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English as an International Language Perception Scale: Development, Validation, and Application

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The issue of English as an international language (EIL) perception has received considerable attention among EIL researchers and practitioners. However, several studies in the EIL perception have not provided validity and reliability information pertaining to the instrument (e.g. a questionnaire), which may have affected the accuracy and interpretation of data. Further, there is currently no validated EIL Perception Scale (EILPS) that EIL researchers and practitioners can utilize in an accessible manner. To address these concerns, this study develops EILPS that is theoretically underpinned and empirically validated through Exploratory and Confirmatory Factor Analyses with two large samples of Korean EFL students (N = 277, N = 278). Results provide support for a four-factor solution that encompasses 1) Current Status of English (CSE); 2) Varieties of English (VE); 3) Strategies for Multilingual/Multicultural Communication (SMC); and 4) English Speakers' Identity (ESI). This study contributes to helping EIL researchers and practitioners employ a validated instrument for measuring EIL perception in an approachable fashion and, ultimately, allowing generalization across settings. Research and pedagogical recommendations — e.g. how EILPS can be applied in research and practice settings — are also made.

Keywords: English as an International Language (EIL); EIL Perception Scale (EILPS); Scale Development and Validation; Exploratory Factor Analysis; Confirmatory Factory Analysis

Introduction: Testing and Measurement Context

As research into English as an international language (EIL) has been increasing in response to the heterogeneity and pluricentricity of English, the last two decades have particularly witnessed a huge growth in EIL perceptions and teaching EIL (TEIL). For example, EIL researchers have conducted studies on perceptions vis-à-vis different varieties of English in various EFL contexts (e.g. Bernaisch and Koch 2016). At the instructional level, EIL practitioners have also begun to develop and integrate a variety of EIL activities as instructional interventions in an effort to enhance EFL learners' perceptions toward EIL (see Matsuda 2012, 2017).

Measurement Problem Encountered and Purpose

Having reviewed the current research vis-à-vis EIL perceptions, however, one gap seems particularly noticeable; to date, there is no validated EIL Perception Scale (EILPS) that EIL researchers and practitioners can utilize in an accessible manner. This methodological concern needs to be urgently addressed because several studies in EIL perceptions have not provided validity and reliability information pertaining to the instrument (e.g. a questionnaire), which may have affected the accuracy and interpretation of data and, therefore, could limit the applicability to other studies. Although Nakayama (2015) attempted to resolve this measurement issue by developing EILPS such as *EIL Feasibility Questionnaire*, it was narrowly focused in scope in terms of dimensions of EIL perception (i.e. native speaker myths and identity) and research participants (i.e. EFL students from one Japanese university). Further, the instrument is only available in Japanese, which can hardly be accessible to and usable by other EIL researchers and practitioners.

This research gap has served as the motivation to develop and validate multidimensional aspects of EILPS, which can be readily used by other researchers and practitioners for measuring students' EIL perceptions. From a practical perspective, this study will allow EIL practitioners to implement EIL pedagogy in the classroom, administer EILPS as pre- and post-tests, and investigate whether their students' EIL perception has improved as a result of their EIL instruction. Hence, it will help prepare EFL learners become more competent users of English in today's multilingual and multicultural contexts (Matsuda 2017). From a research perspective, it will enable future research to (a) use a parallel type of EILPS, (b) make comparisons across studies, and (c) advance our understanding of EIL perception on a more

global scale perspective (e.g. students' EIL perception levels across different contexts), which will, in the long run, contribute to a global body of EIL knowledge.

Review of Literature

English as an International Language (EIL)

The concept of EIL has been the subject of research over the last four decades. Larry Smith first defined EIL as an "international language…used by people of different nations to communicate with one another" (Smith 1976, 38). He emphasized that every English user, regardless their "nativeness," needed to learn English for international communication, which made English language 'de-nationalized.' Parallel to Smith's concept, Kachru (1976, 1986) challenged the orthodoxies of English language (e.g. Practor's [1968] article "The British heresy in TESL") and proposed a pluralistic and dynamic (or creative) view of English (e.g. three concentric circles of English), which led him to pioneering World Englishes (WE) as a paradigm of research in the study of English. Particularly, Kachru (1985) challenged the (unchallenged) hegemony of the native speaker model and questioned the conventional role of native speakers. Scholars working under the paradigm of WE, who also embraced Kachru's (1990) 'Liberation Linguistics,' perceived the monolithic and static views of English as a matter of social injustice and make efforts to transform this phenomenon for the speakers of the 'other tongue' (Bhatt 2010). Although the Kachruvian WE perspective attracted criticism and opposition by provoking heated debate about standard language, codification, and hegemony (see Kachru 1990; Quirk 1990), the wind of change has slowly permeated into the field of TESOL, which influence other related issues of EIL/WE:

- Current status of English (e.g. Crystal 1997, 2010; Graddol 1997, 2006)
- Varieties of English (e.g. Jenkins 2007; Seidlhofer 2011)
- Strategies for Multilingual/Multicultural Communication (e.g. Canagarajah 2007, 2013)
- English Speakers' Identities (e.g. Phillipson 2009; Widdowson 2003)

EIL/WE[1)] scholarship influenced the other related fields or 'critically oriented scholarship,' such as Global Englishes (GE), English as a Global Language (EGL), and English as a lingua franca (ELF), which have also attempted to re-conceptualize

1) The terms EIL (used by Larry Smith) and WE (by Braj Kachru) may seem different (e.g. different terminologies) but in this study are not considered as mutually exclusive, as both notions share much in common in terms of their visions and principles. For example, Smith and Kachru established the International Association for World Englishes (IAWE) and its quarterly journal *World Englishes*.

the traditional approach to ELT and, by extension, raise pedagogical implications for incorporating an EIL (or the other 'critically oriented') perspective into ELT (Matsuda 2017; Selvi 2017).

More recently, to encompass such diverse perspectives under different terminologies (e.g. GE, EGL, ELF), Matsuda (2017) put forward the broad term *EIL* as "a function that English performs in international, multilingual contexts, to which each speaker brings a variety of English that they are most familiar with, along with their own cultural frames of reference, and employs various strategies to communicate effectively" (xiii) (also see Selvi 2017).

EIL perception and its measurement

With an increase in research on EIL, the past two decades have witnessed a particular surge in non-interventional research on perceptions vis-à-vis different varieties of English in Outer (Bernaisch and Koch 2016; Bernaisch 2012; Hundt, Zipp, and Huber 2015; Tan and Tan 2008) and Expanding Circle (Ahn 2014, 2015; Ahn and Kang 2017; Chiba, Matsuura, and Yamamoto 1995; Matsuda 2003; Ren, Chen and Lin 2016; Sasayama 2013; Wang 2015; Yu 2010) contexts. On the whole these studies have shown a strong 'favoritism' toward standard variety in comparison to non-standard or other local varieties; that is, English learners or users in both Outer and Expanding Circle countries tend to recognize American or British English as the 'notion of correctness,' thereby attaching high prestige to both forms (Ahn 2014). These studies have generally reported that national policies (e.g. high-stakes English tests) and pedagogical practices (e.g. English teachers' preference toward standard English as an appropriate teaching model) have been known to contribute to this phenomenon.

At the instructional level, an increasing number of EIL researchers and practitioners have begun to develop and incorporate a variety of EIL activities as interventions in an effort to enhance students' perceptions of EIL (see Matsuda 2012, 2017). Although some similar studies did not explicitly explain their theoretical framework, at the discretion of the authors they seemed deeply grounded in Matsuda's (2017) conceptualization of teaching EIL (TEIL) as "preparing our students to become competent users of English in international contexts" (xvii). These TEIL undertakings, such as in-class activities (Galloway 2013; Galloway and Rose 2013), extracurricular projects (Author 2018; Galloway and Rose 2014; Hino 2012, 2017), and technology-enhanced cross-cultural activities (Author et al. 2017; Ke and Suzuki 2011; Ke and Cahyani 2014) have generally proved to be conducive to greater exposure to varieties of English and EIL communication.

Having reviewed the above-cited EIL research, however, one serious concern has been raised: surprisingly, most studies have failed to provide validity and reliability information pertaining to the instrument used to assess students' perceptions of English language or EIL. Some studies, such as Ahn (2015) and Bernaisch and Koch (2016), seemed to adopt the questionnaire that was developed by other researchers, but still did not provide reliability and validity evidence related to the instrument that was used for their own studies. To compensate for this potential methodological issue, some studies (Author et al. 2017; Ahn 2014, 2015; Galloway 2013; Matsuda 2003; Ke and Cahyani 2014) have used a mixed-methods approach to investigate the phenomenon in question. However, it is worth noting that this measurement issue, especially the use of a questionnaire, may have skewed the accuracy and interpretation of data and, therefore, limited the applicability to other studies.

