Relationships between English proficiency test scores and academic outcomes: DET, IELTS, and TOEFL in a U.S. public research-intensive university

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This study examined the relationships between English language proficiency (ELP) test scores and academic success at the University of Hawaiʻi at Mānoa (UHM) and considered whether academic outcomes differed for students who entered on the basis of different tests. Building on Isaacs et al. (2023), this study notably includes data on the use of Duolingo English Test (DET) in admissions decisions. More broadly, it fills a gap by examining outcomes in a new context (a large, public, less-selective U.S. university), using data from Fall 2022 and later when instruction was delivered primarily in-person after COVID, and covering a wider range of ELP scores than is typically represented in such research. In addition to GPA as an indicator of success, this study considered proportions of students who faced a negative academic action (academic probation or withdrawal) in relation to test submitted and made comparisons to international students who were exempt from submitting ELP scores. Students admitted unconditionally with higher ELP scores were also compared to those admitted conditionally with lower scores and further English language instruction requirements. Findings are relevant to valid use of the DET, IELTS, and TOEFL in admissions, and advance research on the topic by incorporating academic outcomes indicators beyond GPA.

Keywords: Duolingo English Test, IELTS, international admissions, TOEFL, predictive validity

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Background

An argument for the validity of test score use requires evidence that test scores relate to performance in a relevant real-world domain and that decisions based on the scores lead to desirable outcomes (Chapelle, 2021). This study utilized institutional data at the University of Hawaiʻi at Mānoa (UHM) to explore relationships between English language proficiency (ELP) test scores and academic outcomes. It first considered correlations between ELP test scores and GPA, and whether different patterns appeared for graduate and undergraduate students or for those admitted conditionally with lower test scores. Next, the study compared whether students who entered on the basis of different ELP tests or who were exempt from submitting a score experienced significantly different mean GPAs or disparate rates of negative academic outcomes such as withdrawal or probation. Data included students who entered Fall 2022 or later, after UHM returned to primarily in-person operations after COVID-19 disruptions.

Following Isaacs et al. (2023), this study specifically sought to examine how the Duolingo English Test (DET) compared to well-established ELP tests in terms of association with student success. Isaacs et al. (2023) investigated DET, International English Language Testing System Academic Test (IELTS), and Test of English as a Foreign Language – Internet-Based Test (TOEFL iBT) scores and first year grades at a “very selective” (College Board, n.d.) Russell Group institution in the United Kingdom with over 50,000 students (40% international) and a 22% undergraduate acceptance rate (Isaacs et al., 2023). By comparison, the present study considered a “less selective” (College Board, n.d.) public university in the United States with 20,000 students (7% international) (University of Hawaiʻi at Mānoa, n.d.) and a 73% acceptance rate. Findings add to the growing body of evidence on the validity of using DET scores for university admissions decisions and contribute to the broader literature on ELP tests and academic success by: exploring a wider range of ELP scores than typically represented; including students who were exempt from ELP testing; and incorporating withdrawal and probation as outcomes indicators in addition to GPA.

Literature review

As a newer test, empirical support for DET is still emerging. Many institutions, including UHM, began accepting DET during the COVID-19 pandemic when universities sought options for at-home administration of ELP tests (Isbell & Kremmel, 2020). Then, there was "very little empirical evidence supporting [DET] use for university admission purposes," including few independent, peer-reviewed studies (Wagner, 2020, p. 314). Today, as the test has become one of the most widely-used ELP tests in U.S. university admissions alongside TOEFL and IELTS (Coney & Isbell, 2024), more such studies have been published (Isaacs et al., 2023; Isbell et al., 2023), but more are needed to contribute to justifying the use of DET alongside other accepted ELP tests for international admissions.

Isaacs et al. (2023) correlated DET scores and GPA for 1,389 postgraduates and 492 undergraduates entering University College London (UCL) in Fall 2020, during the height of COVID-19. They reported a small positive correlation between DET scores and first year GPA for all students combined (r = .046, adjusted r = .110). When disaggregated by academic level, they found a small positive correlation for postgraduates (r = .089, adjusted r = .195), but a small negative correlation for undergraduates (r = -.047, adjusted r = -.112). Similar patterns held for students entering with IELTS and TOEFL, supporting criterion-related validity of DET, at least in comparison to these two widely accepted tests. These findings lend mixed support for all three tests' predictive validity, in terms of how well scores relate to future academic outcomes as measured by GPA.

Tabassum's (2023) thesis reported higher, moderate correlations for DET scores and GPA in the first term (r = .33) and second term (r = .26) for 1,460 combined graduate and undergraduate students at the University of Calgary between Fall 2020 and Winter 2022, also in the midst of the pandemic. This study reported lower correlations for IELTS (r = .10 – .15) and TOEFL (r = .07 – .09) compared to DET, and noted that only the DET and IELTS correlations were statistically significant. Preceding these DET studies, the most recent peer-reviewed meta-analysis of TOEFL and IELTS predictive validity studies reported a small positive correlation between test scores and GPA (r = .23, p < .001) with no difference between the two exams, and no significant moderating variables (Ihlenfeldt & Rios, 2022).

