The Development of Academic Self-Efficacy among First-Year College Students in a Comprehensive Public University

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This qualitative study investigated the intrapersonal and environmental factors that affect the development of academic self-efficacy in freshman college students in an ethnically diverse, comprehensive, public institution in the western United States. Utilizing Bandura's (1997) model as a conceptual framework, findings from thematic analysis of focus groups employing 146 participants are presented. Results revealed three primary environmental factors nested within Bandura's (1997) model: family/home environment, peer environment, and academic environment. Similarly, results demonstrating intrapersonal factors found themes of student resiliency to affect academic self-efficacy. Descriptions of how factors reported by Bandura (1997) function within the intrapersonal and environmental framework are offered.
Academic self-efficacy plays an important role in undergraduate students’ lives. Indeed, research shows that students’ self-efficacy beliefs, or level of confidence to successfully complete academic endeavors and tasks, influence academic achievement (Bandura, 1977; Bandura, et al. 1996) and, in fact, positively predict college GPA (Zajacova, et al., 2005). While we know that a positive relationship between academic self-efficacy and academic achievement exists (Elias, 2008), we know less about the development of academic self-efficacy, particularly among first-year college students. When we consider the effects of academic self-efficacy on students who are in their first year of college, we find even more important implications. In fact, the implications of a higher college GPA among students in the first year of college are profound, including an increased likelihood of retention, persistence, and future achievement (Allen, et. al. 2007; Pascarella & Terenzini, 2005).

Although, we find an extensive body of literature that demonstrates the complex nature of academic self-efficacy, both from an intrapersonal or environmental perspective (Camgoz, Tektas, & et al., 2008; Lundberg, McIntire, & et al., 2008), we find fewer studies that describe the process that influences the development of academic self-efficacy in first-year college students. What we currently know about academic self-efficacy largely comes from studies that are quantitative and examine undergraduate students from single majors or investigations that rely on student samples from foreign countries. In fact, these studies do not explain the interaction between the intrapersonal and environmental factors in the development of academic self-efficacy, particularly among first-year college students at comprehensive—or regional—public U.S. universities. Consequently, we developed a study that explores the intrapersonal and environmental factors that contribute to the development of academic self-efficacy among first-year students. Accordingly, the questions we ask are: What are the intrapersonal and environmental factors that shape the development of academic self-efficacy among first-year college students at a comprehensive public university? How do these intrapersonal and environmental factors affect the development of academic self-efficacy among first-year students at a comprehensive public university?

Background

The development of academic self-efficacy is a complex process. Several researchers have shown that academic self-efficacy is not a form of academic self-concept (Camgoz, Tektas et al., 2008; Ferla, Valcke et al., 2009; Chong, Klassen et al., 2010), but instead the amount of confidence that a student experiences when completing academic tasks. That is, the self-confidence related to academic tasks that a student experiences largely explains what we know as academic self-efficacy. Accordingly, what we know about academic
self-efficacy relates to the confidence of a student’s ability to academically succeed as measured from an intrapersonal perspective.

**Intrapersonal Factors Influencing Academic Self-Efficacy**

Intrapersonal development tends to shape the development of academic self-efficacy. For example, attitudinally, how a student thinks and feels about intellectual pursuits and scholarly work is directly related to the development of academic self-efficacy. Indeed, Stevens (2007) found that students often felt that intelligence was fixed and did not have a clear perception of how effort and persistence positively impact academic performance—in subjects that are chronically perceived as too hard and—in which they are not smart enough to succeed. Elias (2008), employing exclusively college business students as participants, found that if a student maintained a higher level of anti-intellectualism, or negative thoughts about intellectual pursuits, then his/her levels of academic self-efficacy would be lower. As demonstrated in Elias’ study, the intrapersonal development of academic self-efficacy was highly dependent on a student’s desire to learn rather than value on education. This individual contribution demonstrates the relationship between attitude and the development of academic self-efficacy. If a student maintains a negative outlook on desire to learn, then he or she will be less likely to successfully develop the confidence necessary for academic success.

While we know that attitudes profoundly shape educational outcomes, we also know that a number of environmental and intrapersonal processes affect attitudes and, in turn, have the capacity to affect the messages students tell themselves related to their academic self-confidence. In this study, Stevens (2007) reports that students carry stories of feeling shamed by what he calls “mini-academic traumas” for years. Furthermore, he suggests that students’ attitudes about their learning abilities and comfort to seek help are dramatically stifled by these shaming experiences. In his research, Stevens reported that students’ help-seeking behaviors increased as a result of reflecting on their academic mini traumas. Subsequently, students’ attitudes about their abilities to do well in previously considered too difficult classes shifted and their academic self-efficacy increased.

Despite mini-academic traumas and other deleterious environmental influences, some students maintain the ability to deflect negative influence and prevent the internalization of harmful environmental messages. Resilience is an intrapersonal characteristic that might affect the development of academic self-efficacy. Indeed, students with higher levels of resilience might be more likely to have a higher facility to manage complex academic tasks by way of higher academic self-efficacy. That is, the development of academic self-efficacy might not be negatively affected by damaging stimuli, as mitigated through levels of
resilience. For example, a recent investigation by Mak, Ng, and Wong (2011), tested to see if the relationships between resilience, life satisfaction, and depression could be explained by positive views of the self, the world, and the future (positive cognitive triad). These researchers, through the use of structural equation modeling, analyzed data collected from 1,419 college students and discovered that, indeed, resilience was significantly related to positive cognitions about the self, world, and future. That is, students that were the most resilient maintained generally positive thoughts about themselves, despite experiencing very difficult personal or educational circumstances.

Other investigations exploring both general and academic resilience suggest that individuals harness personal and social resources in extremely stressful situations in order to shield themselves from risk (Block & Kremen, 1996). This finding suggests that not only is resilience an outcome explained by difficult circumstances, but, additionally, the level of psychological resources that a student has at his or her disposal in order to mitigate the extent to which stress and difficulty might negatively affect self-perception, a component of academic self-efficacy. As a vital intrapersonal variable, this study explores resilience and investigates its connection to academic self-efficacy.