Nakayama (2015) attempted to develop the EIL Perception Scale (EILPS) to address this measurement issue. For instance, in light of Jenkins's (2005) and Golombek and Jordan's (2005) theoretical frameworks, Nakayama (2015) developed a reliable and validated *EIL Feasibility Questionnaire (EILFQ)* consisting of three factors with nine items — namely, *native speaker myths* (4 items), *identity* (3 items), and *EIL awareness* (2 items). Although the statistical data supported the psychometric usefulness of *EILFQ*, all items in the scale were devised in reference to only two dimensions of EIL (i.e. native speaker myths and identity).

Additionally, the instrument is only available in Japanese language, which can hardly be accessible to and usable by other EIL researchers and practitioners. To address this gap, the present study aims to develop and validate EILPS through Exploratory and Confirmatory Factor Analyses. It will also aim to offer insights into how EILPS can be applied in research and practice settings, which will enable other researchers and practitioners to employ EILPS for measuring students' EIL perceptions in an approachable fashion.

Methodology

Participants and contexts

This study was conducted in 19 EFL classes of three separate Korean universities — named with the pseudonyms *West University*, *East University*, and *Center University* — based on a convenience sampling technique (Bryman 2004). As summarized in Table 1, two groups of non-overlapping Korean undergraduate students participated in the study; a total of 277 participants (Group 1) voluntarily provided usable surveys for the validation of EILPS (EFA); 278 participants (Group 2) provided usable surveys

for the cross-validation of EILPS (CFA). All were older than 18 years of age (age mean = 21.37, ranging from 19 to 30).

Table 1. Demographic features of the participants for EFA and CFA

Category	Description	EFA Group 1 (*N* = 277)		CFA Group 2 (*N* = 278)		Total (*N* = 555)	
		N	%	*N*	%	*N*	%
University	West University	92	33.2	148	53.2	240	43.2
	East University	139	50.2	8	2.9	147	26.5
	Center University	46	16.6	122	43.9	168	30.3
Gender	Female	166	59.9	165	59.4	331	59.6
	Male	111	40.1	113	40.6	224	40.4
Grade	Freshman	104	37.5	169	60.8	273	49.2
	Sophomore	102	36.8	69	24.8	171	30.8
	Junior	38	13.8	13	4.7	51	9.2
	Senior	33	11.9	27	9.7	60	10.8
Major	English	111	40	135	48.6	246	44.3
	Humanities	59	21.3	95	34.2	154	27.7
	Engineering	78	28.2	47	16.8	125	22.5
	Others	29	10.5	1	0.4	30	5.5

Procedure

Data collection occurred from fall 2015 to fall 2017 semester in the 8-step sequence (DeVellis 2012). Here, we will describe the overall steps for the development and validation of EILPS in great details as follow:

Step 1: Focus of Measurement

Since no previous study established a validated EILPS (cf. Nakayama 2015), the authors developed a structured questionnaire as a first step. More specifically, an extensive literature search was carried out in order to identify potential components of EIL perception. The second author and a senior librarian (who worked in his affiliation) carried out the search in EBSCO, Scopus, MLA International Bibliography, online library catalogs and Google Scholar. The search terms and keywords included "English as an international language," "EIL," "Teaching EIL," and "EIL perception." A manual search of articles in journals (such as *Journal of Multilingual and Multicultural Development*, *World Englishes*, *Asian Englishes*, *The Modern Language Journal*, *TESOL Quarterly,* and *RELC Journal*) published over the past four decades (1976–2017), was also conducted. This time, seminal works[2] in the other relevant

2) Seminal works represented through often-cited articles that made a significant impact on the field.

fields (e.g. GE, EGL, ELF, and WE) were also added based in consultation with several EIL researchers. As a result, hundreds of papers and books were identified from these processes. Then, initial screening of titles and abstracts and additional screening of main texts were conducted, which led us to selecting 31 relevant articles, book chapters and books on the subject of EIL perception. Some of the major references are briefly summarized in the *Literature Review* section.

Step 2: Item Pool Generation

Relevant studies were reviewed to produce an initial pool of 35 EILPS items (constructed by the authors) that encompassed multi-dimensional scope of the EIL perception.

Step 3: Format for Measurement

A closed-ended, 5-point Likert scale, ranging from *strongly disagree* (1) to *strongly agree* (5), was chosen because it was widely used for measuring abstract concepts such as attitudes and beliefs (Rasinger 2008). For aesthetic reasons and the ease of administration, the online questionnaire software (i.e. *Google Forms*) was employed. The responders could easily tick boxes (or answers) on the horizontal layout of the Likert scales.

