CURRENT RESEARCH ON INTELLIGIBILITY IN ENGLISH AS A LINGUA FRANCA

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Recognition of incipient change in the status of English as an international language has yielded a small but growing area of research addressing NNS-NNS interaction. Issues concerning intelligibility are a key focus of this investigation, particularly as native speaker models have limited relevance to these new contexts of use. This review highlights current research from diverse areas of applied linguistics that have addressed aspects of intelligibility in both experimental and real-world settings. Current findings suggest that the processes by which understanding is achieved in ELF interaction are qualitatively different from those observed in NS-based interaction, and that this has implications for a number of research and practice areas. Following a definition of terms, the chapter surveys current research and considers its influence on current trends in English language teaching. Possible directions for further research are also considered.

The precipitate growth of English as a global language with an estimated 1 billion L2 users (Crystal, 2000) presents new challenges to an old problem. Traditionally, debates concerning intelligibility have centered on how far varieties of English should be allowed to depart from a rigid native speaker standard. This is illustrated by the famous exchange between Randolph Quirk and Braj Kachru that opens Seidlhofer’s (2003) Controversies in Applied Linguistics. Quirk argued that a single standard, based on either British or American English, should be consistently applied in all nonnative contexts, and Kachru responded that it was time to legitimize nonnative speaker varieties and recognize the ‘paradigm shift’ that the increasing use of English as an international language required. Nelson reiterates that the native speaker is a rare sight in most international interactions in English and that many speakers “may never have had the dubious good fortune even to have met a native speaker” (1995, p. 276).

Once we acknowledge this revolutionary change, it becomes clear that models and practices that privilege native varieties of English are no longer serviceable. Research undertaken in ELF interaction (NNS-NNS communication) and issues of intelligibility is a response to this new context and is still in its infancy. This chapter begins with a definition of the terms that are frequently used and
routinely defined differently. The following section reviews current research in ELF interaction and intelligibility with a focus on speaker and listener variables, and the final part of the chapter describes the ways in which the most recent findings in intelligibility research have been applied to English language teaching. For reasons of space, this chapter does not cover issues of intelligibility, and written language which would require a separate review.

**Definition of Terms**

**English as a lingua franca (ELF)**

The most cursory review of the literature addressing English in its global context reveals a host of terms, such as ‘English as an international language,’ ‘World Standard English,’ ‘literate English,’ ‘English as a lingua franca,’ and limited agreement on definitions (Erling, 2005; McArthur, 2004). A mutually agreed starting point for most, however, continues to be Kachru’s (1985) division of worldwide Englishes into inner, outer, and expanding circles. If we define a lingua franca as a contact language, i.e., “a vehicular language spoken by people who do not share a native language” (Mauranen, 2003, p. 513), English used in the expanding circle between L2 users “captures ELF in its purest form” (Seidlhofer, 2004, p. 211). As both Maurenen and Seidlhofer point out, however, English is manifestly unlike other contact languages. The enormously diverse intra- and international contexts of use and the continual movement of users routinely result in interactions between speakers from all three groups. While stipulating that this is an inherent feature of global English usage, I will continue to follow Seidlhofer (2004) and define ELF as talk comprising expanding circle speaker-listeners, also described as nonnative speakers (NNSs), competent L2 speakers, or, in Jenkins’ (2000) terms, non-bilingual English speakers (NBESs) for whom proficiency may range from nearly bilingual English speakers (BESs) to beginner NBESs.

**Intelligibility and Comprehensibility**

Up to this point I have used the term intelligibility in its broadest sense to mean both “intelligible production and felicitous interpretation of English” (Nelson, 1995, p. 274). There is no universally agreed upon definition of what constitutes this construct, nor is there an agreed upon way of measuring it (Derwing & Munro, 2005; Jenkins, 2000). Within the field of World Englishes (WE), a common conceptualization is Smith and Nelson’s (1985) tripartite definition of intelligibility, the ability of the listener to recognize individual words or utterances; comprehensibility, the listener’s ability to understand the meaning of the word or utterance in its given context, and interpretability, the ability of the listener to understand the speaker’s intentions behind the word or utterance. This last level of divining a speaker’s intentions is understandably difficult to measure and Levis reports that the term has largely “fallen by the wayside” (2005, p. 254). There remains a clear distinction in the literature, however, between “matters of form,” comprising formal recognition or decoding of words and utterances, and “matters of meaning,” variously described as ‘comprehensibility,’ ‘understanding,’ or
‘communicativity’ (Jenkins, 2000, p. 71). As Field (2003) suggests, a listener may use a higher level of contextual understanding to compensate for the fact that a message is unrecognizable, i.e., unable to be precisely decoded. Similarly, an utterance may be intelligible and incomprehensible, although as Gallego (1990, p. 228) points out, potential comprehensibility issues may be camouflaged by intelligibility problems.

