

# English language proficiency requirements in university conditional admission: A case study of a pathway program

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English language proficiency is typically measured through standardized tests such as TOEFL or IELTS. Standardized test scores are “boundary objects” that allow stakeholders to communicate about the abstract concept of language proficiency. Other means of measurement are possible, but there has been little consideration of how their merits can be evaluated. We describe a university conditional admission “pathway” program in the United States that combines language study, disciplinary credit courses, test preparation, and acculturation activities. During three academic years (AY 2014-15, 2015-16, and 2016-17), 161 students (most from China) enrolled in the pathway with 97 matriculating as first-year students, an overall matriculation rate of 60%. Subsequent performance in the university was high, with average first-year grade point averages statistically equivalent to those of their directly admitted international peers; first-year persistence and six-year graduation rates were higher than those of the overall university population. Initially, pathway participants were required to reach standardized test scores as well as program performance standards in order to matriculate. However, as successive pathway cohorts developed a track record of matriculated performance and persistence, program administrators sought alternate exit evaluation measures. Here, we describe (i) our language proficiency construct (“communicative language proficiency for university study”); (ii) curricular affordances provided for developing this proficiency; (iii) measures of performance collected pre- and post-matriculation among program participants; and (iv) the consequential validity of standardized test requirements. We conclude that program performance measures are preferable to standardized test scores as indicators of college readiness in a university-governed conditional admission program after an initial standardization period.

**Key words:** Boundary object, conditional admission, consequential validity, English language proficiency, IELTS, international student, pathway program, standardized language test, TOEFL.

## 1. Introduction

University admission offices tasked with evaluating and admitting students need assurance that international students from non-English-speaking backgrounds can succeed in an English medium-of-instruction environment. The credentialing of English language proficiency is a central

concern (Murray, 2016). Standardized language tests remain the primary focus of credentialing, as thousands of institutions accept scores from the International English Language Testing System (IELTS) and the Test of English as a Foreign Language (TOEFL).

One alternative approach to direct admission is “conditional admission,” in which the institution sets conditions for full matriculation, including additional coursework, tests, or other requirements. Within the United States, conditional admission programs for domestic students have provided greater admission access for traditionally underrepresented populations through supportive learning communities (Heaney & Fisher, 2011). For international students, conditional admission to a U.S. university is allowable under the U.S. government’s Student and Exchange Visitor Program (SEVP) Policy Guidance S13.1 (ICE, 2016a); such programs began to develop in earnest in the United States after 2010 (Redden, 2013, 2018) in response to global competition for international students.

At the regulatory level, pathway programs are defined as postsecondary programs of study combining credit-bearing and English as a second language (ESL) coursework for students not yet meeting English proficiency standards for admission (ICE, 2016b). Language requirements for entry into the pathway vary depending on the length of program and the sponsoring unit. Preparatory admission programs for international students offering English for academic purposes (EAP) instruction are familiar as “pre-sessional” programs in the United Kingdom (Pearson, 2020) and as “pathways” in Australia (Floyd, 2015). Despite their increasing presence in the U.S. landscape, there is little research on their effectiveness; studies on students transitioning from intensive English or pathway programs into matriculated programs are slowly emerging (Elturki et al., 2019; Grosik, 2017; Heitner, Hoekje, & Braciszewski, 2014; Spencer, 2017).

This paper uses a case study method (Stake, 2009) to describe an undergraduate pathway program at Drexel University, a comprehensive research university located in the northeastern United States. We examine the question of how to evaluate the “English language necessary for a regular postsecondary curriculum and educational setting” as stated in the U.S. Immigration and Customs Enforcement standard (2016b). The concept of language proficiency for postsecondary study is abstract, a construct which has been intensively examined in the language measurement field (Bachman & Palmer, 2010; McNamara, 1996; McNamara & Roever, 2010). This construct is most frequently discussed in its representation by standardized language test scores. The two standardized tests used most frequently for admission to English-medium universities are the International English Language Testing System (IELTS) (Academic Module), and the internet-based TOEFL (TOEFL iBT). Both tests evolved from earlier versions focused on language structure to a greater focus on communicating for academic purposes, framing and operationalizing this construct differently; the TOEFL iBT draws upon notions of communicative competence in academic contexts (Chappelle, Enright, & Jamieson, 2008) and the IELTS focuses on a general academic English communicative ability (Davies, 2008). Both tests provide scores for listening, speaking, reading, and writing in separate modules as well as an overall total score. IELTS reports scores in bands and half bands from one to nine while TOEFL iBT reports scores on a scale from 0-30 with a maximum combined total score of 120.