Step 4: Expert Review of Item Pool

The modified Delphi technique was employed for an initial development of EILPS and examination of its content validity. It is a practical method for achieving a consensus of opinion on a particular topic (e.g. EIL perception) among an expert group (e.g. EIL researchers and practitioners and measurement specialists) (Hsu and Sandford 2007). First, the original version of EILPS, which was produced during the step one to three, was presented to two EIL researchers, seven EIL practitioners, and three language testing experts to review its items and provide constructive feedback on EILPS[3]. Based on their suggestions, we chose to include the most appropriate items in EILPS. Subsequently, the revised items were distributed to the panelists repeatedly until reaching a high level of consensus concerning EILPS among the Delphi participants. As a result of the modified Delphi study processes, three items were removed, resulting in a total of 32 question items. Then, we continued revising and improving the EILPS items based on Dörnyei and Csizér's

3) The criteria for selecting the Delphi participants included individuals who had relevant backgrounds and experiences on EIL issues and could offer useful and timely feedback in the process of constructing the questionnaire items (Pill 1971).

suggestions (2012, 78): 1) Aim for short and simple items, 2) use simple and natural language, 3) avoid ambiguous or loaded words and sentences, 4) avoid negative constructions, and 5) avoid double-barreled questions.

Step 5: Development Administration

Prior to the pilot testing, a quantitative SLA researcher scrutinized the readability of the EILPS. Through this process, five poorly worded items were deleted, leaving a total of 28 items. With reference to Dörnyei and Csizér's (2012) guidelines on pilot studies (see page 79 for details), two pilot testing sessions were administered in the fall of 2015 with 186 ESL and EFL university students from Indonesia, Brazil, Japan, Korea and the USA[4]. Item analysis was conducted by comparing the means between groups on each item in consultation with two language testing researchers; if the *p*-value was below .02, it was considered as a good item for discriminating between high and low EIL perception group. If the *p*-value was above .1, it was considered as a bad item. Based on the item analysis, ten items (out of 28) were retained, four items deleted, and the rest of the items were revised, resulting in 24 EILPS items.

Step 6: Further Item Improvement

In the spring of 2016, three EIL researchers, three EFL teachers and five EFL undergraduate students (i.e. target research participants) were asked to evaluate how well EILPS items would measure the EIL perception (Hughes 1995). Using a qualitative content validity method, these groups judged the content validity in terms of whether the items could actually measure the constructs (or characteristics) of the EIL perception for the EFL students. They also offered suggestions on the questionnaire in terms of comprehensibility and clarity of each question item. Some question items were rephrased based on the feedback and achieved an acceptable level of content validity.

Additionally, the quantitative SLA researcher suggested that EILPS should include reverse-coding items (i.e. 24 main items + 24 reversed items = 48 items) to mitigate response bias. So, we included both positive and negative items in the questionnaire. For instance, the question Item 2, "Many non-native English-speaking countries use English as their official or working language today" was revised to, "Few non-native English-speaking countries use English as their official or working language today," which was added to the questionnaire. However, it turned out that during the pilot tests respondents experienced fatigue due to a longer questionnaire,

4) Forward- and backward-translation technique (e.g. from English to Korean) was applied to ensure clarity and precision in the translated Korean versions.

which led to increasing inattention and confusion during the survey. Thus, we decided not to use the reverse wording in the EILPS. In addition, an Institutional Review Board (IRB) committee asked us to revise a few question items as some EFL participants might have difficulty in understanding unfamiliar EIL jargon. In the subsequent version of EILPS, the questions containing potentially problematic terms (e.g. Outer Circle countries) were rephrased as plain language (e.g. Hong Kong English, Indian English, and Singaporean English). Finally, an English editing specialist turned the syntactically complex items into questions with simple and concise language to make the final version of EILPS.

In the early summer of 2016, the final pilot testing session was administered with a total of 217 university EFL students from four Expanding Circle countries such as Japan (N = 20), Indonesia (N = 40), Brazil (N = 49), and Taiwan (N = 108). Based on Fabrigar and Wegener's (2012) recommendations for adequate item loadings and theoretical alignment, 10 problematic items were removed, which yielded a total of 14 EILPS items (Author et al. 2017).

Step 7: Exploratory Scale Testing and Development

After going through step one to six, we undertook EFA to extract possible constructs from EILPS and then CFA to validate the underlying factors (identified by EFA). From fall 2016 to fall 2017 semester, data were collected from 555 Korean EFL university students enrolling in 19 EFL classes of three separate Korean universities. Prior to collecting data, instructors and the second author explained the study (e.g. the goal, procedures, benefits/risks, security of participants' data) to the prospective participants in their classes. If the prospective participants agreed to voluntarily participate in the study, they were given the online survey URL. Then, they read the consent form, and, if consented, they completed 14 five-point Likert-scale items (see Appendix) in the classroom using their digital devices (e.g. laptop, computer, or smartphone). Cases with missing data were not included in both EFA and CFA.