**The Relative Nature of Comprehensibility**

Although our immediate response as listeners is often to assign responsibility for comprehensibility to our interlocutor, leading scholars in the fields of discourse and WE have consistently recognized that comprehensibility is a relative not an absolute standard and is, in this sense, “co-constructed” (Duranti, 1986; Gumperz, 1992). Smith and Nelson state that “intelligibility is not speaker or listener-centered but is interactional between speaker and hearer,” (1985, p. 333) and Nelson notes that “being intelligible means being understood by an interlocutor at a given time in a given situation” (1982, p. 59). This conceptualization inextricably links comprehensibility to context of use, a complex setting involving factors related to the speaker, the listener, the linguistic and social context, and the environment (Field, 2003; Jenkins, 2000; Levis, forthcoming).

It is evident, however, that these elements have traditionally been narrowly construed, and comprehensibility studies in WE contexts have privileged inner circle speaker-listeners, i.e., focused exclusively on NS judgments of outer or expanding circle speakers (Jenkins, 2002). This situation is an unfortunate inheritance that both responds to and reinforces current inequalities in world Englishes. The research gap can be illustrated using Levis’s (2005) WE speaker-listener matrix:

![Figure 2. World Englishes speaker-listener intelligibility matrix (from Levis, 2005, p.373)](https://example.com/figure2.png)

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The first column, depicting the inner-circle listener, is well-represented in the intelligibility literature. In comparison, both the second and third columns, prioritizing outer and expanding circle interactions, are relatively new and growing areas of research. Significantly, however, recent work that targets expanding circle, or NBESs in ELF interactions (the EC-EC panel above) suggests that they are processing contextual factors including speaker, listener and environmental factors differently than inner circle speakers (Deterding & Kirkpatrick, forthcoming; Field, 2005; Jenkins, 2000; Meierkord, 2004).

**Variables Affecting Intelligibility and Comprehensibility**

**Speaker Factors**

Undoubtedly the most salient speaker factor in standard NS-NNS comprehensibility studies has been phonology and primarily the effects of accentedness. Using measures of intelligibility that ask listeners to write out what they heard, and Likert scales to judge perceived comprehensibility and accentedness, researchers have found that these measures are consistently distinguished and that comprehensibility of L2 speech by NSs is more significantly related to prosodic variables than segmental effects (Anderson-Hsieh, Johnson & Koehler, 1992; Anderson-Hsieh & Koehler, 1988; Munro & Derwing, 1995). This led Derwing and Munro to suggest that improvement in NNS comprehensibility (for NS receivers) “is more likely to occur with improvement in grammatical and prosodic proficiency than with a sole focus on correction of phonemic errors” (1997, p. 15).

In contrast, reporting research addressing phonological factors in interlanguage talk (ILT), Jenkins (2000, 2002) argues convincingly that the processes through which NBESs achieve understanding in ELF interaction are qualitatively different from those used by NSs in NS-NS or NS-NNS interaction. Jenkins (2000) analyzes conversational and information gap task data she collected from L2 mixed-language dyads. Following an examination of all instances of communication breakdowns, she reports that pronunciation issues comprise the biggest source of loss of comprehensibility or intelligibility, and these most commonly occurred at the segmental level. In a typical example given below, (B) a Japanese speaker is describing a small set of pictures to (A) a Swiss-German speaker. As Jenkins points out, despite only one picture containing cars, which were red, and no indication that they were for hire, (A) persists in “adjusting the context and/or co-text to bring them into line with the acoustic information rather than vice versa” (2000, p. 90).

A  
I didn’t understand the let cars.
What do you mean with this?

B  
Let [let] cars? Three red [ ed] cars *(very slowly)*

A  
Ah, red.