Method

Data

Data were received from UHM Undergraduate Admissions and Graduate Division for 397 international students entering Fall 2022 or later (Table 1). This timeframe was selected because mostly in-person instruction and services had resumed, with only approximately 15% of all courses offered online, which is a stark contrast to what students experienced during the peak of COVID-19 (where up to 84% of all courses were delivered online). Graduate (GR) data included 146 students (90 female, 53 male, 3 not reported, mean age = 28.7 years, SD = 7.18) entering in Fall 2022 only, as the university paused accepting DET for graduate admissions in Spring 2023. Undergraduate (UG) data included 251 students entering in Fall 2022, Spring 2023, and Fall 2023 (161 female, 90 male, mean age = 20.1 years, SD = 2.79). DET is currently the most popular ELP test among undergraduate UHM applicants.

Table 1. ELP tests submitted by international students at UHM

	Graduate					Undergraduate				
Entry	DET	IELTS	TOEFL	No ELP	total	DET	IELTS	TOEFL	No ELP	total
Fall 2022	18	26	44	58	146	29	9	12	70	120
Spring 2023						2	2	3	14	21
Fall 2023						30	8	5	67	110
Total	18	26	44	58	146	61	19	20	151	251

Analysis focused on 188 students who submitted ELP scores (88 graduate, 100 undergraduate), with 209 students (58 graduate, 151 undergraduate) admitted without an ELP score providing a baseline comparison for relevant analyses. Although international applicants must submit a measure of language proficiency, this evidence can include being a native speaker of English or living/completing education in an English-speaking country (Office of Admissions, n.d.). Students required to submit an ELP test must meet a cut score, but UHM offers both unconditional and conditional admission levels (Table 2). The minimum scores required for different tests were similar based on concordance tables available at the time, though as a reviewer noted, the thresholds for TOEFL iBT may have been slightly higher than the other tests (e.g., a TOEFL iBT score of 60 is approximately equivalent to an IELTS score of 6.0, ETS, n.d.). We also note that DET concordances have been updated in recent years (see Cardwell et al., 2024). Applicants admitted conditionally with lower ELP scores take another placement test to determine whether further language instruction is required. These language courses are graded on a credit/no credit basis only and do not impact GPA calculations.

Table 2. Minimum English proficiency test scores for admission to UHM, Fall 2022

	Conditional		Unconditional	
Test	GR	UG	GR	UG
DET	95	90	125	125
IELTS Academic	6.0	5.0	7.0	7.0
TOEFL iBT	61	61	100	100

UHM graduate students are placed on probation when their GPA falls below 3.0 after earning eight credits (Graduate Division, n.d.-a). Undergraduate students receive an academic warning if they earn less than a 2.0 GPA in their first semester, and probation thereafter (Mānoa Advising Center, n.d.). Students with an academic action, or who withdrew from the university, were flagged in the data to compare proportions by ELP test taken. This dichotomous flag (i.e., yes if a student received academic warning, probation, or withdrew) is a coarser measure compared to the continuous GPA measure, but these negative academic outcomes have more serious consequences than fractional differences in GPA.

In Spring 2024, 955 degree-seeking international students were enrolled at UHM (566 graduate, 389 undergraduate) (International Student Services, n.d.). The most-represented home countries were Japan, China, South Korea, Canada, and Taiwan. These were also the most represented in the ELP score data (Table 3), with the unsurprising exception of Canada.

Table 3. Top five home countries among UHM international students

	International students enrolled Spring 2024 (including continuing)			ELP tests taken by newly entering students from these countries, Fall 2020-Spring 2024*			
Country	GR	UG	Total	DET	IELTS	TOEFL	Total
Japan	49	105	154	13	16	31	60
China	98	20	118	3	19	31	53
South Korea	67	28	95	3	5	25	33
Canada	37	57	94	2	0	2	4
Taiwan	29	10	39	4	6	7	17

Note. *Graduate students were not admitted via DET in Fall 23 or Spring 24.

Analyses

All analyses were performed using R Statistical Software v4.3.1 (R Core Team, 2023). First, correlations (Pearson's *r*) with 95% confidence intervals were calculated between DET, IELTS, and TOEFL test scores and first year GPA, calculated from credits attempted and grade points earned. Additionally, GPAs were standardized (as *z*-scores) within academic level (i.e., separately for graduate and undergraduate) to facilitate analyses which included both undergraduate and graduate students. Scatter plots were created to check the linear relationship assumption. Correlations were then calculated for subgroups, to identify any differences in the associations by academic level (graduate or undergraduate), and whether the student was admitted unconditionally or conditioned on further English language coursework. Next, a one-way ANOVA was used to check whether mean GPA differs significantly based on which of the three ELP tests (or no ELP) students submitted. Chi square difference of proportion tests were planned to compare proportions of students who withdrew or were placed on academic warning or probation among those who submitted DET, IELTS, TOEFL, or no ELP test score for admission during the same timeframe. Due to cell sizes less than 5, Fisher's exact test was performed instead.