For EFA analysis, data from Group 1 were used (see Table 1). The sample size (N = 277) for EFA was considered large (Gorsuch 1974), acceptable (Cattell 1978), and appropriate (MacCallum, Widaman, Zhang, and Hong 1999). As shown in Table 2, the data were normally distributed because there was no extreme skewness (>2) and kurtosis (>2) (Field 2009). The sample was also factorable in that Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .89, and Bartlett's test of sphericity was significant (χ^2 = 2363.58; df = 91; p < .001) (Kaiser 1960).

Subsequently, EFA was conducted to extract latent constructs and investigate interrelationships among the items using IBM SPSS Statistics 24. Principal

Table 2. Descriptive statistics for EFA (N = 277)

Item	Min.	Max.	M	SD	Skewness	Kurtosis
1	1	5	4.28	0.88	-1.10	0.73
2	1	5	3.97	0.92	-0.70	0.12
3	1	5	4.07	0.89	-0.84	0.38
4	1	5	3.59	1.01	-0.25	-0.52
5	1	5	3.45	1.03	-0.28	-0.33
6	1	5	3.50	0.99	-0.19	-0.30
7	1	5	3.29	1.03	-0.20	-0.37
8	1	5	3.26	1.01	-0.17	-0.32
9	1	5	3.05	1.07	-0.08	-0.48
10	1	5	3.85	0.93	-0.53	-0.02
11	1	5	3.43	0.94	-0.19	-0.13
12	1	5	3.74	0.99	-0.49	-0.18
13	1	5	3.30	1.10	-0.15	-0.70
14	1	5	3.77	0.99	-0.41	-0.54

components analysis with promax rotations was applied because it was expected that the factors would be interrelated. Eigenvalues higher than 1, examination of the scree plot, and correlations between four factors were used to determine the number of factors. Communalities (h^2; above .5), primary factor loading (above .5), and internal consistency (using Cronbach's alpha) were used as criteria for selecting items. Additionally, in reference to Fornell and Larcker (1981), convergent and discriminant validity were assessed through the Composite Reliability (CR; above .8) and the Average Variance Extracted (AVE; above .5). These results are presented in Table 3 and 4, respectively.

Step 8: Confirmatory Scale Testing and Refinement

As a final step, CFA was conducted to validate the underlying factors (identified by EFA) using IBM SPSS Amos 22.0 (a structural equation modeling program). Data from Group 2 (N = 278) were used for CFA analysis. Values for skewness and kurtosis were less than 2, indicating the data were normally distributed (Field 2009). Chi-square test (χ^2/df ratio), the comparative fit index (CFI), goodness of fit index (GFI), the root mean square error of approximation (RMSEA), and adjusted goodness of fit index (AGFI) were used to assess the model fit in CFA tests. Generally, χ^2/df less than 3, CFI and GFI above .9, RMSEA between .05 and .08, and AGFI above .85 indicate adequate fit (Baumgartner and Hombur 1996; Bollen 1989; Hu and Bentler 1999). Goodness-of-fit indices for the CFA model are displayed in Table 5.

Table 3. Results of EFA (N = 277)

Item	Factor structure coefficient (>.5)				h^2 (>.5)
	1	2	3	4	
1	**.85**	.20	.21	.21	.85
2	**.87**	.17	.18	.16	.84
3	**.84**	.24	.23	.18	.84
4	.30	.77	.26	.10	.76
5	.21	**.74**	.27	.08	.67
6	.21	**.83**	.18	.17	.79
7	.03	**.70**	.17	.38	.67
8	.20	.18	**.85**	.08	.81
9	.11	.24	**.83**	.06	.77
10	.39	.28	**.57**	.25	.61
11	.18	.22	**.83**	.20	.80
12	.37	.24	-.03	**.68**	.65
13	.05	.15	.36	**.80**	.80
14	.22	.15	.10	**.82**	.75
Eigenvalues	6.57	1.54	1.31	1.16	
Explained variable (%)	46.93	10.97	9.35	8.30	
Cumulative variable (%)	46.93	57.90	67.25	75.55	(Total)
Retained items per factor	3	4	4	3	14
Factor name	CSE	VE	SMC	ESI	
Cronbach's α (>.7)	.91	.85	.87	.78	.91
CR (>.8)	.89	.85	.86	.81	
AVE (>.5)	.73	.58	.61	.59	

Note: Primary factor loadings > 0.5 are in bold; CSE = Current Status of English, VE = Varieties of English, SMC = Strategies for Multilingual/Multicultural Communication, ESI = English Speakers' Identity; h^2 = Communalities, CR = Composite Reliability, AVE = Average Variance Extracted.

