part of their foundational training. Teacher education programs are called to think critically about the knowledge and experiences provided to teacher candidates about teaching DLs. Toward this end, teacher education programs are seeking new ways to provide necessary skills and knowledge for working with DLs. Field experiences and immersion experiences in particular are being offered as part of more holistic approaches to training for real-world experiences (Zhao, Myers & Myers, 2009). The purpose of this study was to understand the potential that a short-term study abroad immersion experience might have of increasing awareness of strategies and practices to support DLLs in the classroom. Elementary and early childhood education pre-service teachers’ explicit attitudes and beliefs about DLLs were surveyed, a portion of whom participated in a Journey to Costa Rica immersion experience. Further their implicit beliefs were examined through an implicit beliefs online survey. Our research questions were:

1. What are elementary and early childhood pre-service teachers’ implicit and explicit beliefs about DLLs?
2. Do pre-service teachers who participate in a short-term study abroad immersion experience have similar or different beliefs of their peers who did not?

1.1 Teacher Beliefs

Belief is generally defined as a “proposition, or statement of relation among things accepted as true,” (Eisenhart, Shrum, Harding, & Cuthbert, 1988, p. 53). Educational research acknowledges subcategories of belief such as *attitude, values, perceptions, theories, and images* (Pajares, 1992) and Borg (2003) refers to *teacher cognition* as the unobservable cognitive aspect of teaching, more specifically what teachers know, believe, and think. As such, teachers hold beliefs about their profession, themselves, their students, teaching, and learning (Borg, 2003). Teachers make multiple content, pedagogical, management, and relationship decisions rapidly on a daily basis, and research suggests that beliefs impact practice (Yero, 2002). However, when asked to pinpoint these beliefs,

many teachers struggle to separate what they believe with what they are willing to admit they believe (Rokeach, 1968). Accessing and acknowledging beliefs, however, is an essential component of the change process that is under-recognized in professional development efforts (Chaleff, 2003). Belief research in education has focused on all realms of the teaching profession, and both implicit and explicit beliefs have been studied.

1.2 Pre- and In-service Teacher Beliefs About Dual Language Learners (DLLs)

1.2.1 Explicit Beliefs

Research of explicit beliefs of teachers and pre-service teachers about DLLs relies heavily on survey, interview, and observation tools. Kumar, Karabenick, and Burgoon (2015) note that most research on teachers' beliefs about diverse student populations comes from teachers' oral interviews or attitude scales. Self-presentation is a factor to be considered in such data, as teachers tend to report themselves more favorably as it has become more socially unacceptable to express prejudicial beliefs (Kumar, Karabenick, & Burgoon, 2015). Pettit (2011) reviewed 23 studies of mainstream teachers' beliefs about DLLs and reported varying attitudes about DLLs. Teachers reported misconceptions about DLLs (Clair, 1995; Karabenick & Noda, 2004; Reeves, 2004, 2006; Walker, Shafer, & Iiams, 2004) including little knowledge of second language acquisition, devaluing home language use, and misunderstanding the role and responsibilities of the English Speakers of Other Languages (ESOL) teacher. Pettit (2011) suggests context to be an important factor in varying beliefs, noting that studies whose participants had high numbers of DLLs over longer periods of time revealed less negative beliefs and attitudes.

Pre-service teacher belief research about DLLs has increased in recent years. Explicit beliefs of pre-service teachers have primarily been gathered using surveys and interviews. Durgunoglu and Hughes (2010) found that while the pre-service teacher participants had somewhat positive attitudes about DLLs and their parents, they were neutral in their perceptions of preparedness to teach DLLs. Markos (2012) on the other hand revealed narrow, more negative participant views prior to a mandated course in English as a Second Language (ESL) instruction with evolving understandings as the course proceeded. Busch (2010) showed change in pre-service teacher beliefs after taking a course in second language acquisition, whereas another study of pre-service teacher participants showed no significant changes after undergraduate coursework in teaching and learning English as a foreign language (Debreli, 2012). Further contributing to these mixed results, Acquah and Commins (2013) conducted a study of 38 degree-seeking pre-service teachers' knowledge of multiculturalism and diversity. Results of their mixed-methods approach indicated increased levels of knowledge after a course in multiculturalism.

