

## RESEARCH ARTICLE

# Background Characteristics, Transfer Goals, and Engagement of International Community College Students in North Carolina

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Community colleges offer accessible educational opportunities for international students, whose increasing enrollments enrich diversity and global experiences. Our study comprehensively analyzed the background characteristics, transfer goals, and engagement among international students in North Carolina's community colleges by utilizing a 2017-19 data set from the Community College Survey of Student Engagement (CCSSE). We found that participation in developmental education significantly predicts overall engagement among international students. Further analysis of individual engagement factors revealed that personal development is also significantly influenced by participation in developmental education, being of traditional age (18-24 years), and expressing a vertical transfer goal. The findings emphasize the potential importance of developmental education courses in increasing engagement, personal development, and academic success for international students within the community college landscape. Implications include targeted support services and guidance to enhance the overall educational experience and facilitate smoother transitions for international students pursuing further academic pathways.

*Keywords:* International students, transfer, engagement, community college

International students are those who are not U.S. residents and who are studying in the United States on non-immigrant student visas (Higher Ed Immigration Portal, 2023). Studies focused on international community college (CC) students generally infer this status from participant self-identification as having a non-U.S. country of origin (Slantcheva-Durst & Knaggs, 2019), survey response of international or non-resident alien (Garcia et al., 2018; 2019; Ghazzawi et al., 2020; 2021), or institutional records with this designation (Chen et al., 2020; Mamiseishvili, 2012; Zhang, 2016). Lack of a clear definition along with inconsistent institutional variables and

categories can lead to research findings that misrepresent international students (Zhang, 2016). International students make up nearly 1 percent of the community college population, with 5 percent of the 1.1 million international students in the United States studying at CCs (Institute of International Education [IIE], 2023a). International students at CCs predominantly enroll in high transfer associate's colleges (50%) and baccalaureate/associate's colleges (25%), which support pathways to baccalaureate-granting institutions (BGIs), while fewer than 20% attend mixed transfer/career and technical colleges, and 8% attend high career and technical colleges (Mason, 2022). Community colleges have a diverse international student body, with the top five places of origin—China, Vietnam, Japan, South Korea and Brazil—representing 31 percent of all international CC students (IIE, 2023a). Community colleges offer educational opportunities that improve job market competitiveness and family support, with commonly used services including transfer credit assistance and academic and career advising (García et al., 2019). International students increasingly recognize CCs as unique and valuable resource for higher education, yet they face challenges such as language and communication issues, high cost of tuition and living, homesickness, relationship issues, social interactions, culture shock, feelings of isolation, hostility, racial/ethnic prejudice, and perceived discrimination among others (Slantcheva-Durst & Knaggs, 2019).

Community colleges have been excluded from the conversation on international students (Zhang, 2016). While the large corpus of empirical work on international students is still focused at the baccalaureate level, there is sparse research on international students within the CC sector (Hagedorn & Lee, 2005; Lau et al., 2018; Zhang, 2016). Limited research on international CC students suggests they may feel detached from the institution (Slantcheva-Durst & Knaggs, 2019). Perceptions of a supportive institutional environment and welcoming campus community may lead to increased involvement, engagement, and sense of belonging (García et al., 2019; Ghazzawi et al., 2021; Slantcheva-Durst & Knaggs, 2019). Given the increasing enrollment of international students in community colleges (IIE, 2023a), it is crucial to examine factors affecting their success, and create an inclusive campus climate that significantly contributes to their achievement (García et al., 2019).

## BACKGROUND AND PURPOSE OF THE STUDY

To contextualize our current investigation, we looked at the extant literature on the characteristics of international CC students, the role of engagement more broadly and for international CC students particularly, as well as the transfer goals of international CC students.

### International Students at CCs

International students at CCs differ from typical community college students and are more similar to traditional students at BGIs, as most study full-time, do not hold full-time jobs, and are not married (IIE, 2023a). Additionally, they stand apart from racially diverse American student populations due to their status as foreigners, requiring scholars to draw insights from various student groups that only partially reflect their experiences (Slantcheva-Durst & Knaggs, 2017). While racial and ethnic gaps have been studied related to CC experiences and outcomes,

these studies generally exclude international CC students due to their classification, i.e., international as their race/ethnicity.