Within higher education admissions, TOEFL and IELTS standardized test scores have become a “boundary object” (Star & Griesemer, 1989), a tangible index that allows diverse groups such as students, university instructors, and admission officers to communicate about this abstract construct. Yet standardized test scores are only one possible measure of this construct. Other assessment measures are possible. In this paper we (i) define a model of language proficiency for study in U.S. higher education; (ii) propose how this proficiency can be developed and measured in the context of a pathway program; (iii) evaluate the sufficiency of our proposed measures of evaluation through student performance data; and (iv) evaluate the merits of these forms of measurement compared to standardized test scores.

## **2. Program background**

The university pathway program described here is a conditional admission program administered by the English Language Center, a department within the College of Arts & Sciences (CoAS) of Drexel University. Drexel University is a cooperative education school, with strengths in engineering, business, and health sciences. About 11% of its 15,000 undergraduates are international students. The English Language Center (ELC) was founded in 1989 to provide intensive English language instruction for both graduate and undergraduate students. The undergraduate pathway program (International Gateway) was piloted in 2009 with six students and continues to run new cohorts each academic year. Both the intensive and pathway programs are accredited by the Commission on English Language Program Accreditation (CEA).

The authors of this study were invested in the development and ongoing management of this pathway program. Early in the program's history, data regarding student performance during the 2010-11 academic year were collected to track student achievement and analyzed in an effort to investigate patterns of intensive English program progression, standardized test score gains and rates of matriculation, and provided the analytic basis for programmatic adjustments (Heitner, Hoekje, & Braciszewski, 2014). Enrollment peaked at 95 students in the 2011-12 academic year and averaged 74 students across the next three years. This study focuses on the three academic years of 2014-15, 2015-16, and 2016-17.

## **3. Language proficiency for study in U.S. higher education**

Developing the institutional pathway program required university administrators and instructors to confront questions of English language proficiency, pedagogy, and measurement.

### **3.1. Defining the construct**

We began with the substantial research on English language use in U.S. higher education. University campuses constitute a complex "discourse community" of types, genres, and registers (Biber et al., 2002). In particular, U.S. classrooms are interactive and require speaking and listening skills, continuing a dialogic tradition (Turner, 2010); at the same time course texts become increasingly specialized as students progress through their undergraduate education (Swales, 1990).

International students enter this complex community of interactive and informational language use with a variety of backgrounds in English, from foreign language classrooms to English medium-of-instruction schools (Hoekje & Stevens, 2017). To be fully socialized into its norms of use, international students need access to the academic speech community (Duff, 2010). However, the marginal positioning of many English language centers on university campuses may limit students' access to disciplinary courses, campus activities, and social opportunities and thus full participation in the university discourse community (Benzie, 2011; Grosik, 2017; Spencer, 2017). It was important, then, to design a pathway program curriculum that would allow students wide access to academic and social registers as well as disciplinary genres.

The construct of language proficiency we envisioned as a goal of the pathway program was a communicative language proficiency sufficient for students to participate meaningfully in the academic, social, and cultural life of the university and serve as a basis for ongoing language socialization into increasingly sophisticated disciplinary registers. Following the "communicative turn" in understanding language use (Hymes, 1972), we call this construct "communicative language proficiency for university study."

### **3.2. Curricular principles for language development**

To develop this proficiency, our pathway curriculum design followed general pedagogical principles of English for academic purposes (Hyland, 2006), progressing over the course of the

program from a more “wide-angled” general EAP approach to a more specialized “narrow angled” approach (Basturkmen, 2003) as discipline-specific courses were introduced.

We followed the three curricular principles defined by Fenton-Smith et al. (2017): disciplinary language use, opportunities for engagement, and tools for ongoing learning. To support disciplinary language use, we provided discipline-specific language and content-integrated instruction (Snow, 2005) for the math and science courses (introduced in the second, Winter, and third, Spring, terms) as well as for the humanities courses (introduced in the fourth, Summer, term). To support campus engagement, we offered social and cultural programming with members of the larger campus community. To support the development of “tools for learning,” we provided an EAP course (“Skills for College Success”) focusing on academic strategies as well as specific support classes for the disciplinary courses.

### 3.3. Measuring language proficiency

Having defined our language proficiency construct and curricular design principles for its development, we turned to issues of measurement. How should student progress towards communicative language proficiency for university study be measured? Beyond reliance on standardized tests, language proficiency has been assessed in various ways. Within the United States, many colleges and universities accept completion of intensive English program coursework as sufficient to meet conditional English language requirements (Study in the USA, 2017).