1.2.2 Implicit Beliefs

Implicit beliefs, or those said to be inaccessible, are an "internal psychological attribute" (de Houwer, Teige-Mocigemba, Spruyt, and Moors, 2009) and as such are difficult to measure. According to Gawronski and Brannon (2018) there are over a dozen performance-based measures intended to ascertain implicit beliefs and attitudes, including evaluative priming tasks, the implicit association test, and other associative procedures. While educational belief research has relied primarily on explicit tools, the field of social psychology has pioneered research using response latency measures to report implicit attitudes (van den Bergh, Denessen, Hornstra, Voeten, & Holland, 2010). One popular latency measure is the Implicit Association Test (IAT; Greenwald, Nosek, and Banaji, 2003) which relies on latency to reveal implicit attitude about a construct under consideration such as race or gender. The IAT is a computer-based instrument that prompts participants to sort nominal and attitudinal terms based on perceived association of terms. The speed at which the terms are correctly categorized, according to leading researchers, Greenwald, Nosek, and Banaji (2003), provides evidence of positive or negative attitude toward the target subject. Little research has been conducted about the implicit beliefs of pre- or in-service teachers. van den Bergh, et. al. (2010) reported on their study using an explicit belief measure and the Implicit Association Test to measure Dutch teachers' prejudicial beliefs along with observations of their classroom actions and treatment of students. Results of their study showed a relationship between implicit prejudicial attitudes and teacher expectations, perhaps explaining the persistent achievement gap of ethnic minority students (van de Bergh, et. al, 2010). Kumar, Karabenick, & Burgoon (2015) also conducted a study of White teachers' implicit and explicit beliefs about White vs. non-White students and the relationship of those beliefs to their instructional practices. Implicit beliefs were determined using the Implicit Association Test. Results in this study indicated an implicit preference for White students and negative explicit stereotypical beliefs about minority and poor students. In a study of mainstream teachers' beliefs about DLLs, Harrison & Lakin (2018a) reported slightly negative beliefs of participants using an Implicit Association Test for English Learners instrument. The same implicit association test instrument was used in a follow up study of pre-service teachers with similar results (Harrison & Lakin, 2018b) indicating pre-service teachers' beliefs to also be slightly negative. Both of these studies had relatively small sample sizes, however, and more research is warranted.

1.3 Pre-service Training About DLLs

Historically, diversity training for pre-service teachers has been broad to include multiculturalism and diversity courses have been a required element of teacher preparation programs for decades (Jones, 2002). Linguistic diversity, however, as a focus within the umbrella of diversity training, has been slow to gain momentum. Especially in rural and areas where the growth of limited English proficient students has been incremental, limited attention to the linguistic needs of DLL students has been given in the training of teacher candidates (Cho, Rios, Trent, & Mayfield, 2012). A short term study abroad practicum is one avenue to support learning about cultural and linguistic diversity.

1.3.1 Immersion Experiences as Change Agent

As defined, cultural immersion is active integration into an unfamiliar community, interacting with local people, and seeking to understand the way others live in that community by being there and engaging in daily life activities (Powell & Aram, 2016). With increasing diversity in U.S. classrooms, the need for teachers to be culturally aware and sensitive is critical (Marx & Moss, 2011), and teachers who are prepared to act as change agents in the classroom will be able to address social inequities and close any achievement gap (Ukpokodu, 2007).