International students opt to start their higher education journey at a CC for a variety of reasons, including more relaxed admission standards, lower application fees, and tuition expenses, support for English as a second language (ESL), the chance to acclimate to a new academic environment with smaller class sizes, and a better opportunity to prepare for and transition to a four-year institution (Durrani, 2019; Kanno, 2018; McIntyre, 2019; Hagedorn, 2020). Stringent admission requirements on standardized tests like Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS), and American College Testing (ACT)/Scholastic Aptitude Test (SAT) often limit postsecondary options for international students, leading many to pursue CC as a more accessible pathway to higher education in the United States (Rozhenkova & Park, 2021).

Unlike American universities, which attract international students through global rankings and well-established reputations, CCs face challenges such as the lack of widely recognized ranking systems, visa difficulties, and limited campus life, yet they offer a more affordable and supportive environment with smaller class sizes and a clear transfer pathway to top universities (Jennings, 2017). CCs, with their open-access admissions and affordability, often come with fewer resources, as Raby and Valeau (2016) note that many lack comprehensive international student services or internationalization strategies, leaving students without essential academic and cultural support.

## Engagement in CCs

The Community College Survey of Student Engagement (CCSSE) has become the leading survey assessing student engagement in community colleges across the United States. Various seminal theoretical foundations (Astin, 1984; Chickering & Gamson, 1987; Pace, 1984) were utilized to identify student behaviors and effective educational practices linked to student learning and persistence for the survey (Center for Community College Student Engagement [CCSE], 2017). It establishes five key benchmarks: active and collaborative learning, student effort, academic challenge, student-faculty interaction, and support for learners, which, to evaluate engagement at the student level (CCSE, n.d.). Researchers analyzing CCSSE data from 2017 to 2019 applied exploratory and confirmatory factor analyses to establish an eight-factor model of student engagement, ensuring measurement consistency across gender, age, race/ethnicity, and enrollment intensity (Wang & Bohlig, 2022; Wang, 2024), making it a valuable reference for engagement measurement in our study.

CC student engagement is influenced by demographic factors including age, gender, race/ethnicity, and socioeconomic status. For example, CC women tend to be more engaged than CC men (e.g., Mitchell & Hughes, 2014; Ryan & Fong, 2024; Sontam & Gabriel, 2012). Racial and ethnic gaps in CC outcomes are well documented (e.g., Lin et al., 2022) however CC students of color may show higher levels of interaction with faculty and utilize support services more frequently (e.g., Sontam & Gabriel, 2012). Competing demands that go along with having employment or family commitments are barriers but also motivation for many students (e.g., CCSE, 2022).

Research underscores the importance of student engagement in CCs, as peer interaction enhances learning and development (Butler-Paisley & Clemetsen, 2019), while faculty

engagement strongly predicts academic and career progress (Lundberg, 2014). Additionally, Wang (2016) found that students' confidence in completing their degrees is influenced more by a sense of community and close relationships with faculty, peers, and college staff, reinforcing the significance of interpersonal connections in student persistence. Engagement among CC students is strongly linked to their likelihood of successfully advancing toward a bachelor's degree (Karp et al. 2010), with key factors including faculty-student interactions (Schudde & Brown, 2019); relationships with peers, families, and friends (Pascarella & Terenzini, 2005); as well as the utilization of institutional services, which has been linked to academic success (Saenz et al., 2011). Research on international students in community colleges is limited, with few studies examining their engagement within the campus environment (Hagedorn & Lee, 2005; Zhang, 2016). Interactions with students, faculty, and the broader campus community have been identified as the primary means of engagement for international students (Slantcheva-Durst & Knaggs, 2017), with academic advisors playing a crucial supportive role (Zhang, 2016).