Findings

In this section, the results of EFA will first be presented, which will be followed by those of CFA.

Exploratory Factor Analysis

EFA on the remaining 14 items yielded the four-factor solution, meeting factor extraction criteria mentioned above. As shown in Table 3, four eigenvalues (Factor 1 = 6.57, Factor 2 = 1.54, Factor 3 = 1.31, Factor 4 = 1.16) were greater than one. The

scree plot (Figure 1) showed an abrupt break before Factor 5 (with eigenvalue <1), indicating that only first four factors were meaningful to be retained (Cattell 1966). A four-factor solution was also supported by percentage of the cumulative variance (i.e. the sum of the four values for variance) accounted for by the set of retained factors (75.55 %). All communalities (i.e. the sum of the squared loadings for each row) also scored higher than .5. The rotated factor loadings also reached above .5.

Interpreting the factor loadings, Factor 1 encompasses three items with factor loadings ranging from .84 to .87. It depicts L2 learners' perception about the current status of English in terms of current English usage and users, as well as the effects of the global spread of English. Thus, Factor 1 is labeled as *Current Status of English (CSE)*. Factor 2 consists of four items with factor loadings ranging from .70 to .83. Factor 2 is labeled as *Varieties of English (VE)*, as the four items are about perceptions toward English in Outer and Expanding Circle countries and English diversity in the classroom. Factor 3 consists of four items with factor loadings ranging from .57 to .85, and is labeled *Strategies for Multilingual/Multicultural Communication (SMC)*, referring to the perceptions toward multilingual and multicultural English users and strategic competence in multilingual and multicultural contexts. Lastly, Factor 4 includes three items with factor loadings ranging from .68 to .82. Factor 4 is labeled *English Speaker's Identity (ESI)*, as the three items are about perceptions toward the native speaker-nonnative speaker dichotomy and ownership of the English language.

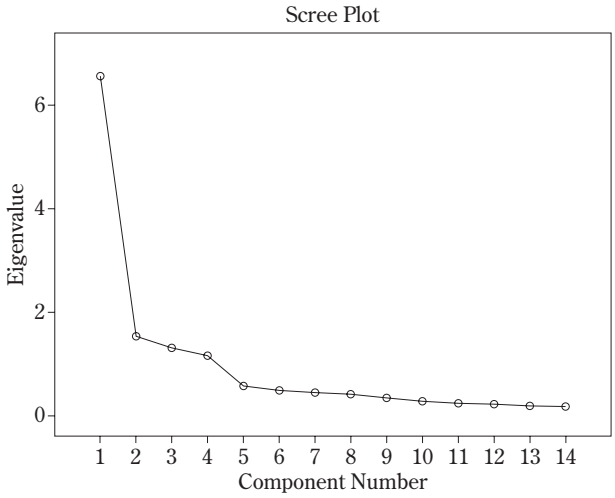

Figure 1. Scree plot and eigenvalues for sample correlation matrix

Internal consistency (Cronbach's α) was also satisfactory: .91 for Factor 1 (CSE),

.85 for Factor 2 (VE), .87 for Factor 3 (SMC), .78 for Factor 4 (ESI), and .91 on the global scale. Values of CR exceeded the threshold of .8, ranging from .81 to .89, providing evidence of convergent validity (Fornell and Larcker 1981). AVE also exceeded the cutoff threshold of .5, ranging from .58 to .73, supporting convergent validity. Given the high level of reliability, corresponding items of each factor were merged and averaged for a correlation analysis. As exhibited in Table 4, the square root of AVE for each factor exceeded the inter-factor correlations (or its correlation with any other factor), verifying discriminant validity for all factors. In other words, the inter-correlations between factors were weak so that these factors were discriminable. On the grounds of these results, the four factors were found to be valid and reliable with items loaded onto the same factor measuring the same construct.

Table 4. Correlation matrix and squared correlations between factors (N = 277)

	CSE	VE	SMC	ESI
CSE	**.73**	.51**	.52**	.49**
VE	.51**	**.58**	.57**	.50**
SMC	.52**	.57**	**.61**	.44**
ESI	.49**	.50**	.44**	**.59**

The square roots of each AVE value are shown in bold type on the diagonal.
**. Correlation is significant at the 0.01 level (2-tailed).