Elementary and early childhood preservice teachers generally have multiple opportunities throughout their teacher education programs to work with diverse learners in schools and communities; however, they rarely have much international experience (Tripp, Love, Thomas, & Russell, 2018). Preservice teachers can benefit greatly from experiences that develop them as global citizens. The globally-oriented citizen maintains a delicate balance between potentially conflicting values, such as appreciation of our common humanity and of our deep differences, courage of conviction and humility, a firm sense of one's moral identity and a willingness to revise it, internationalism as well as patriotism, and rootedness in a community as well as openness to others (Parekh, 2003). Cross-cultural immersion experiences have been considered an effective way to help pre-service teachers achieve the goal of a broader and more global perspective (Cushner, 2007; Foster, 1995; Gay, 2000; McAllister & Irvine, 2002; Nieto, 2006). It is believed that cross-cultural immersion experiences inevitably link to the development of a culturally responsive pedagogy. These experiences contribute to the necessary development of cross-cultural perspectives which often lead to improvements in self-development. The experience of the cross cultural experiential learning calls for the teachers not only to be immersed in different cultures but to reflect on their experiences and beliefs to be more successful as culturally responsive change agents.

Teacher educators have realized the importance of providing opportunities and preparation for preservice teachers to teach students from ethnic and cultural backgrounds. The process is built around several pedagogical methods. These methods may employ social justice practices, they may include the preservice teacher being required to participate in service learning programs, practicums, field experiences, or student teaching placements in an urban or culturally diverse school. Many studies have reported positive outcomes, others have indicated that the experience can actually solidify preservice teachers' predispositions and stereotypes (Anderson & Stillman, 2013; Sleeter, 2001). The research shows that preservice teachers are not adequately prepared to teach limited English proficient (LEP) students (Smith-Davis, 2004). With limited space in already heavy course loads for preservice teachers, instructional strategies and foundational knowledge of second language acquisition is relegated to one or two class sessions often taught by non-TESOL professionals who do their best to introduce the topics into their curriculum. One can find many teacher educators using the indirect strategy of playing the game of What If in class: What if you need to communicate with a non-English speaking parent and you don't know their language? What if your new student from China avoids eye contact? What if a child from Mexico refers to you as 'teacher' instead of 'Mr. Gardner'? What if . . . and so forth (Zhao, Meyers, & Meyers, 2009). Other strategies used by the teacher educators include introducing multicultural literature, visiting museums, viewing films, inviting speakers, and implementing limited school field experiences. These strategies often continue even in spite of the growing body of research that demonstrates the critical role that face to face experience plays in enhancing intercultural development (Cushner, 2007).

In order for preservice teachers to have a better understanding of the diverse student population of which their classrooms will be comprised, teacher education programs need to include more international and global experiences (Blair, 2002). Opportunities to teach in other countries expose students to different ideas and procedures, challenging their ideas that certain teaching strategies or administrative practices are universal. Many student teachers ultimately draw eclectically on the best of both systems (Moseley, Reeder, & Armstrong, 2008; Quezada, 2004).

Palmer and Menard-Warwick (2012) set out to impact preservice teachers' empathy and to 'metaphorically put oneself in the shoes of another' (p. 19). Their goals went beyond developing cultural sensitivity in emerging global

citizens. They examined preservice teachers' empathy and critical perspectives in an effort to help them make connections between their study abroad experiences and those of their future students. As the preservice teachers' faced people whose lives were so vastly more difficult than their own, they began to question their own values and assumptions and were pushed toward greater critical consciousness. Short-term study abroad instructors must monitor through formative assessment and facilitate the delicate balance between participants' moral identity and a willingness to revise it (Parekh, 2003) or risk negative outcomes in participants as they try to understand their own struggles as a 'cultural foreigner' and language learner like their future students.