### Transfer Goals of International CC Students.

CCs are a feasible route to higher education, as they create a pathway toward a baccalaureate degree (Hagedorn & Lee, 2005; Zhang, 2017). CCs provide international students with an opportunity to pursue higher education that might otherwise be inaccessible, especially since many cannot afford the tuition fees of BGIs, and numerous students may not have finished high school or been accepted into universities in their home countries due to stricter admission standards (Anayah & Kuk, 2015). Earlier research indicates that a majority of international students at community colleges plan to transfer to BGIs (Bevis & Lucas, 2007; Bohman, 2010; Hagedorn & Lee, 2005), highlighting the role of community colleges as crucial stepping stones for international students aiming to earn a bachelor's degree (Bohman, 2010). International students who first enroll in a CC and later transfer to a BGI are identified as international transfer students (Rozhenkova & Park, 2021). Despite efforts to streamline the vertical transfer process, students experience barriers including credit loss, unclear pathways, and insufficient advising. Research shows that meeting with advisors increases transfer likelihood (Booth et al., 2013; Wang & Wickersham, 2014), while support networks provide essential guidance on financial awareness, school-life balance, and transfer navigation (Nguyen et al., 2022). The experiences of international students following this non-traditional route have been mostly overlooked in research.

## PURPOSE OF THE STUDY

Our study is among the few to examine international CC student engagement, with the aim to provide a comprehensive descriptive analysis of the background characteristics, transfer goals, and engagement among international students using a 2017-19 statewide North Carolina (NC) data set from the Community College Survey of Student Engagement (CCSSE). We investigated two research questions:

- What is the personal and academic background profile of international students at NC community colleges?
- To what extent are personal, academic background, and transfer intentions related to engagement levels of international students at NC community colleges?

Thus, our aim was to provide a descriptive profile and a better understanding of the factors that may contribute to international CC student engagement.

## METHODOLOGY

### Data Source

The data for this study comes from the Community College Student Survey of Engagement (CCSSE), which is widely implemented across U.S. community colleges to measure and understand effective educational practices, and to promote student learning and retention (Center for Community College Student Engagement [CCSE], n.d.). The current CCSSE survey, used since 2017, includes over 120 items under 47 questions. As part of a larger project, we obtained a dataset comprising the 2017-19 administrations of the survey at 25 NC community colleges (n=12,178). The sample is representative of North Carolina Community College System (NCCCS) students overall in terms of gender and enrollment intensity (NCCCS, nd). For this study, we identified international students as those who responded affirmatively to the question, “Are you an international student or non-resident alien?” (n=364, nearly 3% of the total sample). Based on the curriculum enrollment by residence (out of country) reported on the NCCCS dashboard (a fraction of a percentage point), international students may be slightly overrepresented in our sample.

### Independent Variables

We examined 10 dichotomous variables that represent personal, academic, and transfer background identities for CC students and have been linked to engagement of CC students or higher education students in general. Among these, most represented variables that are typically conceptualized to have two possible values: traditional age (0 = neotraditional, 25 plus years; 1 = traditional, 18–24 years), marital status (0 = not married; 1 = married), having dependent children who live with them (0 = no; 1 = yes), English as a native language (0 = no; 1 = yes), first-generation college student status (0 = not first-generation; 1 = first-generation), participation in developmental education (0 = non-developmental; 1 = developmental), intention to transfer to a four-year institution (0 = no; 1 = yes), and gender (1 = man; 2 = woman). We note that while a gender binary oversimplifies the complex nature of gender identity, we were restricted by the values in the dataset. The ordinal dichotomous variables included enrollment intensity (1 = part-time; 2 = full-time), and highest academic credential earned (1 = secondary education; 2 = post-secondary education) as the categories represent ordered values. These variables were selected to capture a broad range of student characteristics that may influence or reflect their engagement in the CC context.