This study used an alpha of $p < .05$ for statistical significance. *P*-values and statistical significance pertain to inferences about population parameters but require interpretive caution when sample sizes are very small due to lack of statistical power and the risk of spurious results, which is the case for some analyses in the present study. Additionally, descriptive statistics (means and correlations), without concern for *p*-values, are of interest, as the data represents the complete population of incoming international students at UHM during the targeted time period.

Results

Initial data exploration revealed an accumulation of graduate GPAs near 4.0, with a wider spread for undergraduates (Figure 1). This partially reflects the requirement for graduate students to maintain a minimum 3.0 cumulative GPA. The few graduate students with GPAs under 3.0 either submitted TOEFL or were exempt from ELP testing. Undergraduate GPA varied most for those entering with no ELP score, including several students with GPAs under 1.0.

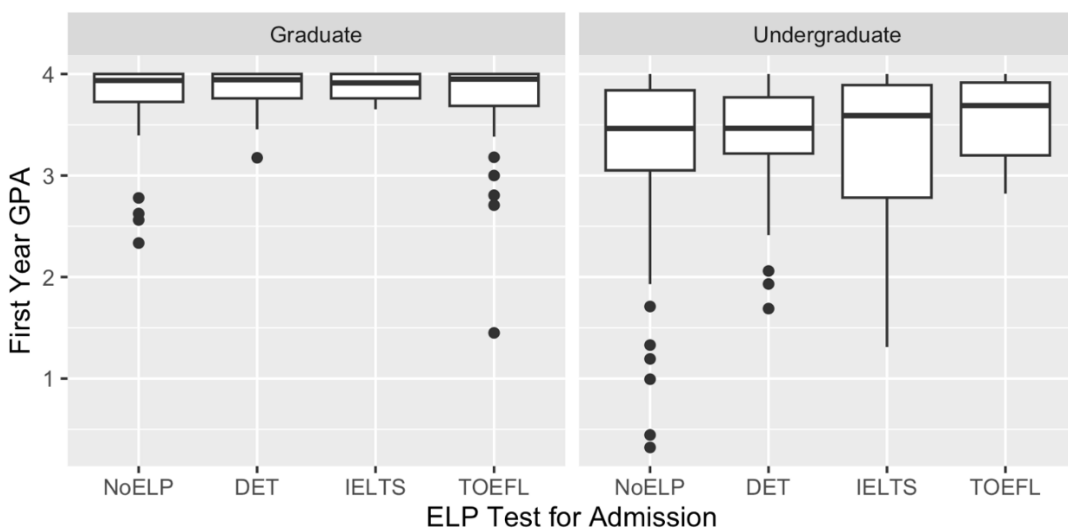

Figure 1. Mean first year GPA by ELP test submitted (or no ELP)

Correlations between ELP scores and GPA

With graduate and undergraduate students combined, *z*-scores of first year GPA correlated weakly to moderately with ELP scores, and no correlation was statistically significant (see Table 4 and Figure 2). Separated by academic level, the only statistically significant correlation was for IELTS graduate students (r = .50, p = .012, 95% CI [.13, .74]). The correlation between DET scores and graduate GPA was negative (r = -.40, 95% CI [-.74, .10]), but not statistically significant (p = .112). All undergraduate correlations were positive, with a medium sized correlation for TOEFL and smaller correlations for IELTS and DET, and none were statistically significant. As illustrated in Figure 2, there were instances of students with relatively high ELP scores who nevertheless earned surprisingly low GPAs.

Table 4. Correlations between ELP test score and first year GPA

Level	ELP test	n		M	SD	min	max	r	95% CI LL	95% CI UL	p	R^2
All	DET	74	Score:	116	16.3	85	155	.12	-.11	.34	.301	.01
(GR+			GPAz:	.06	0.79	-2.50	1.00					
UG)	IELTS	44	Score:	6.85	0.78	5.5	8.5	.29	-.00	.54	.054	.09
			GPAz:	.11	0.79	-3.08	1.00					
	TOEFL	59	Score:	92.4	18.3	30	117	.21	-.05	.44	.115	.04
			GPAz:	-.04	1.17	-6.19	1.00					
GR	DET	17	Score:	121	12.8	95	140	-.40	-.74	.10	.112	.16
			GPA:	3.84	0.23	3.18	4.00					
	IELTS	25	Score:	6.92	0.57	6.0	8.0	.50	.13	.74	.012*	.25
			GPA:	3.88	0.13	3.65	4.00					
	TOEFL	43	Score:	96.6	15.4	64	117	.29	-.01	.55	.055	.09
			GPA:	3.73	0.49	1.45	4.00					
UG	DET	57	Score:	114	17.0	85	155	.19	-.07	.43	.146	.04
			GPA:	3.37	0.55	1.69	4.00					
	IELTS	19	Score:	6.76	1.01	5.5	8.5	.24	-.24	.63	.315	.06
			GPA:	3.31	0.75	1.31	4.00					
	TOEFL	16	Score:	81.2	21.2	30	107	.44	-.07	.77	.090	.19
			GPA:	3.53	0.44	2.82	4.00					

Note. GPAz = GPA standardized within academic level, GR = graduate, UG = undergraduate.