Previous studies relied heavily on qualitative methodology. The current quantitative study adds to the existing body of literature by delving into both explicit and implicit beliefs of pre-service teachers who participate in a study abroad immersion experience. Data from this study include explicit belief survey and Implicit Association Test – EL responses and continues to strengthen our understandings of the value of short-term study abroad immersion experiences. These experiences can help the preservice teacher process the beginning struggles of becoming comfortable in another culture, develop patience with a foreign language, and create awareness of the difference in the environment and community.

2. Method

Convenience sampling in general was used for this study. Within this convenience sampling, however, we were interested in a targeted subgroup of students who had participated in a short-term, study abroad, immersion experience. Appropriate institutional review board approval was received from Auburn University IRB prior to commencing the study (protocol number 17-376 EX 1710). One researcher attended three specific undergraduate courses in which the study abroad participants were enrolled. After explaining the study, participation was requested of all students; the researcher was not the instructor of record in any of the courses, so coercion was not an issue. Time to participate in the survey and the IAT - EL was allotted at the time of the explanation in each class. Those who declined to participate were invited to take a break. Participants used personal computers to access both the explicit beliefs online survey created in Qualtrics and the IAT - EL. Lane, Banaji, Nosek and Greenwald (2007) report no difference in outcomes when the IAT either precedes or follows the explicit beliefs survey, so in order to make a smooth transition between platforms, the explicit beliefs survey was completed prior to moving on to the IAT - EL.

2.1 Participants

Participants in this study were 53 pre-service teachers enrolled in three undergraduate level teacher preparation courses. Two of the classes were elementary education (K-6 pre-certification), and one class was early childhood education (PreK-3 precertification). Table 1 provides demographic information of participants.

Table 1. Participant Demographics

		N (n=53)	Percent
Gender	Female	52	98.1
	Male	1	1.9
Native English	Yes	52	98.1
	No	1	1.9
Speaks a second language?	Yes (Level)	2 (Beginner)	3.8
	No	51	96.2
School level	Senior	53	100
Participant in short-term Journey to Costa Rica	Yes	6	11.3
	No	47	88.7

The survey included all informed consent information and an opportunity to accept or decline participation. All participants were administered the Implicit Association Test - English Learner (IAT - EL) and an explicit beliefs survey. Out of the 53 participants enrolled in courses, 11 students participated in the study abroad experience; however, only six of these participated in the study.

2.2 Study Abroad Immersion Context

This study abroad immersion experience, Journey to Costa Rica (JCR), was a hybrid of the traditional study abroad immersion experiences. In the JCR participants lived in a hostel for two weeks where they had breakfast provided everyday by a Costa Rican family. The program coordinator of Life Monteverde, along with the faculty of this short term program provided students an opportunity to teach and observe in an environmental school, spend afternoons in cultural experiences, visit the local markets of Monteverde, Costa Rica, and conduct weekend student workshops. The traditional study abroad immersion experiences usually consists of three main components; language enhancement, cultural activities, such as field trips and outings, and in-school teaching field experience. During the in-school teaching field experience participants make observations, create lesson plans and co-teach with the support of mentors. In our hybrid immersion experiences, preservice teachers visited family homes of the children who attended the environmental school, they worked with young adult farm workers learning English, and developed a community event to teach science lessons to local children. Our preservice teachers spent a large amount of time in a small community sharing with the locals of the area, making observations of the natural environment, working with the coffee workers, and teaching small kids who spoke very little English.

2.3 Data Collection

This quantitative study relied on two forms of data collection, an explicit beliefs survey, and an Implicit Association Test – EL. The explicit beliefs survey, adapted from Reeves (2006) and previously used (Harrison & Lakin, 2018a; Harrison & Lakin, 2018b), contained 27 Likert-style questions, using a four-point rating scale in which the higher the score reflected a more positive attitude toward and openness to teaching DLLs in the participants' future classrooms. We retained the five subscales from Harrison & Lakin (2018b) study, in which they conducted a factor analysis of the survey items. The distinct subscales are: Beliefs about Pedagogy, Attitudes toward DLLs, Beliefs about Language Acquisition, Perception of Impact of Inclusion, and Perception of Support for teaching DLLs.