**Environmental Factors Influencing Academic Self-Efficacy**

While intrapersonal factors partially explain the development of academic self-efficacy, environmental factors support a more robust view of how academic self-efficacy forms among students. Among environmental factors, familial perception and, specifically, parental confidence in a child are integral components of what shapes academic self-efficacy. Using a sample of nontraditional students, Lundberg, McIntire, and Creasman (2008) showed that familial support directly affects the development of academic self-efficacy and, specifically, that perception of parental confidence and support affects the extent to which a student develops academic self-efficacy. Research also suggests that family support for their children’s educational pursuits significantly declines as they get older. (Lundberg, McIntire, & et al. 2008). Furthermore, studies using foreign student samples show that the higher level of confidence a parent maintains, the higher level of academic self-efficacy a child will have (Steca, Bassi, & et al., 2011).

In addition to familial and parental roles in the development of academic self-efficacy, we know that peer factors shape academic self-efficacy. We see this influence through the lens of social comparison theory (Festinger, 1954), which argues that a person evaluates himself by utilizing surrounding individuals as a point of comparison and suggests that if an individual experiences oneself as performing subpar as compared to his or her counterparts, then one’s level of academic self-efficacy is at risk of decreasing. Along the same line, Hutchison-
Green, Follman, and Bodner (2008), employed a sample composed of freshman engineering students and found that the formation of a student’s self-efficacy beliefs was influenced by comparison performance evaluations with other students. This investigation was conducted using a sample from a single major and generalizability to other majors is unknown. This might suggest that the precise methods that a student employs to influence the development of academic self-efficacy might be discipline-specific. That is, what affects a student in one major may not have the same effect on a student in another major (Thomas & Gadbois, 2007).

Other research suggests that perhaps what transpires between majors isn’t the only considerable factor affecting the development of academic self-efficacy. Research by Hutchinson-Green, Follman, and Bodner (2008) showed that students that engage in this sort of social comparison behavior in an academic setting find themselves less confident as a result of juxtaposing themselves to the perceived abilities of their peers and lose confidence in their abilities as a result. This finding lends support to Bandura’s (1997) theory of academic self-efficacy formation and Festinger’s (1954) suggestion of strong social comparisons.

In addition to peer and academic major influences in educational environments, research demonstrates that instructors influence the development of academic self-efficacy. According to research conducted on students in Asia, a teacher’s self and collective efficacies influenced, not only academic performance, but also successful development of student academic self-efficacy (Chong, Klassen, & et al. 2010). Consequently, teachers tend to influence the extent to which their students will go on to attain higher levels of academic self-efficacy, demonstrating that the instructional environmental influences the development of academic self-efficacy. For example, Chong et. al. (2010), using quantitative research methods, found that the confidence of a teacher for a student translated to the academic confidence of a student.

Additionally, technology, another essential characteristic of educational environments, was shown to affect a student’s attained level of academic self-efficacy. In a quantitative study by Clark (2003), 85 third-through-twelfth-grade African American student participants, representing 13 different public schools in Northern California, were given a pretest and posttest before and after they received laptop computers equipped with word-processing programs and Internet access. She found that academic self-efficacy with mathematics had increased positively and that participants tended to show an increased concern for their career goals and educational attainment. Unfortunately, however, Clark (2003) did not employ a control group in his study, which would have afforded an accurate calibration of the laptop computer influence on academic beliefs and career aspirations and ruled out the possibility of any confounding variables.

Likewise, research shows that perhaps a student’s adopted learning approach can affect the early development of academic self-efficacy. While academic self-
efficacy is widely believed to be an individual cognitive variable (Uwah, McMahon, et al. 2008), the cognitive strategies that a student employs, either aiding or destroying information attainment, seem to affect the level of academic self-efficacy. Likewise, in another quantitative study that included international participants, researchers show that the development of academic self-efficacy might be highly dependent on learning strategy (e.g., deep/surface level processing) (Diseth, 2011). According to Diseth (2011), the higher level of confidence an individual maintains toward academic self-governing affects the utility of focused processing, which is a component necessary for academic success. Unfortunately, though, the research in this area remains primarily quantitative and, as described in numerous earlier examples, employs a sample from other countries, which uses different pedagogical strategies and a host of other variables and may not necessarily be directly applicable to most students in the United States.

While previous research demonstrates the importance of person-centered factors in the development of academic self-efficacy, research also shows that, to a certain extent, the development of academic self-efficacy may be dependent on environmental factors (Ferla, Valcke, & Cai, 2009). Using quantitative methods and an engineering graduate student sample, Jungert (2010) found that students with higher levels of academic self-efficacy were more likely to engage instructors and become more involved in the learning process than their counterparts. This might suggest that in addition to any person-centered variables contributing to academic self-efficacy development, the classroom environment present in graduate study might also facilitate higher levels of academic self-efficacy.

**Conceptual Framework**

Given that the focus of this study is on the identification of factors that contribute to the construction of academic self-efficacy, we explore the developmental process through the conceptual framework introduced through previous empirical evidence. Specifically, we used Bandura’s (1997) model to further differentiate intrapersonal and environmental factors that affect the development of academic self-efficacy. Bandura’s (1997) theory of academic self-efficacy purports a comprehensive theory of the formation of academic self-efficacy as sourced from four different places: mastery experiences, vicarious experiences, social persuasions, and physiological states. *Mastery experiences* are described by previous research as not only being the most influential source of academic self-efficacy but also a student’s self-interpretation of task performance (Bandura, 1997; Zeldin, 2000). For instance, if a student interprets his or her performance on a complex academic task as positive and successful, then that student is more likely to have the confidence necessary to perform well
on subsequent academic pursuits. That is, the mastery experience on a complex academic task will likely yield positive outcomes on future work.