B  
Red.

A  
Now I understand. I understood car to hire,
To let. Ah, red, yeah I see. *(p. 81)*
She reasons that this predominant focus on bottom-up processing reflects a higher dependency on phonological form by ELF speakers who are less able to integrate inferences from some kind of higher contextual knowledge or from a shared background with their interlocutors.

This greater reliance on deciphering phonological form was also found by Deterding (2005) who investigated outer circle speaker-listeners listening to a nonstandard British English variety (Estuary English). Based on transcripts and commentary by undergraduate Singaporean listeners, he identified several segmental issues, ‘th fronting,’ glottalization of medial /t/, and fronting of the high, back, rounded vowel, as barriers to intelligibility. Interestingly, some of these listeners also expressed strong listener irritation with this unfamiliar inner circle variety: “he almost made my blood boil because I could hardly understand his words” (2005, p. 435).

Field (2005) tested both NS and NNS listeners in a psycholinguistic study in which lexical stress and vowel quality were manipulated on sets of disyllabic words. Words were recorded with normal acoustic cues and in conditions where stress was shifted leftward or rightward and in some cases, vowel quality altered. When tested with an intelligibility measure, while both groups of listeners were significantly handicapped by modified stress patterns particularly when the lexical stress was shifted to the right, nonnative listeners demonstrated a lower success rate in identifying the words in the standard, unmanipulated group correctly. Citing additional work (2004), Field is in agreement with Jenkins that “evidence is emerging that NNLs place greater reliance on interpretations at word level even in the face of contradictory evidence” (2004, p. 418).

This initial research in ELF supports a long held contention that certain errors have a higher cost associated with them than others in terms of comprehensibility and that this error hierarchy will vary depending on speaker and listener factors. Hence we would not necessarily want to promote strategies among NBESs that have been shown to increase comprehensibility for native speaker listeners if the former will be primarily or exclusively engaged in ELF interaction (Jenkins, 2002). For NBESs engaged in ILT, Jenkins suggests a “lingua franca core” (LFC), a set of core phonological features that will result in maximum intelligibility in ELF interaction. The core chiefly comprises segmental features but also includes tonic placement, or sentence stress (see Jenkins, 2002 for a complete description.) In her study of ELF interaction, she further observed that NBESs accommodated to each other, thereby increasing intelligibility, by converging on more target-like forms and reducing L1 transfer features when dealing with these high risk core areas.

Although pronunciation has been described as “possibly the greatest single barrier to successful communication” (Jenkins, 2000, p. 83), phonology is only one aspect of a speaker’s language output, and other linguistic variables are perceptually salient for ELF interlocutors. Meierkord (2004) investigated the syntactic forms produced in 22 hours of conversation between outer and expanding circle speakers. Despite finding some “extreme divergences” from the rules of inner circle varieties,
she found that these did not impede comprehensibility. This concurs with Jenkins (2000) who found that grammatical miscues played a minor role in comprehensibility in ELF interaction. It is noteworthy, however, that Meierkord describes ELF as a “syntactically heterogeneous form of English” (2004, p. 128) in which she found unstable and unsystematic features, and she surmises that we are some way from the development of a standard international form of English. Lexical variation is likely to impede comprehension in the form of variety specific idioms (Jenkins, 2000; Seidlhofer, 2001) or in the use of localized vocabulary terms (Nelson, 1995). But perhaps more common with the cline of proficiency that is inevitably present in ELF interaction is vocabulary that is unknown to one or other of the participants (Meierkord, 2004).

As with other aspects of language structure, pragmatics in cross-varietal contexts of English has typically dealt with NS/NNS interaction with inner circle varieties as the fulcrum (Gumperz, 1992; Pickering, 2001). Meierkord focuses on conversational data in ELF interactions and observes that there is a high degree of negotiation and collaborative achievement as revealed by participants’ choice of behaviors such as pausing to allow transitions between conversational topics, choosing safe topics and using politeness strategies such as back-channels and routine formulaic expressions. She suggests that participants employ these strategies in order “to create a variety which assures a maximum of intelligibility” (2000, p. 10). A rather different interpretation of these kinds of behaviors is given by House (1999) ‘Interactions in English as a Lingua Franca and the Myth of Mutual Intelligibility’, cited in Seidlhofer (2001). House argues that these behaviors are rather a reflection of a “palpable lack of mutual orientation” (p. 82) which may be designed to disguise a lack of solidarity between participants and pass over trouble spots (House, 1999, cited in Seidlhofer 2001, p. 143; see also House, 2002, for further discussion).