## Dependent Variables

Student engagement is a concept that has evolved from decades of research on the influence of student behavior and institutional practices on student learning (Sontam & Gabriel, 2012). Wang and Bohlig (2022) found empirical support for eight engagement factors—personal development (PDV), interaction with faculty and peers (IFP), higher order thinking (HOT), institutional support perceptions (ISP), use of advising services (UAS), writing and critical thinking (WCT), student effort (SEF), and extracurricular activities (ECA)—using 42 CCSSE items from national 2017-19 dataset. In a subsequent study, Wang et al. (2025) found that five engagement factors; PDV, ISP, UAS, IFP, and ECA; showed a significant relationship with academic performance. Therefore, for our study, we selected these same five key engagement factors, totaling 29 items with varied scales. PDV (8 items) and ISP (5 items) use a four-point scale (1–4), ranging from *very little to very much*. IFP (10 items) employs a frequency scale (0–3), from *never* to *very often*. UAS (4 items) follows a similar frequency scale (0–3), spanning *never* to *5 or more times*. ECA includes two items, one measured on a six-point scale (0–5) assessing participation levels, and another on a four-point scale (0–3) gauging engagement frequency. The scales of the 29 engagement items varied (0-3, 1-4, 0-5), and they were rescaled to a common range of 0 to 1. Each of the five key engagement factors was then calculated as the sum of its respective rescaled item scores. The overall engagement score was computed as the sum of the mean values of the five individual engagement factors, providing a composite measure of student engagement across multiple dimensions.

## Data Analysis

Given that the dependent variable was continuous and the independent variables were treated as dichotomous factors, we employed multiple linear regression (MLR) as the primary analytic method. MLR is well-suited for continuous outcomes and accommodates categorical predictors by representing them as dummy variables. In this study, dichotomous variables, including dichotomous ordinal ones, were coded in binary or dummy form. This approach allowed for a comprehensive assessment of the relationship between student engagement and a diverse set of background characteristics and for interpretation of results aligned to student identities used in practice and policy.

To examine these relationships, we first conducted a multiple regression analysis using the overall engagement score as the dependent variable. This was followed by five separate regression models, each corresponding to one of the five engagement subscales. All analyses, including descriptive statistics and multiple linear regression, were performed using base R packages, primarily the stats package (R Core Team, 2019).

We addressed missing data using multiple imputation with the multiple imputation by chained equations (MICE) package in R (van Buuren & Groothuis-Oudshoorn, 2011). Missingness was present across several variables but remained below 20%. Although formal missing completely at random (MCAR) tests were not conducted, patterns suggested the data were likely missing at random (MAR). MICE was selected for its robustness under MAR and its ability to handle mixed data types (van Buuren, 2018). Five imputed datasets were generated using default settings and pooled into a complete dataset for analysis, improving accuracy and reducing bias compared to listwise deletion or single imputation.

## RESULTS

The personal and academic profile of this sample of NC international CC students is shown in Table 1. A slight majority identified as women (55%), while over three-quarters were of traditional age (18-24 years; 76%). Less than a quarter of participants were married (19%) or living with dependent children (24%). The majority of participants indicated they did not speak English as a native language (63%) and were the first in their families to attend college (57%), however some had previously earned a post-secondary education credential (19%). Slightly less than half of the participants had completed developmental education coursework (46%), and a strong majority were enrolled full-time (71%). Over half of the participants (57%) indicated that transfer to a baccalaureate program or university was a goal of attending CC. The results for gender, marital status, enrollment status, and transfer goals align with the national trends for all international students attending community colleges (IIE, 2023b). While race/ethnicity was not examined in this study due to the limitations of federal classification of international students, we note that 85% of the students in the sample identified as students of color (including 38% Hispanic/Latino, 21% Black or African American, 10% Asian, 9% Other).

For the multiple linear regression model with overall engagement score as the dependent variable, diagnostic tests indicated that the assumptions of linearity, normality (Shapiro-Wilk test,  $p = 0.740$ ), homoscedasticity (Breusch-Pagan test,  $p = 0.198$ ), and independence of errors (Durbin Watson = 2.21,  $p = 0.973$ ) were satisfied, with no indication of multicollinearity among predictors (all VIFs  $< 1.50$ ). All regression assumptions were also met in the separate models conducted for each of the five individual engagement factors, confirming the robustness of the analytic approach across all dependent measures.