In Bandura’s (1997) model, the second most influential source of academic self-efficacy formation is *vicarious experiences*, which is manifested through the comparison of personal abilities to the perceived abilities of others (Hutchison-Green, Follman, & Bodner, 2008). Like Festinger (1954), Bandura (1997) suggested that social comparisons are highly influential in determining perceived self-confidence when students are not entirely sure of their capacity to succeed within a certain area or an area in which they have little or no experience. For instance, if a student is taking a course beyond the boundaries of his or her current knowledge base, then that student is more likely to engage in this sort of comparison in order to develop a sense of academic self-efficacy. Next, according to Bandura (1997), *social persuasion*, or feedback from others, influences the formation of academic self-efficacy. The messages that we receive from influential individuals, according to Bandura (1997), seem to play a role in academic self-efficacy development. Last, Bandura (1997) suggests that the physiological state, or *emotional experience*, that a student associates with their behavior also has the potential to impact self-efficacy beliefs. For example, if a student encounters an overwhelming sense of anxiety by doing a task, then that physiological response will likely systematically trigger a series of responses and messages that have the capacity to substantially harm the formation of high levels of academic self-efficacy.

Although Bandura’s (1997) theory of academic self-efficacy formation explores the factors that help contribute to the core of academic self-efficacy development, it fails to explore the exact environmental and intrapersonal factors that shape its development. For instance, although Bandura’s (1997) theory purports that vicarious experiences are a major contributor to academic self-efficacy he omitted the identification and explanation of the physical manifestations associated within vicarious experiences. Similarly, Bandura’s (1997) theory does not differentiate variables that are more closely intrapersonal and factors that are external, or environmental. For example, Bandura (1997) highlighted that social persuasion, or feedback from others, is influential on academic self-efficacy development, but did not specify which type of environmental feedback is most influential. Because students do not experience all social feedback identically, similar types of criticisms are also the case for the other three factors that Bandura (1997) outlines. Informed by Bandura’s (1997) theory, this investigation examines and further explores the development of academic self-efficacy through the lens developed by Bandura (1997) and Caprara (2008) in an attempt to raise specificity on the development of academic self-efficacy.
Methods

Research Design

We employed a grounded theory case study design to examine how intrapersonal and environmental factors shape academic self-efficacy among first-year college students. Glaser and Strauss (1967) articulated that what we know as grounded theory today, arguing for the development of theories from empirical research grounded in data rather than deducing conclusions from hypotheses from existing theories. As a grounded theory design, we roughly followed what Birks and Mills (2011) argue as “essential grounded theory methods” (p. 9). In this study, these methods included using initial coding and categorization, concurrent data collection and analysis, theoretical sampling, constant comparative analysis, intermediate coding, and finally finding a core category and developing an explanatory model.

Albeit less consistent with grounded theory, the design of this study was rooted in Bandura’s (1997) theory of the formation of academic self-efficacy. In using an existing theory to guide our research framework, this study attempted not only to assess the comprehensiveness of the theory but to also build upon it through our explanatory model. That is, we were interested in more closely examining and explaining the interaction between individual and environmental variables affecting the development of academic self-efficacy, which is an effort not highly prevalent in the current body of literature attempting to address the development of academic self-efficacy.

Research Setting

We situated the study in a comprehensive regional public 4-year, non-residential university in the western U.S. With over 30,000 undergraduate students and over 6,000 degrees awarded in 2010, the university serves a diverse community as a comprehensive, regional public university in an urban setting. Given our interest in examining academic self-efficacy within the context of an ethnically diverse, highly enrolled, publically controlled campus environment with a large freshman student population, the university served as an ideal site. Indeed, one of the largest public unified school districts in the region surrounds the university, situating the campus within a broader educational context where nearly one in 10 elementary and secondary students are of color and nearly a quarter are English-language learners, all of which reflects the student diversity in the university. Designated as a Hispanic-serving institution, the university serves over a third of undergraduate students who identified as Latino/a, while just over half of students reported being female and over three quarters of students are traditional college age.
Data Sources and Sample

We used first-time, first-year students in the 2011-12 academic year as our data source and selected participants using a mixed sampling strategy. First, we used a criterion sampling strategy to identify students who were first-time, first-year students in either the Fall 2011 or Spring 2012 terms. Second, we used a network sampling strategy to identify sections of the university’s freshman experience/first-year seminar course whose instructors would be willing to host a focus group in their class during the Fall 2011 and Spring 2012 terms. We invited 13 instructors to participate in the study, and six instructors responded to the invitation and offered their classes for participation.

While six instructors responded to our invitation to participate in the study, two instructors taught more than one section of the class. As a result, we hosted a focus group with two sections with these two instructors, for a total of eight focus groups. In total, we recruited 146 students between the eight focus group sessions in the eight courses. The final sample was largely female, ethnically diverse, and first-generation college students. Indeed, nearly 67% of participants reported being female, while nearly 50% reported being Latino/a, 18% white, 10% Asian, 6% African American, and 4% reporting more than one ethnicity. Nearly 52% of participants reported being a first-generation college student, with more Latino and female students reporting a first-generation college student status than other students in the final sample. To further understand descriptive characteristics of the final sample, we performed a chi-square test of independence on the relationship between ethnicity and first generation college status and found that the relationship was significant, \( p < .01 \), with Latino/a students more likely to report being the first one in their family to attend college. Additionally, we ran a chi-square test of independence on the relationship between gender and first generation college status, which was significant and suggests that women were more likely to report being a first generation college student, \( p < .01 \).

Data Collection Instruments and Procedures

We used two data collection instruments through the study. First, we employed a short, five-item questionnaire to collect information on participant demographics. The items included age, gender, race/ethnicity, first-generation college student status, and high school GPA. In addition, we used a focus group protocol to collect information on the development of academic self-efficacy. The protocol included a welcome and introduction section and sections related to both informed consent and demographic questionnaire administration. As the study’s primary data collection instrument, the protocol had focus group questions organized around attitudes about learning, help-seeking behavior, self-
perceived abilities to complete an assignment and do well on a test, and self-reflections on embarrassing and rewarding academic experiences. We organized questions by initial open-ended (first-level) and intermediate, or second-level questions (Charmaz, 2006). Finally, we considered issues related to students’ background, particularly race/ethnicity and gender, with questions about embarrassing academic experiences.