In Australia, pathway programs vary in their contractual arrangements with sponsoring universities. These arrangements can include alternate forms of demonstrating language proficiency for admission purposes through program performance measures rather than testing. Non-testing pathway programs have been referred to as “IELTS equivalences” (Floyd, 2015); their program length and structure is commonly normed to standardized test scores on the assumption that 10-15 weeks of intensive EAP study result in a half-band increment in proficiency on the IELTS (Macqueen, O’Hagan, & Hughes, 2016) – score gains comparable to those reported in the U.S. context by Heitner, Hoekje, & Braciszewski (2014). In cases where program exit requirements are not tied to an externally administered assessment such as a standardized language test, the validity or reliability of the final assessment may be contested. For instance, Dyson (2014) reported that student readiness for matriculation was judged differently by internal assessments compared with a university-developed diagnostic evaluation of student essay writing.

To evaluate program success, we sought performance measures that could be validated, at least initially, in relation to some external, well-accepted measure, such as a standardized test score. This would also establish the legitimacy of the program from a wider stakeholder perspective. Any alternative measure would need to be at least as valid and reliable as an externally accepted measure and have other factors in its favor as well. Moreover, there should be no perceived conflict of interest between the purposes of the program provider and those of the accepting institution. Standardized language proficiency exams like IELTS and TOEFL are an attractive assessment instrument.

However, the “consequential validity,” that is, the pedagogical and other effects, of an assessment protocol must also be considered when evaluating alternative measures. Consequential validity (Messick, 1996) requires a holistic approach to testing to ensure that the effects of a test are integral to its validity as an instrument, including its influence on teaching or learning. All tests – not just standardized ones – have effects on students, teachers, administrators, and program curriculum. In particular, programs with high-stakes summative tests are likely to prioritize test-oriented pedagogy over more formative learning tasks valuable for students entering higher education (Cross & O’Loughlin, 2013). As we developed appropriate measures of assessment, we prioritized consequential validity as a primary consideration in an effort to “aim for test effects which are constructive for the worlds the test interconnects” (Macqueen, Pill, & Knoch, 2016, p. 286).

## 4. Program Curriculum

In this section we describe the pathway program course progression and the opportunities it provided for development of communicative language proficiency for university study.

### 4.1. Program course progression

The pathway program curriculum was designed to progress over three to four terms, from a primary focus on ESL and EAP language courses to more specialized language in disciplinary credit-bearing courses. The progression was designed to provide opportunities for and evidence of student ability to manage university course activities with increasing fluency and independence. To support the requirement of standardized test score benchmarking, test preparation courses were also included in the program design. Academic and advising support was provided by the ELC, with academic support from the University Math and Chemistry Tutoring Centers as needed. A social and cultural component, the Intercultural Community Bridge, provided opportunities for language socialization in more informal settings outside the classroom. Table 1 provides a picture of the pathway program curriculum.

**Table 1.** Pathway program curriculum (AY 2014-15, 2015-16, 2016-17).

	Fall	Winter	Spring	Summer
ESL/EAP courses	15 hours ESL  (Oral & Written Communication)	7.5 hours ESL  (Oral Communication)	9 hours EAP  (Writing for Chemistry & Skills for College Success)	6 hours EAP (COM 111 Support; PHL 105 Support; 3 hours ESL (Advanced Presentations))
CoAS credit courses		MATH (3-4 credits) ESL 110 (3 credits)	MATH (3-4 credits) CHEM 201 (3 credits)	COM 111 (3 credits) PHIL 105 (3 credits) or MATH (3-4 credits)
Test preparation (hours/week)	6 hours IELTS or TOEFL preparation	6 hours IELTS or TOEFL preparation		
Advising/academic support	ELC advising & tutoring	ELC advising & tutoring Math Resource Center	ELC advising & tutoring Math Resource Center Chemistry Resource Center	ELC advising & tutoring Math Resource Center
Social & cultural acclimation	Intercultural Community Bridge	Intercultural Community Bridge	Intercultural Community Bridge	Intercultural Community Bridge

The pathway curriculum included language support courses for students enrolled in credit-bearing chemistry (Spring term), and philosophy and communication (Summer term) courses. These support courses were designed to develop the language and study skills needed for discipline-specific learning. Instructors of these support courses did not teach discipline-specific content *per se*; they

taught academic literacy – the linguistic knowledge and skills necessary to learn the discipline-specific content (Snow, 2005).

Credit-bearing disciplinary courses consisted of first-year courses in math, science, and humanities meant to satisfy graduation requirements consistent with all university majors. Coordination with academic departments across the university was critical for the program's design and implementation. Pathway instructors and administrators benefited from strong, collaborative relationships with the CoAS departments central to the pathway curriculum. Serving as the academic advisor of the students and representing the interests of the program, the pathway program director maintained regular communication with the academic instructors, college advisors, and the Dean of CoAS. This close working relationship allowed academic, disciplinary, or personal issues among pathway students to be addressed without jeopardizing the overall integrity of the program.

