Terminologies and definitions in the use of intelligibility: state-of-the-art

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Um aspecto controverso existente na literatura relacionada à inteligibilidade é a falta de consenso entre as terminologias e definições propostas. Este artigo apresenta uma revisão das terminologias e definições sugeridas para inteligibilidade entre o período de 1950 a 2003. Os conceitos e terminologias são discutidos e uma comparação entre eles é apresentada. Possíveis formas de coleta de dados para estudos em inteligibilidade são recomendadas.

One controversial aspect found in the literature on intelligibility is the lack of consensus among the terminologies and concepts proposed by several scholars. This article presents a state-of-art review of the terminologies and definitions proposed for intelligibility from 1950 to 2003. The terminologies and definitions are presented and discussed, and a comparison among them, with specifications of the similarities found, is shown. At the end, ways of collecting data for further investigations on language learners' intelligibility are recommended.

Introduction

The findings of investigations on intelligibility, irrespective of the linguistic level involved – pronunciation, grammar and/or vocabulary – offer insights into the establishment of pedagogical priorities in the development of foreign language learners' communicative competence. Such priorities certainly relieve foreign language teachers of the need to sacrifice communication in favor of accuracy. In other words, teachers can concentrate on the main errors which hinder communication, rather than be distracted by inconsequential errors.

One controversial aspect found in the literature refers to the definitions and terminologies in the use of intelligibility, as there is a lack of consensus among them. As Jenkins (2000, p. 70) states "there is as yet no broad agreement on a definition of the term 'intelligibility': it can mean different things to different people".

As an attempt to elucidate the existing confusion, as well as to provide a guideline for the concepts, I present in this article an account of the terminologies and definitions proposed for intelligibility from 1950 to 2003. First, I present and discuss the terminologies and definitions proposed by eleven scholars in chronological order. The reason for the presentation in such an order is to call attention to the variety of terminologies which have been incorporated in the literature to define intelligibility from 1950 to 2003. Then, I compare the various definitions suggested over the last fifty-three years, pointing out the similarities among them. In the final section, I recommend ways of collecting data for further research on intelligibility.

The concepts of intelligibility

Catford (1950) distinguishes between intelligibility and effectiveness. His definitions for these two terms encompass two interrelated levels or dimensions involved in the use of language.[1] The first, intelligibility, is restricted to the hearer's understanding of the speaker's words. As Catford (1950, p. 8) states, speech is intelligible "if the hearer understands the words, i.e. if his response is appropriate to the linguistic forms of the utterance." For him, a speaker achieves complete intelligibility if these linguistic forms are selected appropriately, that is, if words, morphological and syntactical devices, and sounds are appropriate. The second level, effectiveness, includes the hearer's grasping of the speaker's intention. According to Catford (1950, p. 7), "it is normally the speaker's intention that the hearer should respond to his utterance in a manner which is appropriate to his purpose in speaking."

The interrelationship of the two terms is apparent, since, as Catford (1950, p. 8) explains that, on the one hand, an intelligible utterance may be ineffective when the hearer understands the speaker's words, but "the hearer's response is not what the speaker intended". On the other hand, an unintelligible utterance may be only apparently effective, since "what is effective cannot be the utterance itself, but some other elements in the situation as a whole" (CATFORD, 1950, p. 8). For instance, some non-

[1] The term 'dimension' used here follows Austin (1975, p. 109) in his explanation of the locutionary, illocutionary and perlocutionary acts. According to him, these acts represent three different dimensions or senses of the use of language.

linguistic clues in the context of situation, such as the speaker's gestures, can help the hearer respond in a way which is appropriate to the speaker's intention. For Catford, hence, an utterance is completely effective only if it is also intelligible.

