

Dynamic Placement Test (DPT) and its Potential Role in English as a Medium of Instruction (EMI)

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Some prerequisites for the success of EMI in countries where English is a foreign language.

1. There are enough faculty members in the institution able to teach a subject in English in a way accessible to learners.
2. Learners have an English proficiency level above B2 level (at least in listening and reading).
3. There is a language center in the institution and a program devoted to supporting students and preparing them for EMI.

The importance of English proficiency tests in EMI

Administering an English proficiency test for all freshmen is essential if we want to know how many students are ready for EMI and what kind of training the incoming students need.

How to choose an English proficiency test for EMI?

Test reliability: Are the test scores consistent and reliable?

Test validity: Does the test measure what it is supposed to measure?

Efficiency: Is the test efficient?

Affordability: Is the test affordable to the university and students?

Tests	what is tested	Test duration	Are the scores available immediately after the test?
TOEFL	4 skills	180 minutes	NO
IELTS	4 skills		NO
TOEIC	Reading + listening	120 minutes	NO
FLPT	Reading + listening	164 minutes	NO
GEPT High Intermediate (the first stage)	Reading + listening	85 minutes	NO
Dynamic Placement Test (DPT)	Reading + listening	35 minutes	YES

English proficiency tests administered at NTU since 2012

Year	Test-takers	Test	Purpose	What is tested	Who pays the fees?
2012-2016	All freshman students	GEPT High Intermediate	Placement	Only listening	NTU
2018-2020	International students	DPT	Placement	Listening and reading	NTU
2018-2021	All students can take one free GEPT test.	GEPT High Intermediate customized for NTU	to check if a student can attain B2 level before graduation	Listening and reading	NTU

The use of DPT at National Taiwan University

So far, DPT has been used by 975 students at NTU. It has been used as a placement test for Freshman English (FE) classes for international students and the criteria of waiving FE for international students since 2019.

year	Number of students	purpose
2018	433	To investigate the correlation between DPT and GEPT (High Intermediate).
2019	325	Placement test for international students
2020	217	Placement test for international students

A Pilot study on DPT and GEPT at NTU in 2018

DPT was first used at NTU in 2018 in a pilot study, in which 433 students took in a standardized test (GEPT High Intermediate) and a computer-adaptive test (DPT), both of which included reading and listening comprehension questions.

Comparisons between DPT and GEPT

	Standardized test	Computer-adaptive test	Focus on a particular level	Test Time	Number of Items	Item types	four skills covered
DPT	No	Yes	No	Not Fixed	Not Fixed	more diverse	listening and reading
the preliminary test of GEPT High Intermediate	Yes	No	Yes	Fixed (35 minutes for listening comprehension and 50 minutes for reading comprehension)	Fixed (40 items in listening comprehension + 40 items in reading comprehension)	only multiple choice items	listening and reading

The mean scores of NTU students in listening in the GEPT High-Intermediate between 2011 and 2016 are very close.

Dates of the Test	Test-takers	Mean score
2016/08/29~09/13	2675	91.44
2015/08/31~09/08	2874	92.04
2014/08/20~09/17	2988	91.70
2013/08/20~09/10	3308	93.61
2012/07/24~09/11	3429	93.98
2011/08/30~09/20	2739	88.18

Test reliability: To what extent is DPT correlated with GEPT high intermediate level?

In our pilot study involving 433 students in 2018, the Pearson correlation coefficient between the scores of DPT and GEPT High Intermediate was **0.94**.

Spearman's rank correlation between DPT and GEPT High Intermediate was **0.95**

Mean and standard deviation of DPT and GEPT High Intermediate (N=434)

	DPT	GEPT
mean	71.33	74.98
standard deviation	21.31	18.56

Measuring the agreement rate between GEPT and DPT

If we classify these 433 learners into two groups, namely, those above B2 level and those under B2 level, the agreement of GEPT and DPT is 0.8215.

Measuring the agreement and interrater reliability between DPT and the Oxford English Test

24 students participated in the pilot study in 2021.

If we classify the 24 test-takers into two groups, namely, those above B2 level and those under B2 level, the agreement between DPT and the Oxford English test is 100%, which shows perfect agreement.

% of agreement: 100%

Cohen's Kappa: 1

Evaluating the Reliability of DPT

DPT was highly correlated with GEPT high intermediate, a standardized test, in both Pearson correlation coefficient and Spearman rank order correlation in the pilot study conducted at NTU (N=433).

DPT had perfect agreement with the Oxford English Test, both of which are computer-adaptive tests, in distinguishing learners above or under B2 level in the pilot study conducted at NTU (N=24).