The credit-bearing disciplinary courses were taught in “sheltered” formats in Winter and Spring terms; these courses only enrolled pathway students. The CoAS instructional and administrative staff selected to participate in the pathway program had experience with and interest in teaching international students from non-English as a medium-of-instruction settings. These instructors were able to adjust their pedagogy to match the learning needs of the pathway population. However, in the Summer term, pathway students studied in “non-sheltered” courses, that is, regularly scheduled university courses with other international and domestic students. The pathway program director met with CoAS course instructors to maintain a line of communication across these courses.

#### **4.2. Opportunities for developing communicative language proficiency**

The pathway program was designed to provide opportunities for students to develop communicative language proficiency for university study (Table 2). The non-credit English language courses and standardized test courses encouraged students to increase their interactive language proficiency in classroom-based tasks. Students were placed into the six-level intensive English program at the ELC in Listening/Speaking and Reading/Writing communication classes. As will be described further below, Level 4 Listening/Speaking proved to be a key threshold level for students as they moved from intermediate to more advanced speaking and listening proficiencies. The student learning outcomes for Level 4 Listening/Speaking included the development of proficiency skills to converse about topics beyond the personal, such as current events and academic concerns; to repair communication breakdown by asking for clarification; to indicate logical connections between ideas using appropriate discourse markers and transitions; and to provide and support opinions. Listening skills included being able to understand main ideas with some details from authentic audio media and speech presentations. These opportunities for students to develop communicative language proficiency were all designed to help students improve the full range of language skills necessary to succeed at and fully benefit from a university experience in the United States.

The EAP courses (ESL 110, Writing for Chemistry, COM 111 Support, PHIL 105 Support) provided students with opportunities to increase their discipline-specific academic language skills and general academic socialization in U.S. university contexts. ESL 110 (“Introduction to Academic Discourse”) is a preparation course for the university first-year writing sequence. The student learning outcomes focus on familiarizing students with the process approach to writing: the importance of drafting, revising, and editing; formatting and organizing writing assignments according to their purpose; and active reading skills of previewing text and selecting information in support of a position. Academic policies of plagiarism are discussed in detail to those unfamiliar with U.S. norms, and academic support services such as the tutoring and writing support are explained.

Writing for Chemistry was an EAP course, taught concurrently with the general chemistry course, designed to increase pedagogical support for non-majors. Student learning outcomes included analyzing words in scientific texts (word roots, prefixes, and suffixes); identifying main ideas and details in scientific reading; summarizing, paraphrasing, and quoting factual information from the text and related sources; and explaining and presenting on an everyday phenomenon using concepts from the class (for example, how polarized sunglasses work).

The disciplinary credit courses (math, chemistry and humanities) provided students experience with disciplinary university professors and curricular standards outside the language program. Student performance in these courses was evaluated by CoAS instructors in relation to a standardized undergraduate grading scale. At the same time, the Intercultural Community Bridge provided students opportunities to use a more informal, social register of language and internalize relevant cultural information outside of the classroom. Combined, these curricular and co-curricular elements were designed to provide students with opportunities to develop the necessary communicative language proficiency for university study. Student performance in the social and cultural component was evaluated in relation to explicit expectations for participation.

**Table 2.** Opportunities provided by pathway curriculum to develop communicative language proficiency for university study (AY 2014-15, 2015-16, 2016-17).

Curricular element	Assessment measure	Opportunities provided	Language focus
ESL language courses	Course performance proficiency levels and metrics	Interactive practice in speaking and listening ESL courses  Practice with increasingly academic reading and writing activities	Interactive language proficiency in classroom-based tasks
EAP support courses	Course performance standards and metrics	Access to various disciplinary genres and registers	Academic language socialization in classroom language and pedagogy Disciplinary language
CoAS disciplinary credit courses	Undergraduate course learning outcomes and metrics	Access to CoAS instructional pedagogy Content based instruction	Academic language socialization in classroom language and pedagogy Disciplinary language
Cultural component	Participation metrics	Interactions with members of the larger campus community  Cultural outings and activities	Social and cultural communicative proficiency Increasing range of informal registers
Standardized test courses	Test scores	Information about test organization and genre requirements  Practice time	Language socialization on some written and spoken genres and tasks

## 5. Program requirements

In this section we describe the entrance, progression and matriculation requirements of the pathway program in the years of this study (AY 2014-15, 2015-16, and 2016-17) and then move to considerations of student performance (Section 6).

### 5.1. Program admission and progression requirements

As a conditional admission program, admittance into the pathway program included both language and academic requirements. Students in the three cohorts evaluated in this paper were required to submit a minimum TOEFL 53 or IELTS 5.0 for acceptance into the pathway program. Students also had to be academically eligible for the majors of their choice at the university by meeting minimum high school grade point average (GPA) requirements and specific course prerequisites. Successful completion of the pathway program and matriculation into undergraduate study required meeting regular program benchmarks including course performance and standardized language test scores. A final letter of recommendation from the pathway program director was also required. Students matriculating into STEM majors had different requirements for admission than those matriculating into non-STEM majors (Table 3).