The regression model results (Table 2) indicate that among international students, only participation in developmental education is a statistically significant predictor of their overall engagement score ( $\beta = 0.13$ ,  $SE = 0.04$ ,  $p < .01$ ), with the model,  $F(10, 353) = 1.71$ ,  $p = 0.078$ , adj.  $R^2 = .02$ , explaining only 2.0% variance in engagement scores. The adjusted  $R^2$  is also an estimate of effect size, which at 0.02 is indicative of a small effect size. The global effect size for the regression model, calculated using Cohen's  $f^2$ , was 0.05, indicating a small effect size. Separate regression analyses for the engagement score factors revealed significant results only for the personal development factor. Significant predictors of personal development were participation in developmental education ( $\beta = 0.58$ ,  $SE = 0.14$ ,  $p < .05$ ), being of traditional age ( $\beta = 0.38$ ,  $SE = 0.19$ ,  $p < .001$ ) and having a vertical transfer goal ( $\beta = 0.28$ ,  $SE = 0.14$ ,  $p < .05$ ), with 6.0% of the variance explained by the model,  $F(10, 353) = 3.46$ ,  $p < .001$ , adj.  $R^2 = .06$ . The global effect size was calculated using Cohen's  $f^2$ , to get the value of 0.10, indicating a small effect size.

**TABLE 1**  
**Personal and Academic Profile of NC International CC Students (n=364)**

Identities		Frequency (n)	Percent (%)
<b>Personal Profile</b>			
Gender <sup>1</sup>	Men	163	44.78
	Women and other	201	55.22
Age	Neo Traditional (25 + yrs)	86	23.63
	Traditional (18-24 yrs)	278	76.37
Married	No	294	80.77
	Yes	70	19.23
Live with Dependent Children	No	275	75.55
	Yes	89	24.45
<b>Academic Background</b>			
English Native Language	No	228	62.64
	Yes	136	37.36
First Generation College Student <sup>2</sup>	No	157	43.13
	Yes	207	56.87
Developmental Education	No	196	53.85
	Yes	168	46.15
Enrollment	Part time	107	29.40
	Full time	257	70.60
Highest Academic Credential Earned	Secondary Education	296	81.32
	Post-Secondary Education	68	18.68
<b>Transfer Intention</b>			
Transfer to Baccalaureate program or University	No	156	42.86
	Yes	208	57.14

*Note:*<sup>1</sup>Individuals who indicated other gender or prefer not to respond (n<10) were included in a gender category with women. <sup>2</sup>Students were coded as first-generation if neither parent/guardian had attended college.

TABLE 2  
Regression Models for the Prediction of Overall Engagement and Dimensions among NC International CC Students (n=364)

Independent Variables	Overall Engagement Score			Personal Development			Interaction with Faculty and Peers		Institutional Support		Use of advising services		Extracurricular Activities	
	$\beta$	SE	B	SE	B	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE
Intercept	2.44***	0.15	3.22***	0.48	5.81***	0.45	2.68***	0.30	2.35***	0.28	0.75***	0.19		
Women	0.04	0.04	0.11	0.14	-0.08	0.13	-0.01	0.09	-0.01	0.08	0.08	0.05		
Traditional Age	0.03	0.06	0.38*	0.19	0.13	0.18	0.15	0.12	-0.21	0.11	0.00	0.08		
Married	0.00	0.06	0.16	0.20	0.35	0.19	0.17	0.12	-0.14	0.11	-0.09	0.08		
Have Dependent Children	0.04	0.05	0.29	0.18	-0.11	0.17	0.06	0.11	0.02	0.10	0.00	0.07		
English Native Language	0.02	0.05	-0.17	0.15	0.08	0.14	0.07	0.09	-0.03	0.09	0.05	0.06		
First Generation College Student	-0.02	0.04	-0.08	0.15	-0.06	0.14	-0.06	0.09	-0.14	0.09	0.08	0.06		
Developmental Education	0.13**	0.04	0.58***	0.14	-0.01	0.13	-0.06	0.09	0.08	0.08	0.11	0.05		
Enrollment Intensity	0.04	0.05	0.20	0.15	-0.25	0.14	0.01	0.09	0.05	0.09	0.06	0.06		
Highest Academic Credential Earned	-0.09	0.06	0.16	0.19	0.07	0.18	-0.20	0.12	-0.13	0.11	-0.08	0.08		
Transfer Goal	-0.01	0.04	0.28*	0.14	-0.06	0.13	-0.11	0.09	-0.04	0.08	-0.01	0.06		
R <sup>2</sup>	0.05		0.09		0.02		0.03		0.03		0.04			
$\Delta R^2$	0.02		0.06**		0.00		0.00		0.00		0.01			
RSE	0.39		1.27		1.16		0.80		0.74		0.50			
F statistic	1.70		3.50		0.72		1.01		0.90		1.30			
	(p=0.07)		(p<0.001)		(p=0.70)		(p=0.43)		(p=0.53)		(p=0.25)			