Smith and Rafiqzad (1979) distinguish between intelligibility and comprehension. Their definition of intelligibility is an operational one, which is in accordance with the purpose and methodology of their research. In order to check the intelligibility among speakers from different cultures, they constructed a cloze-procedure test of either a spoken or read passage, and asked listeners to fill in the blanks. Hence, intelligibility for the two authors "is capacity for understanding a word or words when spoken/read in the context of a sentence being spoken/read at natural speed" (SMITH; RAFIQZAD, 1979, p. 371). The more words the listeners were able to write in the cloze-procedure test, the greater the speaker's intelligibility. Although Smith and Rafiqzad's (1979) definition of intelligibility resembles that of Catford's (1950), that is, it refers to the hearer's understanding of words, theirs is much more specific and delimited, given the methodology the authors adopted in their study (the cloze-procedure test). One example of this specificity is the inclusion of the factor 'rate of speed' in their definition. Although the authors did not specify what rate corresponds to natural speed, their definition does not seem to apply to the understanding of words read or spoken at a fast speed. Comprehension, for Smith and Rafiqzad (1979, p. 371) "involves a great deal more than intelligibility". Such a definition, in my view, is incomplete, since this 'great deal more' is not specified by the two authors.

Smith and Nelson (1985) propose three terms – intelligibility, comprehensibility, and interpretability – and suggest that, in future research on international intelligibility of English, it is useful to clarify these terms and use them distinctively. By intelligibility they mean "word/ utterance recognition" (SMITH; NELSON, 1984, p. 334). The intelligibility of a passage read is high if the reader is able to copy the passage or fill in the blanks of missing words without much difficulty. Comprehensibility refers to "the meaning of a word or an utterance" (SMITH; NELSON, 1985, p. 334). A passage read is comprehensible if the reader is able to make sense of the sentences read or paraphrase them. Interpretability is the "meaning behind the word or utterance" (SMITH; NELSON, 1985, p. 334). The interpretability of a passage read is high if the reader is able to identify the author's intentions.

Smith and Nelson (1985) argue that their three distinct definitions help to clarify the confusion existing in the literature of the international intelligibility of English in relation to the three terms, as they have been used interchangeably. Although their concepts for intelligibility and interpretability resemble Catford's (1950) definitions for intelligibility and effectiveness proposed in 1950, their clarification is helpful as they propose a third term, comprehensibility. By proposing this term, they identify one more level involved in language use. Owing to the interrelationship existing among these three levels, definitions of each one are extremely helpful, not only to elucidate the confusion referred to by the two authors but also for research purposes, since it is necessary to distinguish which of the three levels is to be investigated.

Kenworthy (1987) equates intelligibility and understandability, and distinguishes these two terms from communication. Similar to Catford's (1950), Kenworthy's (1987) definitions comprise two, out of the three, distinctive levels Smith and Nelson (1985) proposed. The first level, including the terms intelligibility and understandability, is restricted to the recognition of words: "the more words a listener is able to identify accurately when said by a particular speaker, the more intelligible that speaker is" (KENWORTHY, 1987, p. 13). The second, communication, as Kenworthy (1987, p. 16) argues, comprises more than merely uttering words with well-produced sounds, it "involves reading the other's intentions." The author adds that communication is much more complex than intelligibility and understandability, as intentions only exist in the other person's mind, and listeners need to make use of all the information available to them in order to guess the speakers' intentions. The information available comprises the knowledge listeners have about the speakers, about the situation, the knowledge speakers and listeners share, and so on.

Dalton and Seidlhofer (1995, p. 9) propose the terms 'accessibility' and 'acceptability', and relate them to the foreign language speaker pronunciation, and to "social and psychological factors." A speaker makes his/her utterance accessible if he/she succeeds in making an interlocutor understand it. Accessibility is determined not only by the clarity of the utterance but also by the interlocutor's expectations and feelings, "such as experience with, and tolerance of low prestige or foreign accent" (DALTON; SEIDLHOFER, 1995, p. 10). Acceptability, on the contrary, depends on the value the interlocutors ascribe to the speaker's accent. Thus, for the two authors, an utterance may be phonetically accurate, but not acceptable.