Finally, at the level of discourse structure, two initial studies suggest that while on one hand, ELF interlocutors may use more transparent information-structuring devices such as topicalization structures to ease listener understanding (Meierkord, 2004), at the same time, speakers may transfer variety-specific features into international settings such as the use of discourse particles rather than acoustic cues to distinguish between new and old information in Singaporean English (Ee Ling Low, forthcoming). Clearly, these studies represent the beginning of a fruitful area of research.

**Listener Factors**

The bulk of current research in listener factors can collectively be described as investigating the effect of listener familiarity in relation to a number of different variables. A particularly significant area is listener experience with phonological representations of the target language. Field (2003, p. 36) argues that the “non-invariance” of phonemes, i.e., the lack of a single, ‘ideal’ representation suggests that listeners may store multiple representations of the phonemes and that the more we are exposed to a certain production, the more intelligible it will be. Major et al.
(2002) suggest something similar for prosodic variables. Finding that Chinese and Japanese listeners understood Spanish accented English as well as standard American English, the authors speculate that this result is related to a similarity of prosodic rhythms in Spanish, Chinese and Japanese, specifically, the lack of vowel reduction. In relation to ELF, the effect of familiarity with phonological forms is termed “the interlanguage speech intelligibility benefit” by Bent and Bradlow (2003). The authors measured the intelligibility of recordings of English sentences produced by Chinese and Korean speakers and NSs of North American English for listeners from Korea, China and with mixed L1 backgrounds. They found that while all listeners judged lower proficiency L2 speakers to be less intelligible, nonnative listeners found high proficiency NBESs with whom they shared a native language as intelligible as the native speakers suggesting a “matched interlanguage intelligibility benefit” (2003, p. xxx). The researchers also found a “mismatched interlanguage intelligibility benefit;” that is, even when there was no shared native language, nonnative listeners found some high proficiency NBESs from different language backgrounds to their own equally as or more intelligible than the NSs. Regarding the matched benefit, Bent and Bradlow suggest that “a nonnative listener is well equipped to interpret certain acoustic-phonetic features of the speech of a native-language matched nonnative talker as the talker intended them to be interpreted, even though they may deviate markedly from the target language norm” (2003, p. 1607). This accords with Jenkins (2000), who observed that in interlanguage talk between same L1 dyads, interlocutors tended not to converge on a target-like form but retained their transfer-based replacement form.

It is less clear how the mismatched benefit works. Bent and Bradlow suggest that it may be the result of shared NBES’s knowledge of developmental characteristics in ILT phonology; however, similar investigations do not support the mismatched benefit result. In another psycholinguistic study measuring speech intelligibility for Dutch NBESs, Van Wijngaarden (2002a) found that Dutch listeners did not benefit from hearing their “own” non-native accent in a second language (2002a, p. 1909) and that the native English speakers were more intelligible. In addition, while Deterding and Kirkpatrick (under review) report that specific pronunciation characteristics used by ASEAN speakers did not hinder comprehensibility for other ASEAN listeners, both Date (2005) and Kirkpatrick and Saunders (2005) report that characteristics of Singaporean English may be problematic for listeners from other parts of Asia, such as China and Japan. There is also data questioning the matched benefit. In a study in which Chinese, Japanese, Spanish and North American speakers delivered 2 minute lectures in English to listeners of the same four nationalities of listeners, Major et al. (2002) found that in most cases, there was no significant benefit. In fact, for Chinese listeners, Chinese accented English hindered their comprehension. It is probable that these different findings are at least partially related to the very different measures that are used across these studies in assessing intelligibility and comprehensibility. Generalizations are difficult to support in light of methodological differences and the relatively small number of studies conducted at this point.
Another factor associated with interactional success in NS-NNS research is listener attitude (Lippi-Green, 1997; Rubin, 1992). Smith and Nelson (1985) suggest that a listener who expects to understand a speaker will be more likely to find that speaker comprehensible than one who does not. Although the effect of listener attitude in ELF interactions has rarely been studied (although see Dalton-Puffer, Kaltenboeck and Smit, 1997), an innovative study by Lindemann suggests a possible model of how this research might proceed. North American English speakers who had relatively positive or negative attitudes toward Koreans were matched with Korean speakers and asked to complete a map task. Qualitative and quantitative differences between the two groups revealed that North American partners with negative attitudes often failed to provide feedback to their Korean partners and “problematized their contributions” (2002, p. 431). Only two of the pairs in this group did not successfully complete the task, yet all six pairs rated their interactions as unsuccessful. As Lindemann (forthcoming) states, “[This] suggests that listeners may react negatively to certain accents (and thus claim to find them unintelligible) even when we would expect that the features of those accents themselves do not directly impede intelligibility.”