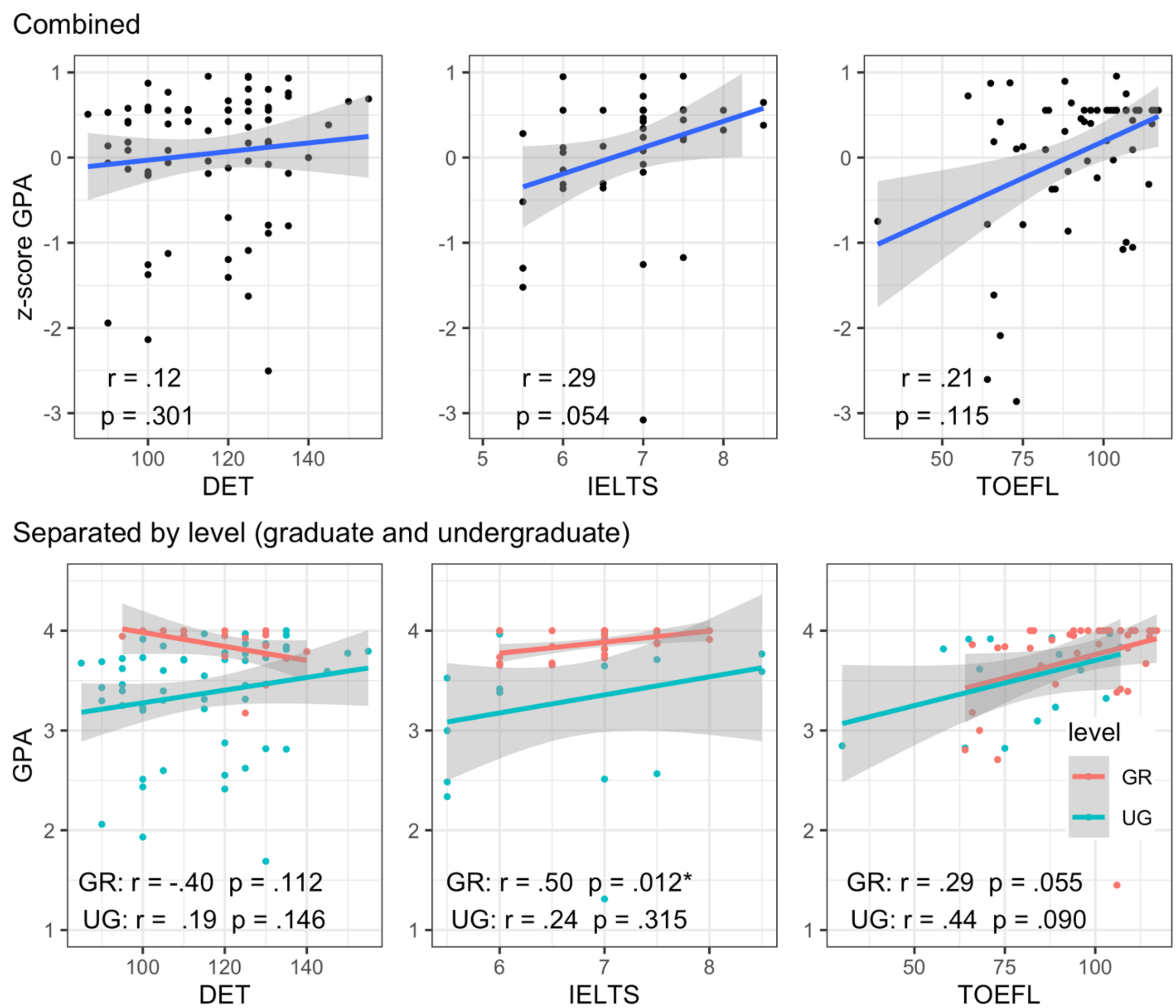

Figure 2. ELP test scores and first year GPA

Unconditional vs. conditional admissions

For students admitted unconditionally with higher ELP scores, there were no statistically significant correlations between ELP scores and first year GPA (see Table 5 and Figure 3). However, it is important to note the small subgroup sizes, especially when disaggregated by academic level. For those admitted conditionally, with ELP scores reflecting a lower range of English proficiency, stronger, positive, and statistically significant correlations emerged for students submitting IELTS or TOEFL scores, with low or negative (but not statistically significant) correlations for DET takers.