Pathway students in AY 2014-15, 2015-2016, and 2016-17 ( $n = 161$ ) ranged in age from 16-22 (mean of 18.45) years with 105 males (65%) and 56 females (35%). They were all undergraduate program applicants with 42 majors in STEM (science, technology, engineering and math) fields and 119 across non-STEM fields. They were almost all from China – 154 students, with the remaining seven from Egypt, India, Japan, Oman, Panama, and Venezuela.

**Table 3.** Pathway program admission criteria and progression benchmarks (AY 2014-15, 2015-16, 2016-17).

	Admission Requirements	End-of-Term Progression			
		Fall	Winter	Spring	Summer
Standardized English Proficiency Assessment	TOEFL 53 or IELTS 5.0 for Fall entry	TOEFL 62 IELTS 5.5	TOEFL 70 IELTS 6.0	TOEFL 79 IELTS 6.0	TOEFL 73 IELTS 6.0
Credit course GPA	STEM 2.75 Non-STEM 2.50 High school or transfer credits		STEM 2.00 non-STEM 2.00	STEM 2.75 non-STEM 2.50	STEM 2.75 non-STEM 2.50
Non-credit courses		75% minimum grade	75% minimum grade	75% minimum grade	75% minimum grade

Students who did not meet term benchmarks were placed on academic probation. Those unable to meet the benchmark the following term risked dismissal from the program. Dismissal from the program required students to transfer into another SEVP-authorized program or leave the United States within a grace period. The pathway program director assisted students who were dismissed to locate and transfer to other programs.

Since progress through the program was contingent upon meeting mandated benchmark language scores before each new term, students were strongly encouraged to re-test in IELTS or TOEFL at least once per term. Official scores were collected by the pathway program director. Students could qualify for matriculation at the end of the Spring term. Students still working to meet matriculation requirements could continue in the Summer term, but no students were permitted to extend their pathway studies into another academic year. Because students who stayed for the



Summer term earned an additional six to seven credits in CoAS courses, providing another term of academic exposure and readiness, the TOEFL requirement was lowered to 73 to match the university's official summer provisional admission requirement.

## 6. Evaluating student performance

Student performance in the ESL and EAP courses was evaluated within the ELC in accordance with CEA standards governing the accreditation of our language program. Students were required to attain final grades of 75% or higher to successfully complete the ESL and EAP courses and demonstrate satisfactory progression through the program.

### 6.1. Pathway program outcomes

Student performance data during and after the program provide evidence of the sufficiency of students' communicative language proficiency for university study. During these three academic years, 161 students enrolled in the pathway program; of these students, 100 successfully completed the program and were offered admission to the university as first-year students; 97 of these enrolled, a 60% matriculation rate.

Across these three cohorts, 61 students (almost 40%) were dismissed or withdrew from the program due to low credit course performance or standardized test scores or both (Table 4). GPA requirements for pathway disciplinary courses were 2.75 for STEM and 2.50 for non-STEM majors. The largest group among these 61 consisted of 42 students (almost 70%) who failed to reach both GPA and test score standards. Six students reached test score standards but not GPA standards. By contrast, 13 students reached GPA but not test score standards. With these different attrition rates in mind, Table 4 presents a picture of outcome percentages relative to the 61 students who failed to complete the program as well as the overall pathway enrollment of 161 students.

**Table 4.** Pathway program outcomes (AY 2014-15, 2015-16, 2016-17).

Pathway enrollment	University matriculation	Pathway dismissal/withdrawal		
		61 (38%)		
		Reason for dismissal/withdrawal		
		IELTS or TOEFL scores	Course performance	Scores and performance
161 (100%)	97* (60%)	13 (21% of failure to complete; 8% of enrollment)	6 (10% of failure to complete; 4% of enrollment)	42 (69% of failure to complete; 26% of enrollment)

\* 100 students reached matriculation requirements; 97 enrolled.

A more detailed analysis of this group of 61 students who failed to meet matriculation requirements by gender, major, and nationality revealed that failure was somewhat more likely among males, STEM majors, and nationalities other than Chinese. Male students comprised 65% of the total participants, but 80% of those who failed to matriculate; STEM majors comprised 26% of the total participants, but 33% of those who failed to matriculate; and non-Chinese students comprised 4% of the total participants, but 7% of those who failed to matriculate. These numbers indicate that some groups of students may benefit from more targeted intervention going forward.

Students who ultimately achieved admission standards performed more successfully in the non-credit courses (language, test preparation, and disciplinary support) than those who did not reach admission standards, as shown by the percentage of pass grades in these courses (Table 5).