We conducted eight focus groups over the course of two terms, with six focus groups conducted in the Fall 2011 term and two in the Spring 2012 semester. We scheduled the focus groups in the first eight weeks of the semester, although three focus group sessions occurred after the first eight weeks. In general, we set the focus group session for one hour in length, which coincided with the length of the class session associated with the freshman experience/first-year seminar. We preceded the focus group sessions with a single, 15-minutes session in class on a different date than the focus group where we introduced the study to participants and asked students to complete the informed consent form and demographic questionnaire. In general, two researchers were present at the sessions and co-facilitated the focus group, and sessions were digitally audio recorded. At the conclusion of sessions, we invited students to contact us if they had further questions or were interested in reviewing focus group transcripts and our interpretation of the results of the data analysis.

**Data Analysis Procedures**

We employed a multi-stage, constant-comparative process of data collection and analysis. First, one member of the research team transcribed focus group audio recordings verbatim. Using redacted and de-identified transcripts, we initially segmented and coded data at the end of the Fall 2011 term. After developing initial codes individually, we compared codes to codes and categorized them into meaningful groups or clusters of codes (Glaser, 1992). At this point, we identified three categories that needed further investigation: academic identity, social comparison, and attitudes about learning. After conducting this set of focus groups, we returned to the data to perform intermediate coding and identified a core category, which is consistent with grounded theory (Birks & Mills, 2011). Finally, we integrated intermediate codes and our core category into an explanatory model of the developmental process of academic self-efficacy among first-year, historically underrepresented students.

**Results**

The analysis of the focus groups held across the duration of Fall 2011 and Spring 2012 terms allowed us to not only validate Bandura’s (1997) self-efficacy theory but to also build upon his model. Here, we present results that differentiate
and further specifies Bandura’s (1997) theory of academic self-efficacy formation and allow a multilayered presentation of the development of academic self-efficacy from an intrapersonal and environmental perspective during a crucial moment in a student’s life, the first-year experience. The results, although nested in Bandura’s (1997) overarching thematic construction, afford a more explanatory theory of the development of academic self-efficacy than previously presented, as a result of higher specificity of Bandura’s (1997) factors. We introduce the following themes in an order sequential to their perceived impact on a student’s academic self-efficacy.

**Family and Home Environment: The Function of Parents and Siblings in Performance Comparisons and Resilience Related to Academic Self-Efficacy**

Perhaps one of the strongest themes that emerged was related to the events that occur within a student’s home environment, which tended to have enduring effects and interactions with students’ intrapersonal characteristics. Also nested across Bandura’s (1997) themes, the results from this study point to this environmental variable’s substantive influence on a student’s academic self-confidence. Often, students socially compared themselves to the academic and intellectual accomplishments of their siblings. For example, one participant expressed the following type of familial comparison that influenced her academic self-efficacy: “I’ve never taken an AP class. Versus my older sister, she’s insanely academically smart. But, I think that she always said to me, because I always said, ‘How did you take AP classes?’ because I signed up for AP psychology, but I ended up dropping it because I couldn’t handle it.” The participant went on to say: “I always asked her, ‘How did you do it?’ She said that it’s not about how you do it, but that you have to apply yourself. If you want to take it and you want to do good in it, it’s all about how much you study and how much effort you put into it. I always said, ‘You’re smart, you can handle it.’ She said, ‘No, it’s because I study hard, I do the work, and I apply myself to it.’”

Performance comparisons, or vicarious experiences, were something that, as Bandura (1997) suggested, proved highly influential in determining a student’s academic self-confidence. Unlike this participant’s response, our data suggest that many familial environments, especially those where the most performance comparisons occurred, tend to not exhibit positive dialogues between family members, which would be prerequisite for the healthy development of academic self-efficacy. For instance, another participant suggested that her sibling’s intellectual abilities were innate when she explained: “My brother is a sophomore in high school and I know that’s way younger than me, but he is always in honors and AP classes and he’s always a straight A student. I was never like that because I did not get the brains and he did.” This participant concluded her thought about her familial interaction with: “Everyone in my family, like my mom and grandpa,
they did not mean it in a mean way, but they would always say, ‘You know your brother is so smart.’ They made all these comments, which made me feel bad that he was smart and I would really start comparing myself to him even though he was so much younger than me.”

What these participants illuminated went on to support the notion that students listen to their family members and internalize, as suggested by Bandura (1997), the vicarious experiences of their parents and siblings. As evidenced through these rich narratives, our results suggest that the level of emotional responsiveness, an intrapersonal variable, to these environmental claims and social comparisons, influenced a student’s academic self-confidence. Too often, participants evaluated themselves based upon the educational achievements of their siblings, cousins, and even parents.

Furthermore, as mentioned, students in our sample primarily represented students of color. These students possessed an array of cultural variables, nested within their family environment, that suggest a powerful level of cultural influence on the attainment of academic self-efficacy. That is, familial characteristics, some more salient than others, differentially affect the development of academic self-efficacy. One such potent illustration, as evidenced by a high level of confirmative feedback, was portrayed by the following response: “In my case, my parents lived the war in El Salvador. That was always in my mind since I was little. It’s not possible that they survived and I’m going to let it all go to waste, so I want to prove it to them that their sacrifices are not in vain.” This student reconfirmed his confidence by stating, “I’m going to get a college degree. That’s what they wanted. That’s the American dream. I’ll provide that and I’ll do anything possible. I’ll jump any hurdle. I’ll do anything possible to get that degree.” Like this participant, students between focus groups repeatedly confirmed this thematic element. That is, participants recognized the extent to which their immigrant families struggled to provide them with the opportunities to attend higher education.