Table 5. Correlations between ELP test score and first year GPA: Unconditional vs conditional admission

Level	ELP test	n		M	SD	min	max	r	95% CI LL	95% CI UL	p	R^2
	Unconditional											
All (GR+ UG)	DET	31	Score:	132	7.46	125	155	.18	-.19	.50	.341	.03
			GPAz:	0.15	0.83	-2.50	1.00					
	IELTS	28	Score:	7.34	0.47	7.0	8.5	.21	-.17	.54	.278	.05
			GPAz:	0.22	0.83	-3.08	1.00					
	TOEFL	27	Score:	108	4.60	101	117	.07	-.32	.44	.738	.00
			GPAz:	0.07	1.37	-6.19	1.00					
GR	DET	9	Score:	131	4.64	125	140	.23	-.51	.78	.543	.06
			GPA:	3.74	0.27	3.18	4.00					
	IELTS	17	Score:	7.24	0.36	7.0	8.0	.15	-.36	.59	.562	.02
			GPA:	3.92	0.09	3.72	4.00					
	TOEFL	23	Score:	108	4.79	101	117	.11	-.32	.50	.626	.01
			GPA:	3.78	0.55	1.45	4.00					
UG	DET	22	Score:	132	8.40	125	155	.15	-.29	.54	.505	.02
			GPA:	3.51	0.57	1.69	4.00					
	IELTS	11	Score:	7.50	0.59	7.0	8.5	.34	-.32	.78	.304	.12
			GPA:	3.35	0.86	1.31	4.00					
	TOEFL	4	Score:	105	2.06	103	107	.65	-.83	.99	.347	.43
			GPA:	3.78	0.32	3.32	4.00					
	Conditional											
All (GR+ UG)	DET	43	Score:	105	10.4	85	120	.04	-.27	.33	.819	.00
			GPAz:	0.00	0.76	-2.14	0.95					
	IELTS	16	Score:	6.00	0.37	5.5	6.5	.40	-.12	.75	.121	.16
			GPAz:	-0.07	0.70	-1.52	1.00					
	TOEFL	32	Score:	79.4	15.0	30	98	.35	.00	.62	.048*	.12
			GPAz:	-0.13	0.98	-2.86	0.90					
GR	DET	8	Score:	110	9.64	95	120	-.38	-.86	.44	.353	.14
			GPA:	3.95	0.09	3.74	4.00					
	IELTS	8	Score:	6.25	0.27	6	6.5	.10	-.65	.75	.815	.01
			GPA:	3.78	0.15	3.65	4.00					
	TOEFL	20	Score:	83.1	11.7	64	98	.63	.26	.84	.003**	.40
			GPA:	3.67	0.42	2.71	4.00					
UG	DET	35	Score:	103	10.3	85	120	-.01	-.35	.32	.934	.00
			GPA:	3.28	0.53	1.93	3.97					
	IELTS	8	Score:	5.75	0.27	5.5	6	.74	.07	.95	.036*	.55
			GPA:	3.26	0.62	2.34	4.00					
	TOEFL	12	Score:	73.2	18.3	30	96	.31	-.32	.74	.332	.09
			GPA:	3.45	0.46	2.82	3.93					

Note. GPAz = GPA standardized within academic level, GR = graduate, UG = undergraduate.