Note: \*p<.05, \*\*p<.01, \*\*\*p<.001

## Discussion and Implications

International community college students are not a monolith. While our sample was limited to international students at NC CCs administering the CCSSE, our findings can shed light on the broader population of international CC students in the United States. The NC sample examined in this study is similar to overall national characteristics reported in Open Doors (IIE, 2023b) but includes greater proportions of married and part-time students. Knowing that most of the students in the sample are the first in their families to attend college and do not speak English as a native language, along with nearly half being enrolled in developmental education, suggests some of the challenges students are facing as they navigate the college environment in a new country. It is also important to note the significant proportion of international students who have an interest in transferring to a BGI. While there is limited research on international transfer students, one single-institution study found this population differed from the domestic transfer student population in terms of greater diversity of racial/ethnic and socioeconomic backgrounds, as well as greater proportions of students who are first-generation college and low income (Rozhenkova & Park, 2021).

The findings indicate that among international CC students, participation in developmental education emerged as the only statistically significant predictor of overall engagement. However, the overall model was not significant,  $F(10, 353) = 1.71, p = 0.078$  and accounted for only a modest proportion of variance (adjusted  $R^2 = 0.02$ ), suggesting limited explanatory power. In contrast, separate regression analyses revealed that personal development, one of the five key engagement dimensions, was significantly predicted by participation in developmental education, traditional-age status, and having a vertical transfer goal. This model was statistically significant,  $F(10, 353) = 3.46, p < .001$  and explained slightly more variance (adjusted  $R^2 = 0.06$ ). These results underscore the potential value of developmental education in promoting aspects of student engagement, particularly related to personal growth and identity development. Institutions may consider enhancing support systems within developmental education programs and designing engagement initiatives that address the specific needs of traditional-age international students and those pursuing transfer pathways.

## Developmental Education

Our findings show that developmental education is a significant predictor of engagement, specifically personal development, for international CC students is important to consider, given the often-negative association of developmental education with student progress. Community colleges are a primary support for students lacking college readiness skills, with 98% offering developmental education, compared to 80% of public and 59% of private baccalaureate-granting institutions (Bragg & Durham, 2012). Rozhenkova and Park (2021) highlighted several key reasons why international students choose to begin higher education in a community college, including less stringent admissions requirements, affordable application fees and tuition costs, English as a second language (ESL) support, an opportunity to adjust to a foreign academic environment with smaller class sizes, and a chance to better prepare for and transfer to a 4-year institution (Durrani, 2019; Hagedorn, 2020; McIntyre, 2019). Previous research underscores the critical role of developmental education in fostering socio-academic integration, thereby

enhancing students' sense of belonging and persistence (García et al., 2019). For international community college students navigating English language development, robust student services and faculty support, such as personalized assignment reviews and supportive environments for honing oral presentation skills, are essential (García et al., 2019).