**Table 5.** Non-credit course performance (pass/fail rates) by program outcome (admitted versus non-admitted).

Academic Year	Admitted			Non-admitted			Percentage difference
	Students	Courses	% pass	Students	Courses	% pass	
2014-15	48	338	95	27	154	73	22%
2015-16	29	203	94	23	150	71	23%
2016-17	23	153	97	11	69	84	13%
TOTAL	100*			61			

\* 100 students reached matriculation requirements; 97 enrolled.

## 6.2. Identifying a language proficiency threshold

Clearance for matriculation was clearly related to performance in these non-credit courses (Table 5). However, a closer look at the pass/fail rate among students across the six levels of the intensive English program curriculum revealed an inflection point. Our data suggest that a language proficiency threshold for students was observable by the second (Winter) term of the program through student performance in both the Listening/Speaking and the ESL 110 writing courses. Sixty-two percent of the students placed in Level 4 Listening/Speaking were ultimately offered admission, compared to 39% of those placed in lower levels. Admission rates of those placing in higher levels were even greater (Table 6).

**Table 6.** Percentage of students admitted relative to placement in Listening/Speaking levels in Winter terms (AY 2014-15, 2015-16, 2016-17).

Listening/Speaking	All students	Admitted students	Percentage admitted
Levels 2 & 3	31	12	39%
Level 4	73	45	62%
Level 5 & 6	57	43	75%
TOTAL	161	100*	62%

\*100 students reached matriculation requirements; 97 enrolled.

Performance in the credit-bearing ESL 110 course, a prerequisite to the first-year writing sequence, in the Winter term showed similar results. Those who successfully reached admission status had an average GPA significantly higher than those who did not (Table 7).

**Table 7.** Student performance in ESL 110 by admitted status.

Academic Year	Total students	Admitted		Non-admitted		Difference in mean GPA
		GPA	<i>n</i>	GPA	<i>n</i>	
2014-15	75	3.31	48	1.94	27	1.37
2015-16	52	3.08	29	1.84	21*	1.24
2016-17	34	3.26	23	2.13	10*	1.13
Total	161	3.23	100	1.94	58*	1.29

\* Discrepancies due to differences in student completion.

### 6.3. Student performance in the disciplinary credit courses: Math, Chemistry, and Humanities

Another important program metric was student performance in the disciplinary credit courses: the mathematics sequence, chemistry and humanities courses as well as ESL 110 (Table 8).

**Table 8.** Student performance in disciplinary credit courses upon exit by admission status

Academic Year	Total students	Admitted		Non-admitted		Difference in mean GPA
		GPA	<i>n</i>	GPA	<i>n</i>	
2014-15	75	3.30	48	1.58	27	1.52
2015-16	52	3.19	29	1.61	22*	1.58
2016-17	34	3.29	23	2.22	10*	1.07
Total	161	3.17	100	1.70	59*	1.47

\* Discrepancies due to differences in student completion.

### 6.4. The role of internal program measures

The program curriculum and its internal measures of course fulfillment supported the development of student abilities and skills to fulfill admission requirements (Tables 5–8). However, we continue to monitor internal program metrics. ELC courses are normed on an acceptable pass rate of 70-90% as a matter of accreditation standards. The pass rates in the non-credit courses for all students averaged 86%, within this range (Table 5). The two groups, however, show very different performance profiles, with matriculating students averaging 95% and non-matriculating students averaging 79% pass rates.

Admitted students in each of the three cohorts showed significantly higher GPAs than those of the non-admitted students in the disciplinary courses. With the mean GPA of non-admitted students in each cohort below the minimum required for matriculation to STEM (2.75) and non-

STEM (2.50) majors, student performance in these courses became important indicators of ultimate program outcome.

### 6.5. Student course performance after matriculation

A critical question for any pathway program concerns the post-program, collegiate success of students cleared for matriculation in terms of GPA performance and persistence toward graduation. Persistence is a metric that accounts for transferring as well as continuing students. The average GPAs of first-year pathway alumni were statistically equivalent with those of their directly admitted international peers (Table 9).

**Table 9.** Matriculated first-year cumulative average GPAs, Pathway alumni versus direct admit international students.

Academic Year	Pathway Alumni		International Direct		Difference in mean GPA	Statistical significance <sup>b</sup> <i>p</i>
	GPA	<i>n</i>	GPA	<i>n</i>		
2014-15	3.10	45 <sup>a</sup>	3.10	282	0.0	.95
2015-16	3.13	29	3.22	317	-0.9	.26
2016-17	3.30	23	3.19	242	.11	.11

a. Discrepancies due to differences in student completion.

b. Two-tailed *t*-tests for statistical significance across differences in means were calculated using SPSS v. 26.