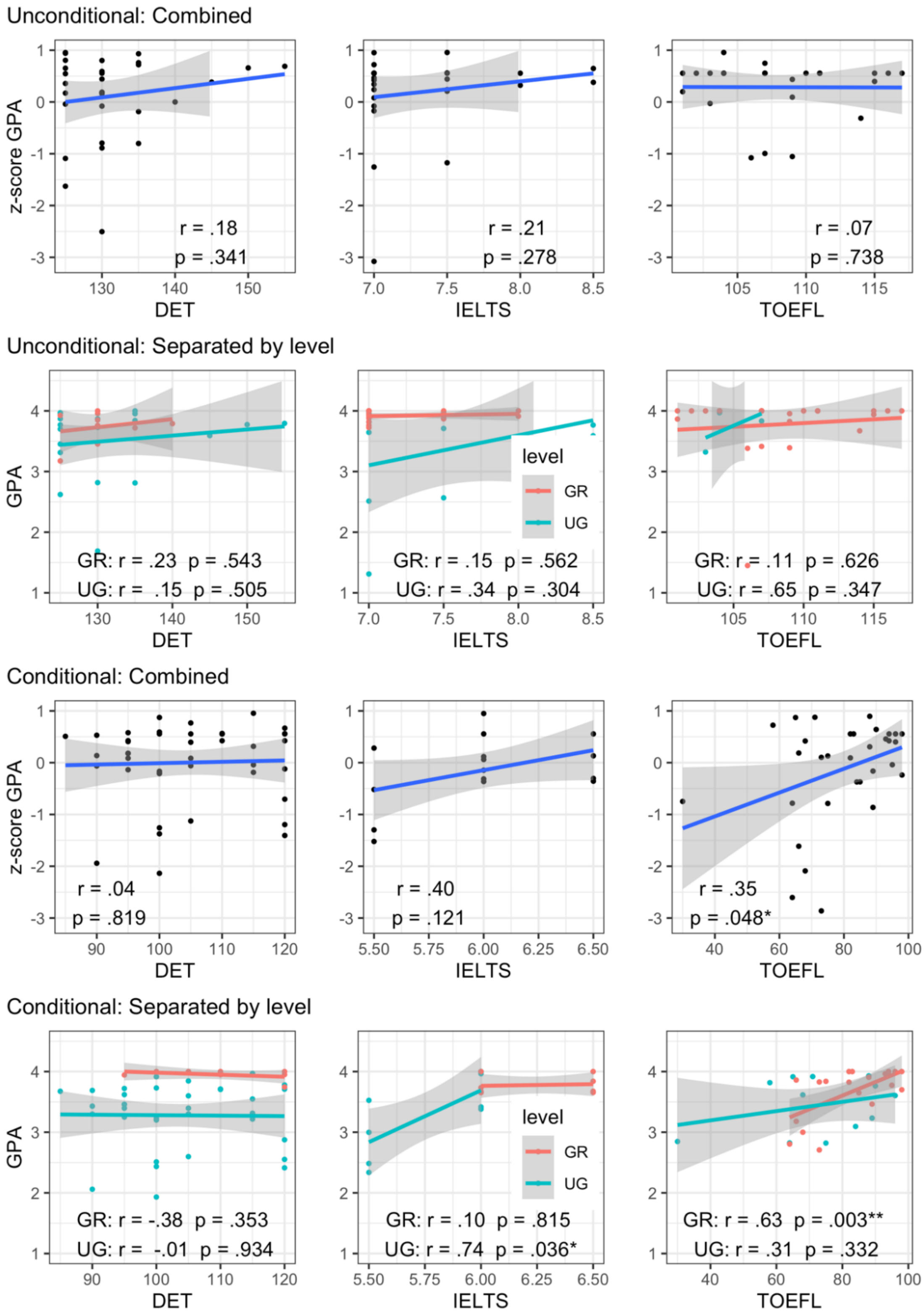

Figure 3. ELP test score and first year GPA: Unconditional vs conditional admission

Mean GPA

Broadly, the mean GPAs for all groups were similar, and confidence intervals were highly overlapping (see Table 6 and Figure 4). A one-way ANOVA was conducted to compare the mean first year GPA of students grouped by ELP test taken or no ELP. ANOVA revealed no statistically significant difference between any group, whether with all levels combined (R^2 = .00, F(3, 357) = 0.48, p = .699) or when separated by level. Readers should be mindful of smaller cell sizes (e.g., TOEFL n = 16 for undergraduates) in the disaggregated analyses.

Table 6. One-way ANOVAs of mean first year GPA by ELP test taken

	ELP		First year GPA			95% CI					
Level	test	n	M	SD	SE	LL	UL	F	p	DF	R^2
All* (GR+ UG)	no ELP	184	-0.05	1.06	0.08	-0.21	0.10	0.48	.699	357	0.00
	DET	74	0.06	0.79	0.09	-0.12	0.24				
	IELTS	44	0.11	0.79	0.12	-0.12	0.35				
	TOEFL	59	-0.04	1.17	0.15	-0.34	0.26				
GR	no ELP	50	3.77	0.39	0.06	3.66	3.88	0.92	.435	131	0.02
	DET	17	3.84	0.23	0.05	3.73	3.94				
	IELTS	25	3.88	0.13	0.03	3.83	3.93				
	TOEFL	43	3.73	0.49	0.07	3.58	3.88				
UG	no ELP	134	3.30	0.71	0.06	3.18	3.42	0.64	.593	222	0.00
	DET	57	3.37	0.55	0.07	3.23	3.51				
	IELTS	19	3.31	0.75	0.17	2.98	3.65				
	TOEFL	16	3.53	0.44	0.11	3.32	3.75				

Note. *GPA standardized within academic level. GR = graduate, UG = undergraduate.