Confirmatory Factor Analysis

At the last stage, CFA was conducted on the factors obtained in EFA in order to cross-validate between the EFA constructs and a new sample (i.e. Group 2; N = 278), as summarized in Table 1.

Table 5. Goodness-of-fit indices for the CFA model (N = 278)

	χ^2/df	*CFI*	*GFI*	*RMSEA*	*AGFI*
Model	1.85	.94	.95	.06	.90
Recommended value	≤ 3	≥ .9	≥ .9	.05 – .08	≥ .85
Result	Good	Good	Good	Good	Good

Table 5 presents the goodness-of-fit indices of the model from the CFA. The table shows a good model-fit within recommended cut-off values, representing χ^2/df (1.85), CFI (.94), GFI (.95), RMSEA (.06), and AGFI (.90). Consequently, all indices achieved adequate cut-off levels. Hence, the CFA results for the four-factor model

with the 14 items based on the existing EILPS demonstrated a good model fit. Figure 2 illustrates the fitted model for the four-factor structure of EILPS.

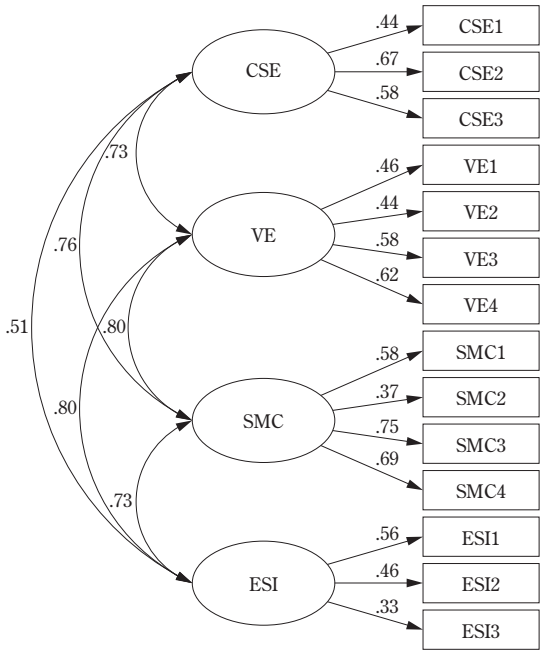

Figure 2. Factor structure of EILPS

Insights Gained

The current study aimed to develop a scale to measure EIL perception (i.e. EILPS) that can be used by EIL researchers and practitioners in an accessible fashion. The results of EFA generated a 14-item scale comprising four factors. Additionally, EILPS had good psychometric properties (i.e. internal consistency and convergent and discriminant validity) with satisfying values for , CR and AVE. Results of CFA confirmed the four-factor structure of EFA. Specifically, the first factor (i.e. CSE) gauges perceptions toward the current status of English. We speculate that informants who score high on this factor are highly aware of current English uses and users, plus the effects of the global spread of English. The second factor (i.e. VE) measures perceptions toward varieties of English. We posit that respondents who score high on this factor are likely to have positive perceptions toward English in Outer and Expanding Circle countries and English diversity in the classroom. The third factor (i.e. SMC) assesses perceptions toward strategies for multilingual and

multicultural communication. We speculate that individuals who score high on this factor tend to have positive perceptions toward multilingual and multicultural English users and strategic competence in multilingual and multicultural contexts. Finally, the fourth factor (i.e. ESI) measures perceptions of English speakers' identity. We postulate those who score high on this factor are often positioned against the native speaker-nonnative speaker dichotomy and take an ownership of his or her English.

Conclusion: Implications for Measurement Users

Informed by these results, EILPS can be considered a reliable and valid measure of EIL perception, which can be of much use in research and practice settings. From a research perspective, the study provides a practical and validated instrument for objectively measuring EIL perception. It is practical due to its easy administration. For instance, based on our anecdotal experience, participants could complete the test within five minutes by employing a given URL link (e.g. using Google Forms) using their own digital devices. Students' responses were then automatically saved into a Google Sheets spreadsheet in which researchers and teachers were able to download and analyze the data.