Additional variables that may affect intelligibility or perceived comprehensibility to a greater or lesser degree for listeners include familiarity with a particular speech event, topic, or specific interlocutor, listener specific factors such as level of tiredness (Field, 2003) or situation specific factors such as environmental noise (Rogers, Dalby & Nishi, 2004; van Wijngaarden et al., 2002a; van Wijngaarden et al, 2002b). There are currently very few studies addressing these variables in ELF contexts.

Applications to Teaching English as an International Language

The “intelligibility principle” (Levis, 2005, p. 370) has guided much of the practice of teaching spoken English. Over time it has taken somewhat different guises and moved from definitions that are largely concerned with the speaker such as “comfortable intelligibility” (Abercrombie, 1949; Kenworthy, 1987) to those that more explicitly prioritize the listener such as “listener friendly pronunciation” (Kirchner, 2005, month & day).

Assuming a focus on ELF interaction, Walker (2001, 2005) proposes that we reconsider traditional target models (i.e., inner varieties) and move toward “pronunciation for international intelligibility” using the lingua franca core as a starting point. He reports on his application of these principles in the classroom working with monolingual Spanish groups and strategies he has developed to help NBESs converge on more target-like forms that would be more intelligible in ELF interaction. While cautioning that she is not advocating a replacement model for British or North American varieties of English (see also Dauer, 2005), Jenkins (in press) sees a primary advantage of promoting a lingua franca core in a pronunciation syllabus as ensuring that mutual intelligibility across varieties in EIL will be maintained. She notes that if “a policy of pluricentricity is pursued unchecked…with each expanding circle L1 group developing its own English pronunciation norms,
there is a danger that their accents will move further and further apart until a stage is reached where pronunciation presents a serious obstacle to lingua franca communication” (in press).

While it is true that anxieties regarding the preservation of standards and intelligibility of EIL are regularly expressed (Berns, 2005), and people are taking seriously the notion that expanding countries such as China and Japan might want to choose a more international model (Matsuda, 2003; Qiong, 2004), we are also some way from a general acceptance of some kind of sea-change in target models. Seidlhofer (2001) describes this as a “conceptual gap” that has occurred between ELF and ELT.

Fundamental issues to do with the global spread and use of English have, at long last, become an important focus of research in applied linguistics…And yet, the daily practices of most of the millions of teachers of English worldwide seem to remain untouched by this development…This state of affairs has resulted in a conceptual gap in the discourse of ELT (pp. 133-134).

Inner circle models cast a long shadow for both students and teachers regardless of context of use, and teachers are often uncomfortable with their position as either conservators of traditional practices or heralds of new ones (Jenkins, 2005; Sifakis & Sougari, 2005; Timmis, 2002).

It is clear that native speakers of inner circle varieties can no longer view themselves as gatekeepers of the English language (Higgins, 2003) and will need to consider making adjustments "toward an agreed international (rather than NS) norm" (Jenkins, 2002, p. 85). Although investigation of discourse produced in international contexts is still in its infancy, spoken corpora such as the Vienna-Oxford International Corpus of English (Seidlhofer, 2001) and the Corpus of English as a Lingua Franca in Academic Settings (ELFA) (Mauranen, 2003) have numerous pedagogical as well as research applications toward this end.