### 6.6. Matriculated performance: persistence and graduation rates

For those pathway students who matriculated, persistence rates were high, with first-year persistence ranging from 83-98% (mean of 93%) for the three academic years included in this study. This rate exceeds the overall university first-year persistence rate of 85-89% (mean of 87%). University graduation rates are also indicative of academic success, which the university reports within six years of entrance. The six-year university graduation rate of 89% among pathway alumni also exceeds the overall university graduation rate of 71%.

### 6.7. Standardized test scores for pathway admission

The matriculation rate from the pathway program into the university was low, an average of 60% over these three years. An analysis of standardized test scores for program entry and exit supported a re-examination of program entry requirements. For both IELTS and TOEFL, the difference in entry and exit score means for admitted versus non-admitted students was highly statistically significant ( $p < .01$ ). These results (Table 10), supported raising the entry scores for admission into the pathway program in an effort to increase matriculation rates.

**Table 10.** IELTS and TOEFL average entrance and exit scores (AY 2014-15, 2015-16, 2016-17).

Test	Students	Admitted			Non-admitted			Difference in score gain	Statistical significance <sup>a</sup> <i>p</i>
		Entry	Exit	Score gain	Entry	Exit	Score gain		
IELTS	49	5.5	6.1	0.6	5.2	5.4	0.2	0.4	< .01
TOEFL	115	66.5	80.5	14	62.2	68.1	5.9	8.1	< .01

a. Two-tailed *t*-tests for statistical significance across differences in means were calculated using SPSS v. 26.

## 7. Discussion

The English language proficiency needed for effective engagement in English-medium education has been under-examined despite the large numbers of international students enrolling from other language backgrounds. Within the United States, few studies of pathway program effectiveness exist; institutions have predominantly relied upon standardized test scores, with widely varying institutional policies for onsite screening, support services and performance tracking (Andrade, Evans, & Hartshorn, 2014). In the U.K. and Australia, preparation (pre-sessional) programs have had longer history but still lack a consistent evaluation record due to similar issues of variation in program design, measures of success, and extent of institutional tracking (Pearson, 2020).

We conclude that effective demonstration of preparation relies on notions of validity, reliability, and authenticity. In our pathway program, validity and reliability of assessment across language courses were based upon adherence to policies and procedures in accordance with CEA accreditation standards. The authenticity of our program was supported by offering credit-bearing courses directly related to disciplinary majors offered at the university. Regularly assigned CoAS instructors taught these courses with syllabus requirements similar to fully matriculated students; thus, the academic expectations closely aligned with university standards. Evaluation of the first full year of the program (AY 2010-2011) highlighted the correlation of the CoAS course grades to later matriculated performance and confirmed their independence from initial test scores (Heitner, Hoekje, & Braciszewski, 2014). Our current study confirms the correlation between performance in the credit courses and ultimate program success.

Recommendations for matriculation came from pathway program instructors and administrators who were employees of the university and received no additional incentives or bonuses when participants were accepted. A high acceptance rate “looks good” for a program, and there are always market consequences for low matriculation rates for any pathway program in a competitive recruiting environment. As our data show, the matriculation rate was low, but the dividends were high. The relatively low yield in terms of pathway matriculation resulted in students commensurate with their directly admitted peers with the added benefit of higher rates of persistence and graduation. By contrast, pre-sessional pathway programs with insufficiently high standards have led to academic failure for underprepared students (Pearson, 2020).

We recognize that the costs associated with pathway programs are not insignificant for students and their families. Yet, overall, and mindful of the alternatives, we see many advantages to the design of university-governed pathway programs like ours. Students’ academic liability within a pathway is much reduced compared to a failure experienced as a first-year matriculated student. Pathway students have the opportunity under U.S. visa regulations to apply elsewhere, many times as stronger applicants, making a fresh start without a compromised academic record; in many cases, their subsequent universities will honor their transfer credits earned as pathway students.

For universities, advantages of a pathway program are considerable. Pathways provide universities with the opportunity to build a successful and loyal group of matriculants. Further, pathways provide college access to a wider, more diverse set of international students and provide support for on-campus intercultural programming. They set the framework for more inclusive 21st-century recruitment strategies for U.S. universities (Hoekje & Stevens, 2017).

After several years of pathway performance data, administrators reviewed program requirements, focusing on the standardized retesting requirement for matriculation. When first piloting and conducting a conditional admission program, standardized test scores provided an important – external – check on the assessment of language proficiency, especially when few other measures were available. But as more data accumulated to evaluate students and the efficacy of the program, the utility of requiring standardized test scores to exit the pathway program diminished. Moreover, the relationship between standardized test scores and students’ developing language proficiency

for disciplinary study and other academic socialization is not always so straightforward (Humphreys et al., 2012). Given the longitudinal success of successive cohorts and increasing sensitivity to the “consequential validity” of standardized testing, we re-evaluated the standardized testing requirement to exit the pathway program.