In addition, a valid and reliable EILPS will allow EIL researchers to gauge EIL perceptions in a scientifically convincing way. For example, EIL researchers, who used to rely on or self-made or other researchers' questionnaires without testing validity and reliability, can employ EILPS to assess students' EIL perceptions and thus obtain more accurate data for better analysis of the results. Moreover, as Ren et al. (2016) have indicated, a comparative study about students' perceptions of EIL in cross-cultural contexts is quite limited in the current literature. In this regard, this study could be a feasible starting point to stimulate such comparative studies. Putting differently, if EILPS is validated in different cross-cultural contexts, it can make it possible to conduct a comparative study regarding how similarities or differences in four dimensions of EIL perception play out across different contexts. For example, the author and co-author (2018) investigated EIL perceptions of Taiwanese and Korean non-English majors by means of EILPS. It was found that both groups generally held positive perceptions toward all four aspects of EIL (i.e. CSE, VE, SMC, and ESI). However, significant statistical differences existed in VE and SMC between two groups. The authors attributed this phenomenon to different sociopolitical context and context-specific educational factors. Therefore, a comparative study using a validated EILPS can help us understand this issue from more diverse perspectives and, ultimately, allow generalization across contexts.

From a practical perspective, EILPS can be useful for EIL practitioners to gauge students' EIL-related components (e.g. EIL awareness and strategy) that contribute to (or undermine) its development. Specifically, those who implement EIL pedagogy in the classroom can administer the EILPS as pre- and post-tests and investigate whether their students' EIL perception has improved as a result of their EIL instruction, which will, consequently, help prepare EFL learners to become more competent users of English in today's multilingual and multicultural contexts (Matsuda 2017). For example, our previous project (author et al. 2017) measured the pedagogical effectiveness of the videoconference-embedded classroom on enhancing students' EIL perception. Although a mixed-methods approach (i.e. questionnaire, class evaluations, in-class observation) was applied, validity and reliability of the questionnaire was not reported in that study. Future research of its kind may employ EILPS as a viable way to improve the accuracy and interpretation of data. Finally, unlike Nakayama's (2015) study, the EILPS questionnaire is available in English with four dimensions of EIL (see Appendix), which can be readily accessible to and usable by other EIL researchers and practitioners. When reporting such findings using the validated EILPS, it will also enrich our understanding of the status of EIL perception on a more global scale perspective, which will contribute to a global body of EIL knowledge.

Despite its novelty and empirical evidence regarding the reliability and validity of EILPS, there are limitations that should be acknowledged. Although a sample of 555 is considered a large number of participants when conducting factor analysis (Kline 2000), these participants were all Korean ethnicities, mostly consisting of freshman and sophomore (N = 444, 80%). Non-random, homogeneous selection of samples or *convenience samples* may lose its representativeness of Korean EFL students, which could ultimately affect generalizability of results (Bryman 2004). Additionally, due to this particularity of the participants, the results of this study may not be entirely applicable to other EFL contexts. Thus, a future research may benefit from recruiting Korean EFL students from other grade levels as well as participants with diverse linguistic and cultural backgrounds.

To conclude, we can measure changes in the language or linguistic ability of students (e.g. speaking ability or listening ability) using standard or commercialized tests such as TOEFL iBT or IELTS. However, the non-language aspects of the students such as perception or attitude change have been rarely examined in a scientifically convincing fashion. Therefore, EILPS can be of a great use for classroom language teachers as well as researchers who need or require objective data. As more and more EIL researchers and educators engage in EIL research and the amount of such

research is accumulating quickly, we hope the current study contributes to theory-building process in the area of EIL by offering a validated EILPS.

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Appendix

Factors and Items of EIL Perception Scale

Current Status of English (CSE)

(CSE 1) English is used today as an international language to communicate effectively with people from around the world.

(CSE 2) Many non-native English-speaking countries currently use English as their official or working language.

(CSE 3) English is the language of business, culture, and education around the world today.

Varieties of English (VE)

(VE 1) Different varieties of English, such as Hong Kong English, Indian English, and Singaporean English, are acceptable today.

(VE 2) Teachers can use English listening materials that are recorded by people who have different kinds of English accents.

(VE 3) Different varieties of English, such as Indonesian English, Taiwanese English, and Japanese English, are acceptable today.

(VE 4) Teachers can include the interaction between non-native and non-native English speakers (e.g., Indonesian-Japanese speakers) in English listening materials.

Strategies for Multilingual/Multicultural Communication (SMC)

(SMC 1) I can adjust my conversational style according to my interactions with people of other cultural

backgrounds.
(SMC 2) I can explain my own culture and customs clearly in English to people from other cultures.
(SMC 3) I am open-minded about accepting speaking/pronunciation patterns that are different from those of my home country.
(SMC 4) I can behave appropriately according to English users I speak with.

English Speakers' Identity (ESI)
(ESI 1) English teachers should not push me to speak like a "native" English speaker.
(ESI 2) I don't mind if people laugh at my English accent when I speak because it is my own English.
(ESI 3) It is unnecessary to speak like American or British English speakers as long as my English is intelligible (or understandable) to others.