Our data also suggested that a significant number of individuals within the family unit prove destructive to the academic confidence of students. For instance, a student insightfully shared:

“Umm, well, I just have my mom. She’s always been my biggest support. Then, I have my grandma and she’s negative sometimes, so she would always say, ‘Oh, she’s going to get pregnant soon,’ because I would have friends visit me at my house. She’d thought that I’d drop out from high school and I graduated. I hope she was proud of me, but she saw that I came here and I thought she’d be more proud of me and, like, more supportive. She still makes comments sometimes and it hurts my feelings and it pushes me. (crying). I’m sorry. It just pushes me.”

What this participant shared suggests that resiliency plays a significant role in the formation of academic self-efficacy. This participant persisted and maintained
her academic confidence, despite the overwhelmingly negative messages from her family. Results further suggest that resiliency was a mitigating factor for harmful environmental stimuli. The students in our sample, especially those from historically underrepresented groups in higher education, exhibited strong coping strategies reflective of their resilience. In fact, many students provided encouraging and optimistic responses when asked questions geared toward inquiry into their family domain. For instance, this participant described an experience of academic shaming that she overcame: “…the teacher was trying to make examples so she was passing back papers that students had written previously and they were from our class of good examples and bad examples, and one of them was mine.” This student went on to explain, “I didn’t feel good about it, the fact that the bad example was mine.” Despite being shamed in the classroom with work that was displayed to peers as subpar, this student displayed resiliency by rejecting the negative internalization, “For me, it was positive. I thought this is not going to be me again. What do I need to do to do better because the next time I am going to be the good example.” As evidenced by these participants, our data highlight that students in our sample were able to transform negative environmental messages into sources of motivation.

**Mixed Messages that Facilitate the Development of Academic Self-Efficacy within the Peer Environment in Educational Contexts**

Students are surrounded by their peers from the moment students leave their homes and enter an academic environment until they return. This feedback can vary significantly from something positively reinforcing to something destructively critical. Our data suggested that the messages that peers submit to one another prove exceedingly influential on the development of academic self-efficacy. For instance, another student in our focus groups gave feedback that illustrated the magnitude of peer influence throughout stages of the educational pipeline: “…I know that because I’m taking a bigger load of classes that all the free time I have needs to be used on assignments, but they have so much more free time that they don’t understand that and it’s hard to say no again and again and again because they don’t understand that we’re paying more for this.” This participant went on to say, “They don’t understand that it’s hard to balance friends and sometimes you have to give in. My friends guilt trip you, so it’s, like, fine, but just for a little bit.” As this quotation illustrates, the results go on to support the emotional response component of Bandura’s (1997) theory of academic self-efficacy formation. But, unlike Bandura’s (1997) theory, our results showed that peers (external factor) are highly provocative for emotional responses (internal factor) that Bandura (1997) partially described.

Thus, our data suggest that how students interpret their peers’ messages facilitates the development of academic self-efficacy. Again, students’ level of
resiliency, an internal variable previously discussed, is not a singular factor that prevents the solidification of low levels of academic self-efficacy. Because of our need to explore data variability across both internal and external variables, we discovered that peers often sling stereotypes, and other universally held misbeliefs, as a method for social persuasion and comparison. Indeed, our results suggest that students carry these messages with them for lengthy periods of time, which results in damaged academic self-confidence. On this note, one student vividly recounted:

“I went to an all girls high school, so my class was 120 students. It wasn’t very big so everyone knew what class everyone was in. We had math classes a lot of the Asians were in Calculus AP, and there was one Asian girl in my class and people would question her and ask, ‘How are you not in the higher calculus?’” Like others, this participant suggested that the lack of fulfillment of cultural and ethnic stereotypes are weapons that students employ which significantly harm the acquisition of high academic self-efficacy. Too frequently, as nested within our data, students are forced to dismantle or reconcile the cultural expectations held by peers. In another testimony, this participant worked hard to ensure that she didn’t internalize the message sent by her peers:

“I agree with what she said because most everybody I went to high school with, they stayed up mostly in the Bay area. I wanted to get away and meet new people so I came down here. Ever since then I’ve been judged by my friends like, ‘Oh, why did you go down there? You don’t want to be with us? You don’t like us?’ When I hang out with my African American friends, they also kind of judge me because they already judge me on the way that I talk, but then it makes it worse that I moved down here and I went to college, and I actually know what I want to do. They always have to make snide comments about the things that I do.”

As this participant indicated, our results further suggest that given the right arena to discuss their experiences, accompanied by the reinforcement from significant individuals, students can successfully dismantle harmful social persuasion from their peers and develop higher levels of academic self-efficacy. Again, the peer environment, as examined through the use of Bandura’s (1997) theory of academic self-efficacy development, demonstrated that peer groups (environmental variable) provoked both social comparisons and emotional responses. While discussing peer groups, we noticed that another reoccurring theme which prompted the notion that aspects of a student’s educational environment, another prominent environmental variable, show academic climates conducive to successful academic self-efficacy development.
The Effects of Instructor Attitude and Pedagogical Approaches on Academic Environments

Our results showed that there are characteristics in students’ academic environments that are more conducive to promoting academic self-efficacy. Classrooms and courses endorsing student use of technology for educational purposes appear to catalyze higher levels of student academic self-efficacy. When students have the opportunity to learn using a variety of methods that psychologically engage them, the most learning occurs. More importantly, the appearance of learning as a rigid and strict process is greatly reduced. For instance, one participant shared:

“Uh, well, my dad, he always watches the history channel, sometimes, and he always like, I sometimes will be watching TV and I’ll see this whatchama-call-it, the Discovery channel, or, uh, the history channel, and I’ll see something that I actually like and I know that if I was like forced to learn it in class I’d be like, ok, this is kinda boring. But, now, that I wanna see it and watch it and learn about it, it’s more interesting because I’m doing it for me.”

The story that this participant shared illustrates that technology is employed frequently and proves to be a powerful component nested within academic environments contributing to the formation of academic self-efficacy. As previously explained, Bandura (1997) argued that mastery experiences affect the formation of academic self-efficacy. Here, results suggest that students are more likely to achieve their mastery experiences through supportive educational environments appropriately equipped with technology. Similarly, the data suggested that instructor attitude and beliefs are highly influential within this domain.