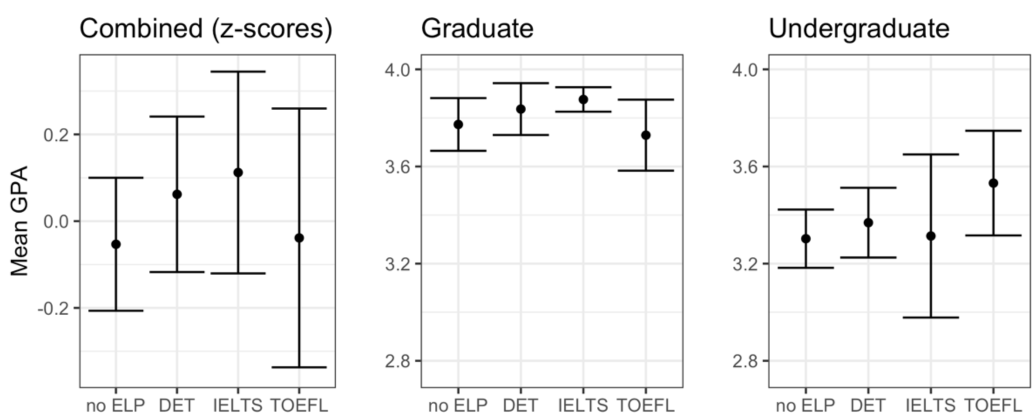

Figure 4. Mean first year GPA with 95% confidence intervals by ELP test submitted

Academic action or withdrawal

Fisher's exact test was used to determine whether the proportion of international students who withdrew or with an academic action (warning, probation) was comparable by ELP test submitted or no ELP (Table 7). This analysis found no statistically significant differences, though the proportions were lowest for students submitting IELTS scores. Still, of potential concern, the raw proportion of students with academic action or withdrawing was higher among those who were exempt from submitting an ELP test score. This is especially pronounced among graduate students: 18% of graduate students entering without an ELP score experienced one of these negative academic outcomes, compared to 0-9% of those with a score.

Table 7. Pearson's chi square difference of proportions tests: academic action or withdrawal

	ELP test score submitted						
Level	No ELP	DET	IELTS	TOEFL	x^2	df	p
All (GR + UG)							
Total	205	79	45	63	6.42	3	.093
Academic Action	43	14	3	8			
Proportion	.21	.18	.07	.13			
Graduate							
Total	56	18	26	44	6.884	3	.075
Academic Action	10	1	0	4			
Proportion	.18	.06	.00	.09			
Undergraduate							
Total	149	61	19	19	0.41	3	.978
Academic Action	33	13	3	4			
Proportion	.22	.21	.16	.21			

Note. Academic Action includes warning/probation and withdrawal.

Discussion

Existing literature, theory, and logic tell us that many factors influence academic success beyond language proficiency. The restricted range of test scores among students who were admitted to university further dampens potential correlations. Thus, small to moderate r and small R^2 values are common and expected in studies of GPA and ELP test scores (Ginther & Yan, 2018). Often overlooked is a restricted range and limited variation in GPA, as international students are often quite successful. Compounding this, graduate programs typically require maintenance of higher cumulative GPAs, creating a floor effect. At the site of the present study, the University of Hawai‘i at Mānoa, "international students consistently achieve higher GPAs than their non-international peers, regardless of academic level" (Mānoa Institutional Research Office, 2023, p. 1), complete degrees slightly faster, and have higher 1-year persistence rates compared to domestic students. This strong academic performance of international students was visible in the present study, and in some subgroups there was very little variation in GPAs (e.g., SD of .13 and range of 3.65 to 4.0 for graduate students submitting IELTS scores). Nonetheless, some correlations in the present study were stronger compared to other studies of ELP test scores and GPA, including in Ihlenfeldt and Rios's (2022) meta-analysis and the even weaker correlations reported by Isaacs et al. (2023), though few of the present correlations were statistically significant.

The larger observed correlations may be attributable to the wider range of ELP test scores observed in this study because UHM offers conditional admission with lower scores. In Isaacs et al. (2023), students exceeded one of five cut scores depending on program (University College London, n.d.). The least restrictive required a minimum of 92 on TOEFL (44th percentile for graduate, 52nd percentile for undergraduate; ETS, 2023), or 115 on DET (68th percentile of test takers; Cardwell et al., 2023). This means that Isaacs et al. (2023) included, at most, individuals from top half of the TOEFL score distribution, and the highest 32% of DET scores (IELTS does not publish detailed information on percentiles).

By comparison, UHM allowed conditional admission with scores as low as 61 on TOEFL; 5.0 for undergraduates on IELTS; and 90 for undergraduates on DET. As such, UHM data potentially include students across 90-95% of the distribution of TOEFL scores (ETS, 2023), and spanning 80% of DET's score distribution (Cardwell et al., 2023). While Duolingo provides global mean and standard deviation information which could allow correcting for range restriction, as done by Isaacs et al. (2023), such correction was not done here as the range was not substantially restricted.

In the present study, large, statistically significant correlations were found for conditionally admitted students with lower IELTS or TOEFL test scores, but not for DET test takers or for unconditionally admitted students with higher scores on any test. We might expect conditionally admitted students to struggle more with the linguistic demands of study. Indeed, in terms of eventual grades, it appeared that ELP matters more at lower levels of proficiency than at higher score levels above the cut score for unconditional admission. This, alongside high mean GPAs, suggests that unconditional cut scores are well set, as students who exceeded them were comparably well-prepared regardless of relative position over the cut.