The explicit beliefs and attitudes survey was administered first and ended with a link to the Implicit Association Test (IAT) – EL hosted by millisecond software. The IAT – EL is a computer-based software program that records the speed of participants in categorizing terminology related to DLLs and mainstream students with positive and negative attitudinal terms. For a more detailed explanation of the IAT - EL, please see Harrison & Lakin (2018a; 2018b).

2.4 Data Analysis

Our first research question was, “What are elementary and early childhood pre-service teachers’ implicit and explicit beliefs about DLLs?” In order to answer our first research question, we analyzed participants’ responses to the IAT – EL and their responses to the explicit beliefs survey. Overall, participants in this study held generally balanced implicit views of DLLs. Table 2 shows the breakdown of *D* scores (for more information on scoring, please see Harrison & Lakin, 2018a; Harrison & Lakin, 2018b) among participants. Twenty three participants (34.8%) had *D* scores which indicated a strongly negative attitude, moderate negative, or slightly negative toward DLLs. Thirty participants (30.3%) had scores indicating a neutral response, and 23 (34.7%) held scores indicating a strongly positive, moderate positive, or slightly positive attitude. These results do not align with results from Harrison & Lakin (2018a) as mainstream teachers’ beliefs tended to be more negative than positive. Neither do the results align with the more positive pre service teachers’ implicit beliefs reported by Harrison & Lakin (2018b).

Table 2. Implicit Association Test – EL *D* Scores

Category	n	Percent
Strong negative	8	12.1
Moderate negative	8	12.1
Slight negative	7	10.6

Neutral	30	30.3
Slight positive	3	4.5
Moderate positive	11	16.7
Strong positive	9	13.6
Missing	2	

Note. D scores range from -2 to +2. The definition of categories was based on Nosek, Greenwald, and Banaji, 2007, and Harrison & Lakin (2018a; 2018b).

Participants' explicit beliefs were overall more positive than negative regarding DLLs. Table 3 shows the breakdown of participant scores into five subcategories (Harrison & Lakin, 2018b): Pedagogical Beliefs, Attitudes Toward DLLs, Language Acquisition Beliefs, Perception of Impact of Inclusion, and Perception of Support. Of these subcategories, three were positive, Attitude Towards DLLs, Perception of Impact of Inclusion, and Perception of Support. In other words, the participants' attitudes toward DLLs were moderately to strongly positive, as were their perceptions of the impact of having DLLs in their future classrooms and the support they anticipate from their specialist staff and principal. Second language acquisition beliefs and pedagogical beliefs, on the other hand, were slightly negative on average among all participants.

Table 3. Descriptive Statistics for Explicit Attitudes Survey (All Participants)

	Range (scale 1 to 4)		M	SD
	Min.	Max.		
Pedagogical Beliefs	1.86	3.1	2.49	.33
Attitude Towards DLLs	2.33	3.83	3.14	.41
Language Acquisition Beliefs	2.0	3.43	2.63	.32
Perception of Impact of Inclusion	2.22	4.0	3.25	.42
Perception of Support	2.67	4.0	3.75	.46

We were next curious about whether or not pre-service teachers who participated in the JCR immersion experience have similar or different beliefs than their peers who did not participate in the immersion experience. To answer this question, we separated the explicit beliefs data based on their stated participation in the JCR immersion experience. Tables 4 and 5 show the descriptive statistics for the participants and non-participants in the JCR immersion experience. These data reflect similar trends to that of the whole group. However, participants in JCR held slightly more positive attitudes than non-participants. The non-participants had a multimodal distribution of data, in particular, for Attitudes toward DLLs (see Figure 1). In order to determine if either group had statistically significant differences between their expected and observed, positive or negative, beliefs, we ran a Chi-square goodness of fit test for each group on the five subscales of beliefs. The Chi-square test, followed by the Monte Carlo test for significance, indicated that the non-participants in the JCR immersion experience were significantly more likely to hold negative, inappropriate, language acquisition beliefs ($n = 43$, $X^2(1) = 18.69$, $p < .05$). There were no differences in expected versus observed occurrences of negative or positive language acquisition beliefs in