Instructors and educational administrators construct atmospheres within the academic setting based not only their pedagogical strategies, but as well as biases and other attitudinal tendencies. The data illustrated that when educators take the time to initiate an enduring dialogue with students, the effects are monumental. For instance, this participant explained how her school administrator created a lasting impression:

“Because my school was very supportive, even the principal. The principal knew the name of every student. That’s how important it was to us to know our material. Because of them, talking to them, and they were advising me what to do and how to react to that. I started ignoring them because they were pulling me down and didn’t want me to succeed more than them. I passed the level, or the expectations, that they didn’t think you’re going to pass. It’s just that certain goal that put to yourself, to advance, and to reach another level.”

Fortunately, for this student, the messages, expectations, and guidance of this
educator were positive and reinforcing. That is, educators provoke emotional responses (Bandura, 1997) that affect academic self-efficacy formation. Here, results suggest that instructor attitude is a highly influential environmental variable that triggers lasting emotions in students, which, in turn, formulate self-beliefs in students.

Similarly, results suggested that many students received messages that portrayed instructor attitudes on subjects and students that were less than positive. In our focus groups, however, we noticed that our sample was comprised of resilient students. Indeed, the resilience of our students was noteworthy. For instance, this student’s ability to deflect such a negative message was truly resilient:

“In 9th grade, going back to high school, I had two teachers, one was Latino. …The teacher never really asked me where I was from, he just knew that I knew Spanish and that was about it. One time I came late to the class from the nurse and he said, ‘Now you’re showing who you really are,’ and I’m like, ‘What am I?’” Then, the in explaining the instructor’s response and reaction, the participant went on to say, “Oh, you’re Latina and now you’re going to start missing school and eventually you’re going to drop out.’ I was really quiet. I just sat down and I didn’t really say anything. He told me to sit down with my people because either way I was going to turn out like them. After, I think he realized what he did. He told me to stay after class and he told me, ‘What are you really?’ I told him, ‘I’m Mexican.’ He told me, ‘Are you really Mexican?’ I said, ‘Yeah, I was raised over there,’ and he said, ‘You don’t seem like a typical Mexican girl.’ I said, ‘What are Mexican girls supposed to do?’”

The participant further explained the presumptuous conclusions of her instructor by saying, “He said, ‘They’re really loud, they’re really disrespectful, they play around with guys too much, and they don’t focus on school.’ It just made me feel sad. I would expect that from a student, not from a person that went to college and supposedly has an open mind.”

This participant’s story supports Bandura’s (1997) theory, which suggested that the social persuasion, or feedback from others, accompanied by the physiological response, or emotional state, work collaboratively at constructing academic self-efficacy. But, Bandura’s (1997) model of academic self-efficacy does not attempt to explain the particular variables that contribute to the ASE developmental foundation.

Given that we argue that Bandura’s (1997) finding of the four most significant factors that contribute to academic self-efficacy formation do not adequately explain the development of academic self-efficacy, we propose an adapted explanation, incorporating Bandura’s (1997) theory as a nested component to the larger, more explanatory factors that shape the development of academic self-efficacy among first-year college students. That is, we found that
Bandura’s (1997) explanatory theory required further specification in order to meaningfully illuminate the complex interaction of environmental and intrapersonal variables that influence academic self-efficacy.

**Discussion**

**Intrapersonal and Environmental Factors that Shape the Development of Academic Self-Efficacy**

Given the results of our investigation, we return to address our first research question: What are the intrapersonal and environmental factors that shape the development of academic self-efficacy among first-year college students at a comprehensive public university? Accordingly, the focus groups held at various points in time across the first semester among groups of freshman college students revealed that Bandura’s (1997) theory, which suggested a theory of development of academic self-efficacy in students, although descriptive, lacked explanatory power for this phenomenon. Therefore, through the principles of grounded theory and a constant-comparative method of data collection and analysis, and in response to our first research question, these three primary factors were identified to shape self-efficacy development: family/home environment, peer environment, and academic environment. Bandura’s (1997) model of academic self-efficacy development theoretically highlights experiences that have the capacity to calibrate the level of academic self-efficacy attainment, but fails to identify the factors that contribute to its development.

Also consistent with previous research surrounding familial influence, the data suggest that the level of parental support is related to a student’s academic self-confidence (Lundberg, McIntire, & Creasman, 2008). As demonstrated in the results, students internalize the messages sent to them from within their home environment. Our data suggest that these messages become belief systems and that these belief systems strongly relate to the conscious and unconscious messages that students repeat to themselves during difficult tasks and challenging academic experiences. The data were saturated with codes and themes, which demonstrate the pervasiveness of parental messages on the successful acquisition of academic self-efficacy.

Interestingly, previous research failed to accurately determine the extent to which peers might have influenced academic self-efficacy acquisition, other than from a social comparative perspective (Festinger, 1954). Partially supportive of past research, our findings suggest that students do, indeed, compare their performance with other students. But, past research evaporated and filtered the totality of peer influences on academic self-efficacy. The results from this investigation determined that the interaction between students extends far beyond academic and social comparisons on challenging tasks. In fact, students interact
with peers at various stages of their academic careers and, indeed, the interpersonal markers and events that transpire prove to be strong enough to spill over from one academic stage, or level, to the next. At this point, we reiterate that the findings from our work demonstrate that academic self-efficacy, as partially interpreted through Bandura’s (1997) explanatory model, is sourced from three main influential spheres: the family/home environment, the peer environment, and the academic environment.

With respect to intrapersonal factors and environmental interaction that influence academic self-efficacy, it is important to note that students’ intrapersonal characteristics interact with environmental factors to produce academic self-efficacy. As the results suggest, there were a few striking qualities of the students that have effects on the messages they tell themselves about difficult academic tasks, which affect their academic confidence. The students with more resilience tended to perform a different mental operation than their counterparts: connecting and transforming their negative experiences to something motivating and positive. Building upon previous research that identified positive environmental characteristics conducive to enhancing a student’s academic resilience, our findings further explained that resilience is a mitigating factor for academic self-efficacy formation. Future research might determine the psychological factors that affect resiliency, in an attempt to further explain the effects of this primary intrapersonal variable on academic self-efficacy formation.