Some negative correlations between DET scores and GPA were surprising and merited closer examination. At the graduate level, the correlation was $r = -.40$ (95% CI [-.74, .10], $p = .112$) and largely driven by students who were conditionally admitted ($r = -.38$, 95% CI [-.86, .44], $p = .353$). Both conditional and unconditional graduate admits earned high GPAs, with a minimum of 3.18 and most students above 3.75 (Figure 2). This limited GPA range and small sample seem to drive the unexpected graduate correlations. With all of these students in good academic standing, correlation with GPA (even a negative one, or one that is not statistically distinguishable from 0) may be of minor, if any, concern. In general, across the dataset, some students with low ELP scores earn high GPAs; there also exist striking outliers, with notably high ELP scores and low GPA (for example, GPAs under 2.0 but a score of 130 on DET, 7.0 on IELTS, and 100 on TOEFL). Again, language proficiency alone is not the only determiner of academic success, and low correlations do not necessarily belie test quality. Relatedly, a very small negative correlation of $r = -.01$ (95% CI [-.35, .32], $p = .934$), was found for conditionally admitted undergraduate students. This nil correlation is somewhat in line with Isaacs et al. (2023) and in the present study appeared to be driven, in some part, by a small number of students who experienced academic difficulties.

Of major concern in this study, beyond correlations with GPA, is whether the ELP tests perform differently for making admissions decisions, that is, whether admitted students are generally successful academically and avoid negative outcomes. The mean GPAs of students who submitted each of the ELP tests or no test were similar, and ANOVA analyses showed no statistically significant differences among these groups. Even more critical for students' academic outcomes than fractions of GPA is the risk of withdrawing or earning low enough grades to warrant academic probation or warning. Fisher's exact test found no statistically significant difference in these outcomes between those who submitted the different ELP tests (or no test). However, students exempt from submitting an ELP score had a higher raw proportion of academic action or withdrawal, especially among graduate students. Returning again to Figure 1, the spread of individual students' GPAs extended lowest among those with no ELP score. These findings suggest an important opportunity to review ELP test exemption criteria.

Limitations

This study's findings are notably limited by sample size. Three semesters of entering undergraduates were represented, but only one semester of graduate students because the Graduate Division paused accepting DET in Spring 2023. Unlike Isaacs et al. (2023), no meaningful conclusions could be drawn about differences by field of study, as subgroups yielded sample sizes too small for meaningful evaluation and were ultimately excluded from this report. In addition, no single country represented a large enough subgroup to warrant comparison. In the present study, readers should interpret correlations and means based on very small samples with healthy skepticism (e.g., $n = 4$ for unconditionally admitted undergraduates submitting TOEFL scores) and statistical comparisons via p-values even more so. Incorporating additional semesters' data in a future study, especially as the Graduate Division resumes accepting DET, would increase overall and subgroup sample sizes and provide more substantial evidence.

Conclusion

Locally, this study contributes to decisions to accept different ELP scores for international student admissions at UHM. Broadly, it fills a gap in the existing literature by examining outcomes in a new context (a large, public, less selective state university in the U.S.) and including a newer test, the DET, adding to Isaacs et al.'s (2023) study situated in a highly-selective U.K. institution. As noted in the limitations section, the small sample size in the present study must be kept in mind when considering results. While recognizing this limitation, we also see value in sharing findings, arrived at independently of any test developer, from a wide range of institutions. More work like the present study will eventually facilitate meta-analytical studies which have the potential to yield more precise and generalizable estimates.

In our view, the present results do not raise immediate red flags against accepting DET alongside the long-accepted IELTS and TOEFL at UHM. Compared to the other tests, the relationship between DET scores and GPA for conditionally admitted undergraduates was indeed visibly weaker. However, observed mean GPAs and proportions of student withdrawal/probation were similar for the DET and other tests (or no test), and no differences among them were statistically significant. Although negative correlations appeared for graduate students submitting DET, none of these graduate students' GPA fell below 3.0, and all remained in good academic standing. Nonetheless, UHM, along with other English-medium institutions, may wish to re-evaluate DET cut scores in light of more student outcomes data, newer concordance studies (Cardwell et al., 2024), and in combination with other evidence of academic readiness. Going forward, it will be important for UHM to continue monitoring the post-admissions outcomes for students submitting DET scores, as well as scores from other ELP tests.

Notably, international graduate students exempt from submitting an ELP test score for UHM admission experienced academic action or withdrew in higher raw rates than any of the ELP test groups and saw more instances of low GPAs. This suggests a need to investigate and potentially reevaluate UHM's ELP requirements by further breaking down the exempt students into subgroups based on reasons for exemption and examining their outcomes.

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