Validity

DPT consists of three parts: language elements (including knowledge in vocabulary, grammar, and discourse), reading, and listening.

Each item is mapped to the CEFR “can do statement”, calibrated, and tested.

DPT item types in the section of language elements

Item types	Ability required to answer the question	Relationship to productive skills
Insertion of a word into a sentence	Vocabulary, grammar	Sentence-making
Sentence reordering	Vocabulary, grammar	Sentence-making
Dialogue reordering	Vocabulary, grammar, discourse	Dialogue-making

What do the results of DPT reveal?

Information provided by DPT contains the raw score, the CEFR level, and the relative strength of the test taker in language elements (including knowledge in vocabulary, grammar, and discourse), reading, and listening.

How can administrators use the information provided by DPT for EMI?

1. to place learners with the same level and college in the same Freshman English class to prepare for EMI.
2. to understand the levels of new students and offer appropriate number of classes for each level.
3. to use the information derived from DPT scores and corpus tools to decide on the teaching materials
4. to use DPT for the evaluation of an English program (by comparing learners' performance in DPT at the beginning and end of the program).

How can instructors use the information provided by DPT?

1. to understand the English levels of students in reading and listening. If students are homogenous in their English levels, it is easier to choose the teaching materials and set the teaching goals.
2. Information about students' levels can help instructors divide them into groups, in which lower-level or higher-level students can be more evenly distributed in different groups to facilitate collaborative learning.
3. When choosing the reading materials for students, it is helpful to use tools such as vocabulary profiler (<https://www.lex tutor.ca/vp/eng/>) or online readability analyzers (<https://readabilityformulas.com/free-readability-formula-tests.php>) to choose the textbooks appropriate for their students' levels

Linking CEFR, ESP, and EMI

1. There is a significant gap between Freshman English (FE) and EMI. In order to bridge the gap, more time in Freshman English classes should be dedicated to English for Specific Purposes (ESP).
2. English instructors should familiarize students with not only the core vocabulary in general English but also words, terminologies, multiword expressions, and common expressions frequently occurring in the texts relevant to students' majors.
3. CEFR together with corpus-informed word lists and grammar rules can help educators what words and grammar should be taught to students with a certain level, e.g.

General service list (GSL): the most frequently occurring two thousand words. (A2 level)

Academic Word List (cf. Coxhead, 2000) <https://www.wgtn.ac.nz/lals/resources/academicwordlist>

English Vocabulary Profile (based on CEFR) <https://www.englishprofile.org/wordlists>

English Grammar Profile (based on CEFR) <https://www.englishprofile.org/english-grammar-profile>

MIDDLE SCHOOL VOCABULARY LISTS (MSVL): NEW WORK ON ACADEMIC VOCABULARY BY GREENE & COXHEAD (https://lex tutor.ca/vp/eng/nat_lists/ms-cat_subs/blurbs/MS-CAT.pdf) containing 500 word families in each of the five subject areas

Linking ESP, EMI, and Bilingualism

1. As EMI is supposed to be learner-centered, English instructors can focus on ESP and learning strategies instrumental to EMI.
2. One reading strategy students should learn is to activate their prior knowledge in a subject. This involves relating what they have previously learned in Chinese to what they are learning in English. Educators should teach students how to use bilingual resources to facilitate the learning. For instance, the Chinese and English articles in Wikipedia can be very useful if students know how to exploit them.
3. Students can also use the state-of-the-art in AI, as reflected in Google Translate and DeePL, to help them overcome the language barriers in EMI.
4. English instructors can use sensemaking activities to help students make sense of a text in their fields by identifying the terminologies in English and their Chinese translation equivalents in Chinese.
5. There are many free EMI courses at Youtube, Coursera, EdX, and FutureLearn. Many contain English scripts for their courses. In particular, most materials at Youtube not only contain English subtitles but also Chinese translations automatically generated by Google Translate. These resources are excellent resources for anyone interested in EMI.

Some concluding remarks

Our pilot study in 2018 indicates that DPT is an efficient, effective, and reliable tool, whose scores are highly correlated with those in GEPT.

Since 2019, DPT has been used by NTU as the placement test for international students and as the criterion for waiving Freshman English.

DPT can also be used in program evaluation or monitoring learners' progress over a semester or a year.

In this webinar, we have shown that there is a significant gap between Freshman English and EMI. To bridge this gap, more time in Freshman English classes should be dedicated to ESP. The information derived from DPT can help educators identify students that are likely to succeed in EMI.

Thank you!