Conclusion

It is clear from the preceding review that research is moving in the direction of Kachru’s “paradigm shift” and toward a world Englishes perspective, despite the powerful draw of models of speaking and listening based on inner circle varieties. Current findings suggest that ELF interaction operates under different conditions than NS-NS or NS–NNS interaction, and that this is particularly evident in the blurring of the distinction between intelligibility and comprehensibility in interlanguage talk. There is compelling evidence to suggest that ELF interlocutors engage in communication strategies and accommodation processes that are unique to this context and that may conflict with the ways in which NSs typically negotiate understanding. This suggests that we may need to reexamine key precepts that have guided our teaching and research practices.
It is also the case that much of this research is in its initial stages. There are few results from very different kinds of studies ranging from experimental measures of intelligibility and ratings of perceived comprehensibility to observations of interlocutors in real-world communicative contexts. Our priority then would seem to be to forge a robust interdisciplinary research program that will federate researchers across a broad range of areas from English language teaching and sociolinguistics to phonetics and psycholinguistics. In this way we can meet our certain future of global Englishes with more confidence.

Notes

1. An illustration of how a listener may intuitively distinguish these two notions is shown in this comment made by a North American undergraduate student on an ITA teaching evaluation form: “I concentrate on trying to understand his English rather than trying to understand the concept of what he is saying.”

2. This is demonstrated in recent stories in the US media politicizing international teaching assistant policies at state universities and in both US and UK media discussions of outsourcing or ‘call center English’.

3. The Association of South East Asian Nations comprising Brunei, Malaysia, the Philippines, Singapore, Cambodia, Indonesia, Laos, Myanmar, Thailand and Vietnam.

ANNOTATED BIBLIOGRAPHY


This article is recommended in conjunction with Major et al. (2002) cited below. Together, the studies offer two research perspectives on measuring the intelligibility of nonnative speakers for nonnative hearers, the context of interaction that lies at the heart of ELF. This study yielded a number of findings suggesting that an “interlanguage benefit” may operate between NBESs in interlanguage talk. Although the results of the study were mixed, and at least one of the findings concerning a “mismatched benefit” is perhaps doubtful, its design and execution represent an important strand of empirical research in intelligibility that is often overlooked.


This book continues to be the standard against which other work in the area of phonology, intelligibility, and world Englishes is measured.
number of the studies discussed in this chapter use Jenkins’ proposals as outlined in this manuscript as their starting point. Her comprehensive data analysis is framed within thorough presentations of the changing contexts of English language usage, models of L2 phonological acquisition, and applications to teaching practice. Jenkins leads the reader through the steps of her argumentation clearly and without a surplus of technical vocabulary; hence, it has much to offer both specialist readers and those with limited exposure to both phonology and EIL.


Virtually all of the papers that appear in this volume have been cited in this review. Collectively they represent the most current ways of thinking regarding research models and teaching practices in EIL and pronunciation, and some of the most influential international scholars who are working in this area. Particularly meritorious is the way in which Levis has ensured the inclusion of a range of contexts of use and users of EIL while continuing to limit the overall scope to key areas of intelligibility and identity. Papers also reflect a broad research base. Following the editorial, the opening paper by Derwing and Munro reviews the state-of-the-art in terms of how research has been used, not always appropriately, to inform pronunciation instruction. The papers that follow address aspects of the field from a variety of research perspectives including psycholinguistics (Field), sociolinguistics (Gatbonton et al.) and critical ethnography (Golombek & Jordan). With the additional inclusion of a forum debating issues related to the lingua franca core, this volume is an important source of current trends for both researchers and practitioners.


This article is recommended in conjunction with Bent and Bradlow (2003) cited above. Unlike the Bent & Bradlow investigation, this study did not find an across-the-board “matched intelligibility benefit.” In fact, Chinese L2 listeners who were tested on their comprehensibility of a spoken passage found Chinese L2 talkers significantly more difficult to understand than native speakers and more difficult than L2 Japanese and Spanish speakers. Together, these two studies present a realistic picture of our elementary understanding of the factors involved in intelligibility and comprehensibility in ELF interaction, and both groups of researchers acknowledge the need for ongoing research. It is significant, however, that this study was funded by ETS in order to assess the possible test bias of nonnative varieties for test takers from different L1 backgrounds. This alone suggests the possibility of an important shift of perspective in organizations
that have traditionally been the gatekeepers of traditional inner circle varieties of English.

OTHER REFERENCES


Deterding, D., & Kirkpatrick, P. (under review). The effects on intelligibility of pronunciation features in an emerging ASEAN English lingua franca.