Similarly, the emotional response a student experienced in reaction to the aforementioned environmental variables was highly influential on the way a student developed academic self-efficacy. This intrapersonal variable, as supported by Bandura (1997), had a high degree of variability in the way it affected academic self-efficacy formation. Hypothetically, a student’s emotional response to our primary environmental variables might be mitigated by the first intrapersonal variable, resilience. That is, the higher a student’s resilience, the lesser extent to which negative environmental messages might be internalized and affect confidence and performance on complex academic tasks. In response to our second research question, our inquiry suggested that resilience and emotional response are primary intrapersonal variables that affect the acquisition of high academic self-efficacy.

It should be noted that further research is needed in order to further explore precisely how resilience and emotional response interact with the environment to produce academic self-efficacy. Likely, resilience and emotional responsiveness are not mutually exclusive variables, but, instead, interact with each other in complex ways that cumulatively interact with the environment. More research is needed to increase the explanatory power of our intrapersonal variables. For instance, further investigations might use a mixed-methods approach to
illuminates this phenomenon. Quantitative data is needed in order to generalize these variables across people and educational contexts.

As previously mentioned, our findings not only suggested that these factors affect the development of academic self-efficacy, but also how these factors are particularly sensitive in first-year college students. We return to the following and final research question to address the interaction of these factors in first-year college students: How do these intrapersonal and environmental factors affect the development of academic self-efficacy among first-year students at a comprehensive public university? As suggested by the results of this investigation, students with higher resilience tended to detach their negative experiences from the achievability of their goals and educational outcomes. Through the mechanism of resiliency, some students were able to successfully transform their negative environmental input into motivation and fuel for positive self-propulsion. In fact, students that were more resilient at resisting the faulty predictions they received from either their home or academic environments, were more likely to express higher confidence in their ability to execute complex academic tasks.

The results from this investigation not only fit well with factors that past research identified as major contributors in the development of academic self-efficacy but also theoretically synthesized what previous studies proposed as separate predictive entities. In other words, factors that were previously found to highly influence academic self-efficacy formation, like technology and instructor attitudes (Clark, 2003; Chong, Klassen, & et al., 2010), were found to actually be nested factors of contemporary classrooms and educational experiences within an academic environment. Additionally, the data from this study suggested that factors previously determined to be influential on academic self-efficacy and exclusive to parents, like parental attitude and efficacy beliefs (Steca, Bassi, & et al., 2011), were actually much more complex and intrinsically connected to other factors that occur within a home and family environment, like the extension of culture and other familial belief systems. The stimuli shown to have effects on academic self-efficacy acquisition should not be regarded as individual parts, but instead represented holistically. In fact, the results from this study suggested that when examining academic self-efficacy, influential spheres should not be sliced to their smallest components, but instead represented in their entirety, as done here, in order to produce a model with the capacity for more description and validity.

Recommendations for Practice

The three aforementioned environmental domains of influence provide a series of meaningful implications and recommendations for future research and practice. The practical applications of this study’s findings extend into
classrooms, campuses, and homes. In the campus context and at the classroom level, instructors may benefit from an increased awareness of their capacity to influence the acquisition of academic self-efficacy in their students. The verbal and nonverbal messages and cues that instructors deliver to their students are extensive. These messages haunt, or enhance, students for years following their interactions with educators. In this sense, findings from this study support the recommendation that instructors thoughtfully and constructively use supportive and empowering communication when interacting with students. Additionally, an understanding that some students enter into the classroom with low levels of academic self-efficacy, and perhaps related to the subject matter, is useful information for the instructor. In fact, there is some evidence (Stevens, 2007b) that suggests asking students to reflect upon how they feel about learning the material in this classroom is welcomed and leads to self-awareness and an increased likelihood of asking for help. In addition to how and what they communicate, findings from this study support the notion that instructors need to not only work diligently to develop supportive, non-shaming educational environments but to also limit the communication of negative attitudes toward a subject with their students.

Instructors may want to consider taking a pro-active approach with their students by providing resources and opportunities to enhance students’ academic self-efficacy (Stevens, 2008). Examples include: 1. Giving extra credit for attending tutoring or faculty office hours, 2. Providing students a quick self-assessment about academic confidence and self-efficacy (Stevens, 2007a), 3. Providing contact information for learning resources and other supportive service departments on a syllabus, 4. Pairing students up as accountability partners and providing guidelines on how to support one another in their academic success, 5. Providing information and examples on how to ask for help and facilitate a discussion about the intrapersonal roadblocks to help-seeking, 6. Helping students remember their learning capabilities and resiliency by facilitating discussion and/or a journal exercise about the importance of remembering and analyzing their past “proud learning moments” as map to enhance academic self-efficacy. 7. Providing information and hands on experience that will enhance the joy of learning in the particular class, and 8. Instructors self-disclosing their own struggles and success stories of enhancing their academic confidence and ways they find joy in the learning process. The implications and recommendations, however, do not remain exclusive to instructors.

In homes, family members must work doubly hard at advancing educational values. The findings suggest that often certain aspects of the cultural fabric of home environments worked counterproductively on a student’s academic self-confidence. In this sense, families need to remain cognizant and aware that sometimes their cultural practices and uniformly held beliefs concerning how our sons and daughters should approach higher education are deleterious. In fact,
families must work at ensuring that the measures with which they raise their children are constructive in that they encourage advanced academic pursuit, scholarship, and educational diligence. One tactic that families might employ in order to promote this recommendation is to have regular candid conversations with each other with the intention of making plans and creating strategies for students beyond the attainment of a high school diploma. Parents and guardians are considered to be the primary manufacturers of home environments, and instructors, judged to be the main creators of academic environments, need to understand the extent to which their routine decisions yield lasting effects on the acquisition of academic self-efficacy.