the group who went to Costa Rica ($n = 6$, $X^2(1) = 0.67$, $p = .69$). Those who did not participate in the JCR also strongly disagreed with appropriate pedagogy beliefs and strategies for DLLs ($n=43$, $X^2(1) = 33.8$, $p < .05$); whereas those who participated in JCR indicated no difference between slightly positive and slightly negative pedagogy beliefs ($n=6$, $X^2(1) = 0$, $p = 1.0$). These differences may or may not be due to the JCR immersion experience, although at least half of the JCR participants had more awareness of appropriate pedagogy and language acquisition beliefs. In addition, those who did not participate in JCR showed no differences in positive or negative attitudes toward DLLs ($n=43$, $X^2(1) = 3.92$, $p = .07$): whereas all six participants who participated in JCR indicated positive attitudes toward DLLs ($n=6$, all of which were in the “3=Agree”, slightly positive category, therefore no chi-square test was run on this constant variable). Both groups indicated more positive beliefs and expectations toward inclusion of DLLs in their classrooms and the support to teach them (JCR participants all indicated positive beliefs, therefore no Chi-square was run; non-JCR participants indicated significantly more positive than negative beliefs regarding inclusion and expectations for support, $n=43$, $X^2(2) = 27.40$, $p < .05$ and $X^2(2) = 26.0$, $p < .05$, respectively).

Table 4. Descriptive Statistics for Explicit Attitudes Survey (Subset of Costa Rica Participants)

	Range (scale 1 to 4)		M	SD
	Min.	Max.		
Pedagogical Beliefs	2.29	3.1	2.80	.36
Attitude Towards ELs	3.0	3.67	3.30	.25
Language Acquisition Beliefs	2.29	3.43	2.90	.41
Perception of Impact of Inclusion	3.11	4.0	3.33	.37
Perception of Support	3.56	4.0	3.92	.18

Table 5. Descriptive Statistics for Explicit Attitudes Survey (Non-Participants in CR Study Abroad)

	Range (scale 1 to 4)		M	SD
	Min.	Max.		
Pedagogical Beliefs	1.86	3.14	2.45	.31
Attitude Towards DLLs	2.33	3.83	3.11	.42
Language Acquisition Beliefs	2.0	3.29	2.60	.29
Perception of Impact of Inclusion	2.22	4.0	3.23	.43
Perception of Support	2.67	4.0	3.72	.48