Moreover, fostering interaction among students, faculty, and staff members is indispensable for holistic student growth (Slantcheva-Durst & Knaggs, 2019). These interactions, coupled with the utilization of diverse resources like faculty office hours, tutoring services, and writing centers, not only bolster academic skills but also nurture student confidence (Lewis, 2015). Astin's (1999) Theory of Student Involvement further reinforces the significance of student engagement in academic achievement, emphasizing the role of involvement in cultivating a sense of belonging within the college community. Nichols and Williams (2019) underscored the transformative impact of utilizing college writing centers on enhancing students' overall writing abilities, organizational skills, and preparedness for current and future academic endeavors. International students frequently utilize community colleges to enhance their English proficiency through language classes and interactions with local students, facilitating a smoother transition to universities. This collective body of research elucidates the multifaceted pathways through which student engagement, support services, and academic resources converge to foster a conducive environment for student success and belonging within the college landscape.

## Transfer Goals

Another important finding in this study was the contribution of having a vertical transfer goal to international CC students' perceptions of personal development. Considering that this engagement variable is focused on perceived development of knowledge and skills at CC, the finding suggests how educational aspirations (i.e., transfer) are linked to international CC student development. The transfer function is considered one of the primary objectives of community colleges, enabling them to act as pathways to BGIs for students from diverse backgrounds (Mullin, 2017). However, few studies address the transfer gap that exists between students of different nationalities and countries (Chase et al., 2014; Crisp & Núñez, 2014; Ghazzawi et al., 2020), which is a noteworthy gap in scholarly attention. Zhang (2017) revealed that 67.2% of international students compared to 53.6% of domestic students transferred from major community college districts to a Texas-based four-year institution. Therefore, the goal of preparing for admission to a BGI is a significant draw for international students attending community colleges (Hagedorn, 2020; Rozhenkova & Park, 2021), potentially indicating a predisposition to seek opportunities for developing academic skills and career goals.

## Limitations and Future Research

One noteworthy limitation of this study is that neither the NCCCS nor the CCSSE captured the country of origin or native language, so we are lacking this important information about our sample and its context. Additionally, these instruments do not capture other nuances of the international student profile, such as generational status, immigration status, or immigration recency. These sociocultural factors may influence how CC students perceive themselves as international vs. non-international, their racialized experiences, and adjustment barriers, thus further layering their

student identity and college experiences (Kim, 2012; Slantcheva-Durst & Knaggs, 2019). Additionally, while the proportion of international students in the CCSSE sample appears to be higher than the proportion observed in the NCCCS population, it is not possible to know whether some students may have interpreted the item language of “non-resident alien” as simply “non-resident”. It is also possible that international students responded at a higher rate to CCSSE than domestic students. Future research can address international student identification and understanding and use of the identities and labels institutions use to categorize them.

Another limitation of the study is that the regression models have low explanatory power, with only 2%-6% of the variance in dependent variables explained. Among international students, participation in developmental education was the sole significant predictor, while personal development was influenced by developmental education, traditional age, and vertical transfer goals. However, these findings suggest that additional unmeasured factors likely play a substantial role in shaping student engagement. Future research should consider expanding the model to include a broader range of factors to better capture the nuances of student engagement.

## Conclusion

Our study serves as an exploratory endeavor into international CC student experiences, reinforcing the need for greater attention to this population. Our findings point to the particular role of developmental education in acclimatizing students to the institution, fostering feelings of belonging, and realizing the personal developmental benefits of attending a CC. The reform of assessment practices, provision of targeted support, use of student-centered pedagogy, integration of equity-minded approaches, and incorporation of developmental education reforms into broader initiatives stands as a pivotal pathway to enhancing overall student engagement and success within the college landscape (Center for the Analysis of Postsecondary Readiness, 2022). Thus, there is an imperative to implement tailored support services and guidance to enrich the educational journey and facilitate smoother transitions, especially for international students embarking on further academic pathways. Future studies should consider the impact of other markers of cultural identity, such as race and ethnicity, migration plans, and language, to understand how these identities shape educational experiences and vertical transfer experiences. To facilitate these inquiries, survey instruments and institutional research offices may also consider including demographic questions that capture the nuances of the international student identity.

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