In their definitions, Dalton and Seidlhofer (1995) introduce a factor which is not considered by any of the previously mentioned scholars: the interlocutor's attitudes towards the speaker's accent. The inclusion of this factor makes their definitions subjective, since listener's attitudes may be concealed, and, in case they are apparent, can be expressed through different means. The difficulty in identifying the presence of the listener's attitude towards the speaker's accent may hinder the conclusion, on the basis of Dalton and Seidlhofer's (1995) definitions, of whether an utterance is actually accessible and/or acceptable.

Bamgbose (1998) suggests one term 'intelligibility', which refers to the three concepts proposed by Smith and Nelson (1985). For Bamgbose (1998, p. 11), intelligibility is "a complex of factors comprising recognising an expression, knowing its meaning, and knowing what that meaning signifies in the sociocultural context." Bamgbose's (1998) concept is actually directly comparable to Smith and Nelson's (1985) three terms, since 'recognising an expression', 'knowing its meaning', and 'knowing what that meaning signifies in the sociocultural context' are similar to Smith and Nelson's definitions of intelligibility, comprehensibility and interpretability respectively. Owing to these similarities, the clarification Smith and Nelson proposed to the literature of the international intelligibility of English in 1985, by suggesting three terms distinctively defined, was, in 1998, obscured by Bamgbose. He put together and labelled as one term three complex interrelated levels of language use. For research on intelligibility, his concept would be extremely confusing to follow, as the researcher, by adopting his term, would need to investigate the three levels together.

James (1998) proposes three terms: comprehensibility, intelligibility and communicativity. Comprehensibility is used as a "cover term to refer to all aspects of the accessibility of the content – as opposed to the form – of utterances" (JAMES, 1998, p. 212). As it is a cover term, it can be regarded as comprising all of the three interrelated levels which are defined separately by Smith and Nelson (1985), and indistinctively by Bamgbose (1998). Intelligibility and communicativity are related to two of the three levels. Intelligibility is referred to as "the accessibility of the basic, literal meaning, the propositional content encoded in an utterance" (JAMES, 1998, p. 212). A lack of intelligibility may occur if the language learner text is not well-formed, that is, if there are errors apparent in the grammatical, lexical or phonological form. At the level of phonology, foreign-accented speech is

regarded as being an obstacle to intelligibility. Communicativity is related to discourse and involves "access to pragmatic forces, implicatures and connotations" (JAMES, 1998, p. 216). A lack of communicativity[2] occurs "when the reader-listener blithely assigns a meaning (and interpretation) to an utterance, but his reading is not what was intended" (JAMES, 1998, p. 217).

Jenkins (2000) approaches intelligibility in Interlanguage Talk (ILT), that is, in the context of interactions between speakers of English from different L1 backgrounds using English as a lingua franca. She defines it as "the production and recognition of the formal properties of words and utterances and, in particular, the ability to produce and receive phonological form" (JENKINS, 2000, p. 78). According to her, the phonological form is a precondition for success among speakers of English in ILT. As Jenkins herself states, her definition of intelligibility followed that of Smith and Nelson's (1985). It is, thus, restricted to the level of recognition of words.

Finally, Field (2003) proposes two terms: intelligibility and comprehensibility. As he himself states, his concepts are not completely divergent from Smith and Nelson's (1985) definitions of intelligibility and comprehensibility. By intelligibility Field (2003, p. 35) means "the extent to which the content of the message is recognisable." Comprehensibility is "the extent to which a speaker's message is understandable, thanks to a combination of appropriate vocabulary, correct (or approximate) syntax, sensitive pragmatics and mastery of basic features of pronunciation" (FIELD, 2003, p. 35). To this distinction, he adds that intelligibility is part of comprehensibility. Field's (2003) definitions, thus, comprise two out of the three levels proposed by Smith and Nelson (1985).

TAB. 1 summarises the various terminologies, when and who proposed them.

[2] James uses the term 'miscommunication' to refer to lack of communicativity.