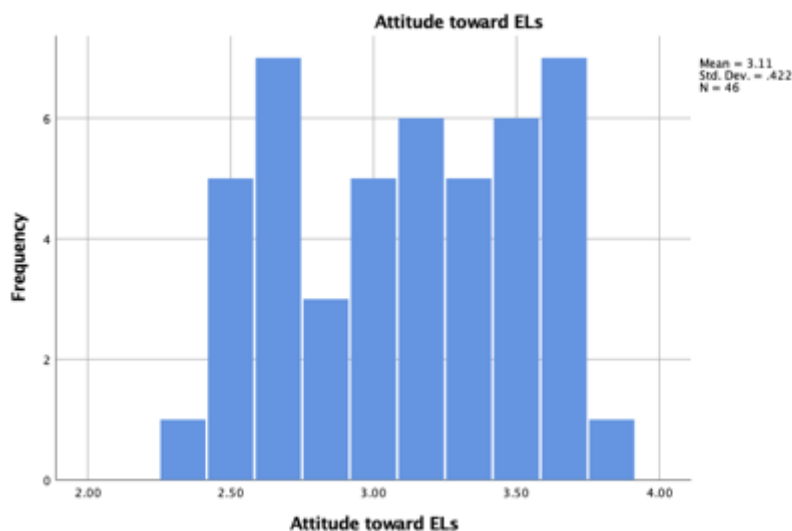


Figure 1. Multiple-modal distribution for non-participants

3. Discussion

Results from this study suggest a continued interest in the study abroad immersion experience as an agent of change is warranted. The Costa Rica group participants, though small in number ($n = 6$), had slightly more positive explicit beliefs than the non-participant group. While we cannot attribute this to the Costa Rica trip per se, we know from other scholarly research that immersion experiences are effective in increasing awareness of global diversity, thus we do not want to rule it out. Unfortunately, we were unable to separate implicit belief data of the Costa Rica participant group from the non-participant group, so we cannot comment on implicit beliefs for this group. Implicit beliefs of all study participants were generally balanced among negative, positive, and neutral, indicating a range of attitudes and beliefs of this group of pre-service teachers.

The JCR non-participants' explicit beliefs about second language acquisition and pedagogical strategies were strongly negative, meaning they did not understand language acquisition and the pedagogical strategies that assist DLLs to succeed. Those who participated in the JCR immersion experience were equally split between negative and positive beliefs regarding language acquisition and pedagogical strategies for DLLs. Knowledge of second language acquisition is considered one of the main elements necessary in building a solid understanding of how to support the academic success of DLLs (Samson & Collins, 2012). While the subset of Costa Rica participants held slightly more positive second language acquisition beliefs than the non-participant group, there were still negative attitudes, indicating this is an area that could be addressed across the board in teacher preparation. Pedagogical beliefs were more negative in the non-JCR participant group and balanced between negative and positive in the JCR participants, indicating a misunderstanding about some foundational methods of teaching DLLs. Since the JCR participants were involved in Spanish language learning classes and tutoring native Spanish-speakers in English, it is possible that this influenced at least some of the positive beliefs about second language acquisition and attitudes toward appropriate pedagogy strategies for DLLs. Nevertheless, the negative attitudes overall of these key categories should be alarming to teacher education programs. Teacher preparation programs are charged with providing the most up-to-date knowledge and pedagogical practices to their teacher candidates, and it is not unreasonable that school districts and building administrators expect their newly hired teachers be as prepared as possible for the diverse classrooms they will surely encounter. Teacher education programs are called to adequately prepare teacher candidates for the classrooms of the 21st century; including instruction of DLLs is paramount in this call.

4. Limitations

There are several limitations to this study. Participants of the JCR immersion experience stayed in groups of three or four in a hostel run by a Costa Rican family. This reduced the language and cultural exposure we had as part of the experience. Also, the community of Monteverde is bilingual, Spanish and English, so many people spoke English. In spite of this, informal observations allowed us to see student engagement with the hostel family and

multiple interactions with DLL students outside the formal teaching times. These significant interactions provided a deeper experience than otherwise might have been accessible.

Another limitation was the data set. Not all of the Journey to Costa Rica participants participated in this study, so we were not able to capture a complete picture of the group as a whole. Further, the data were such that we were unable to connect the specific implicit with specific explicit results. We were therefore unable to correlate the Journey to Costa Rica participants' explicit and implicit data specifically. Further, JCR participants kept journals while in Monteverde; however, after reading through the journals, there was little to add to the current study.

5. Avenues for Further Research

Clearly, continued research regarding the beliefs and attitudes of pre-service teachers about DLLs is warranted. Further use of the IAT – EL and other belief measures combined with interviews, observations, and reflection will provide a richer picture of pre-service teacher attitudes and beliefs about this growing population of students in PreK12 schools. Furthermore, more deliberate immersion experiences can and should be created to better understand the immersion experience as an avenue for belief identification, empathy, and change. The IAT as a tool for understanding implicit bias in teacher education programs could be an integral component of this further research.

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