### **7.1. Issues of consequential validity**

In addition to providing an external measure of language proficiency, standardized testing also influenced behaviors and decisions of administrators, teachers, and students in ways that were counterproductive to program quality. Updating and monitoring standardized test scores throughout the program cost substantial administrative time and effort. Test preparation instruction limited the resources available for instruction in the academic, disciplinary, and social language skills students need in university study (Floyd, 2015; Green, 2006; Humphreys et al., 2012). Standardized test scores are summative performance measures with specific types of test tasks. Writing tasks, in particular, vary from the longer-term assignments in the university (Banerjee & Wall, 2006; Raimés, 1990). Instructors often found themselves forced to “justify” course activities in relation to standardized test tasks. Seviour (2015) argues instead for the value of process-oriented evaluation that can support student learning in the fulfillment of the task.

Students were particularly affected by the testing regime. Repeated testing to demonstrate score gains incurred substantial costs, both financial and psychological. Students prioritized study for the test over social and cultural activities designed to develop more intercultural competence and tended to view standardized test scores as the ultimate arbiter of matriculation (Kaloustian, 2014). The ambivalence we observed in relation to student involvement in social and cultural engagement has been noted in other university preparation programs as well, due to immediate pressures to focus on score-based admission requirements (Grosik, 2017) and perceived lack of language and cultural knowledge (Wright & Schartner, 2013). Given the potential of ESL/EAP programs to positively impact international students’ academic and social engagement (Fox, Cheng, & Zumbo, 2014), we view the interactional component of our pathway as particularly valuable and have continued to find ways to increase student social and cultural engagement.

### **7.2. Issues of predictive validity**

We acknowledge the many assumptions and limitations involved in predicting university performance. Research on the “predictive validity” of standardized tests confronts this issue, even when restricting the domain of prediction to language-based tasks (Chappelle, Enright, & Jamieson, 2008). Multiple factors intervene, from students’ academic backgrounds to their individual skills and competencies (National Academies, 2017) and the nature of pedagogical support after student enrollment (Fenton-Smith et al., 2017). Even successful completion of a pathway program does not guarantee successful completion of an academic program (Pearson 2020). However, our year-long academic pathway program provided support for academic language and classroom experiences designed to develop English language skills in the context of the larger campus community. Tutoring and advising resources continued to be available to first-year matriculated students. Pathway students learned how to navigate the wider community and its resources for housing, meals, shopping, and entertainment in a new country, in English. Many students developed friendships with each other and with those outside the program. In short, pathway students had the opportunity to “pre-prove” – to themselves and others – they were capable of performing like college students, in real time, across many of its facets. Our evaluation of students relied on multiple examples of evidence-based performance (Banerjee & Wall, 2006).

In this context, standardized test scores were increasingly viewed as a barrier that excluded students with proven program performance. Only about 62% of Pathway students successfully completed the program and were offered admission, with an ultimate matriculation rate of 60%. Of the 61 students who failed to matriculate, most (79%, 48 out of 61) failed due to course

performance and in most cases, in addition to standardized scores. Clearly, most students who failed to matriculate were excluded because they did not perform well in their course work. However, 13 students (8% of program participants) were not admitted based solely on standardized test scores, an exclusion that we saw as overly restrictive given program curricular measures designed for the development of a communicative language proficiency for university study.

## **8. Conclusion**

We conclude that program performance measures are preferable to standardized tests to meet admission requirements in a university-governed, conditional admission program after an initial standardization period. It may seem paradoxical to first use standardized tests as an exit assessment only to conclude such instruments are unnecessary and even problematic for evaluating readiness for matriculation. However, this observation fails to take into account the initial phases of a new program without a proven track record versus the growing maturity of a program where conditions of validity, reliability, and authenticity of internal program measures can be verified. Without the initial support provided by repeat testing, the current success of the pathway program might not have been so clearly demonstrable.

We continue to use standardized language test scores for admission into the pathway program. For international students applying from various educational backgrounds, a standardized test score provides a common and reliable quantitative measure of language proficiency prior to student arrival. But once students' performance can be observed over the course of an academic year and evaluated in numerous contexts, a single quantitative test score has comparatively less validity. Indeed, while a standardized test score allows stakeholders to discuss the abstract construct of academic language proficiency, it can obscure the construct itself and other approaches that can be used to measure it.

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## **Declaration of interest statement**

Barbara Hoekje was the primary program developer of the Gateway program and Director of the Drexel University English Language Center from 2001-2015. She served on the TOEFL Committee of Examiners from 2008-2013. Travis Harman is Associate Director of the English Language Center and was previously the Gateway Program Director. Reese Heitner was Assistant Director of the English Language Center responsible for the standardized testing component of the Gateway program and Administrator of the IELTS test center located at Drexel University during the years reported here. None of the three authors of this research paper has affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

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