Limitations and Recommendations for Future Research

We note some important limitations in our study. First, and most obvious, it is difficult to generalize the results of this study to first-year undergraduate students in university contexts that are not similar to the one in our study. For instance, the majority of our sample was composed of undergraduate students of color that have been historically underrepresented in higher education, so the results from this study may not extend to students who share similar background characteristics but who attend a research intensive university in a suburban community or, by contrast, a rural community college. Second, it is difficult for us to make inferential predictions surrounding the extent to which the factors yielded from our data actually represented academic self-efficacy. Undoubtedly, the approach that we took in this study presented a new lens and explanatory model for the formation of academic self-efficacy, but in order to more accurately predict relationships, causality, and effects, more research is required.

In addition to these more general limitations, we identify two specific limitations of the findings in our study. First, we relied on the participation of instructors of the university’s freshman experience/first-year seminar course. Given that only six of the several dozen instructors who teach the course responded affirmatively to our invitation, we wonder if the instructors who responded share characteristics as a group that differentiate their instructional approaches and the effects that these approaches have on students. Second, the use of whole, intact undergraduate classes as our focus group may bias the results of our study as we consider the implications of the influence of a regulated instructional environment with pre-existing academic expectations and social dynamics on student responses to our interview questions. Clearly, in this setting, some students would have been less likely to participate in the focus group session, given the identity that they formed as a student in the first-year experiences/freshman seminar course prior to our arrival. To mitigate the effects of this environment, we attempted to conduct focus groups as early in the semester as possible.
As we consider the implications of this study for future research, we argue that future studies should further explore the factors and relationships identified in this study and consider approaches to the determine the extent to which our factors quantitatively influence the formation of academic self-efficacy. With respect to the former, examinations with similar students in different settings would confirm the findings of this study. Equally important, we feel that using alternative methodological approaches would extend what we found in this study. For example, future studies may consider examining the factors identified from this investigation using multivariate methods, specifically exploratory factorial analyses, in order to develop measures to quantify our constructs. Then, while using existing validated measures for academic self-efficacy, future studies can determine the extent to which our constructs predict academic self-efficacy, ideally while controlling for other exogenous factors. With data from predictive analyses, these findings would be more generalizable to the population and given more credence.

The findings from this investigation provide both scholars and practitioners with information on how to understand what positively affects undergraduate students’ academic self-efficacy formation. By using the findings from this study, parents and families will be more aware about how their actions affect their children as students. In addition, instructors, educational administrators, and policymakers should rely on the findings from this study as they shape policies and practices for first-year college students. For example, educational advocates should ask themselves the following set of questions when making decisions that impact the life of a student: How will my decision affect academic self-confidence? Will implementing this foster a supportive educational environment? Am I certain that my behavior is sending supportive messages to students? As long as individuals continue to introspectively approach the data from this study, then the educational arena should shift in such a direction that will fuel the acquisition of the highest possible levels of academic self-efficacy.
References


Directions: Use a pen or pencil to complete the questions below. To respond to a question, circle or write the answer that best represents your opinion.

1. What is your age?

2. Which one of the following categories most closely describes your gender?
   Male  Female  Transgender

3. How do you identify racially/ethnically?

4. What is your high school GPA?

5. Are you the first in your immediate family to attend college/university?
   Yes  No  Unknown

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!
Appendix B

ACADEMIC SELF-EFFICACY STUDY
FOCUS GROUP PROTOCOL
FALL 2011

Facilitator(s): _____________________________
Class: _____________________________
Instructor:
Date: _____________________________
Time: _____________________________
Room: _____________________________
Participants: _____________________________

I. Introduction/Background
Welcome and introduction:
Good morning. Thank you for taking the time to come together for this focus group discussion with us today. We will be leading today’s discussion. We’ve invited you to this focus group so that we can learn about the influences on the development of academic self-efficacy and the influence of academic self-efficacy on retention of first-year college students. Specifically, we intend to develop an explanatory model of how undergraduate students at a four-year university develop academic self-efficacy and, in turn, how academic self-efficacy affects the retention of students during the first year of undergraduate studies.

Informed consent:
Please find an informed consent form as part of your focus group session packet. At this time, I ask you to read, review, and sign the informed consent form. If you have questions, please ask them now. If you would like to ask a question in private, please let me know.

Questionnaire:
We invite you to complete a short, five-item demographic questionnaire, before we begin.

Timing:
Today’s focus group will last approximately 60 minutes. Are there any questions before we get started?

II. Focus group
1. How do you approach a learning task that you perceive will be challenging?
   • What are you saying to yourself about participating in this task?
   • What past experiences may have influenced your perception that you may be challenged by this learning task?
   • How has this approach to learning been an obstacle for you in terms of academic success?
2. What are the varieties of ways you seek help when you feel challenged?
   • What are the internal obstacles to you seeking help?
   • How do you approach instructors or others when you have difficulty with an assignment?
3. Discuss how you evaluate your abilities to complete an assignment in a class.
4. Discuss how you evaluate your abilities to perform well on a test.
5. Talk about a time when you have been embarrassed by another person (e.g., parent, sibling, friend, teacher, fellow student) in regard to your academic abilities?
   • How do you think that experience has impacted your academic self-confidence today?
   • How do you think your specific demographic (ethnic gender SES place of birth, language) was a factor in being targeted?
6. Please describe a learning experience where you better understood that effort pays off.
   • How has that experience influenced your learning habits?

Closing questions
I would like give you a final opportunity to help us evaluate the program. Before I end today, is there anything that I missed? Do you have any other issues related to the evaluation of the program? Have you said everything that you anticipated wanting to say but didn’t get a chance to say?

III. Debriefing
Thank you for participating in today’s focus group session. We appreciate your taking the time and sharing your ideas with me. We also want to restate that what you have shared with me is confidential. No part of our discussion that includes names or other identifying information will be used in any published reports or documents. We want to provide you with a chance to ask any questions that you might have about this focus group. Do you have any questions at this time?