TABLE 1
Terminologies proposed from 1950 to 2003

Terminologies	Year and Scholar
Intelligibility	1950, Catford; 1979, Smith and Rafiqzad; 1985, Smith and Nelson; 1987, Kenworthy; 1998, Bamgbose; 1998, James; 2000, Jenkins; 2003, Field.
Effectiveness	1950, Catford.
Comprehension	1979, Smith and Rafiqzad.
Comprehensibility	1985, Smith and Nelson; 1998, James; 2003, Field.
Interpretability	1985, Smith and Nelson.
Understandability	1987, Kenworthy.
Communication	1987, Kenworthy.
Accessibility	1995, Dalton and Seidlhofer.
Acceptability	1995, Dalton and Seidlhofer
Communicativity	1998, James

As can be seen from TAB. 1, a total of ten different terms have been proposed. Out of these, intelligibility is not only the one which has been adopted by most scholars but also the term which has continued to be cited from 1950 to date. Comprehensibility was introduced in 1985 by Smith and Nelson, and is the second most adopted.

Comparison among the definitions

Despite the terminological diversity, and as suggested by Jenkins (2000), some definitions are similar. TAB. 2 shows the similar definitions. The ones written in italics are also mentioned by Jenkins (2000, p. 70). It is important to explain that the definitions proposed by Dalton and Seidlhofer (1995) comprise features, such as psychological and social factors, which are not mentioned by the other authors. For this reason, it is not possible to relate and compare their concepts to the ones presented by the other nine scholars; they are not, hence, included in TAB. 2. Smith and Rafiqzad's (1979) definition of comprehension is not included either, as it is considered incomplete.

TABLE 2
Similarities among the definitions

Scholars	Terminologies and concepts	Similar concepts
Catford (1950, p. 8)	**Intelligibility** – occurs "if the hearer understands the words, i.e. if his response is appropriate to the linguistic forms of the utterance."	Similar to Smith and Rafiqzad's intelligibility, Smith and Nelson's intelligibility, Kenworthy's intelligibility and understandability, Jenkins' intelligibility, and Field's intelligibility.
Catford (1950, p. 7)	**Effectiveness** – "it is normally the speaker's intention that the hearer should respond to his utterance in a manner which is appropriate to his purpose in speaking."	Similar to Smith and Nelson's interpretability, Kenworthy's communication, and James' communicativity.
Smith and Rafiqzad (1979, p. 371)	**Intelligibility** – "capacity for understanding a word or words when spoken/read in the context of a sentence being spoken/read at natural speed."	Similar to Catford's intelligibility, Smith and Nelson's intelligibility, Kenworthy's intelligibility and understandability, Jenkins' intelligibility, and Field's intelligibility.
Smith and Nelson (1985, p. 334)	**Intelligibility** – "word/utterance recognition."	Similar to Catford's intelligibility, Smith and Rafiqzad's intelligibility, Kenworthy's intelligibility and understandability, Jenkins' intelligibility, and Field's intelligibility.
Smith and Nelson (1985, p. 334)	**Comprehensibility** – " the meaning of a word or an utterance."	*Similar to James' intelligibility* and Field's comprehensibility.
Smith and Nelson (1985, p. 334)	**Interpretability** – "meaning behind the word or utterance."	Similar to Catford's effectiveness, Kenworthy's communication and James' communicativity.
Kenworthy (1987, p. 13)	**Intelligibility and understandability** – "the more words a listener is able to identify accurately when said by a particular speaker, the more intelligible that speaker is."	Similar to Catford's intelligibility, Smith and Rafiqzad's intelligibility, Smith and Nelson's intelligibility, Jenkins' intelligibility and Field's intelligibility.
Kenworthy (1987, p. 16)	**Communication** – "involves reading the other's intentions."	Similar to Catford's effectiveness, Smith and Nelson's interpretability and Kenworthy's communication.
Bamgbose (1998, p. 11)	**Intelligibility** – "a complex of factors comprising recognising an expression, knowing its meaning, and knowing what that meaning signifies in the sociocultural context."	*Similar to James' comprehensibility.*
James (1998, p. 212)	**Comprehensibility** – "refers to all aspects of the accessibility of the content – as opposed to the form – of utterances."	*Similar to Bamgbose's intelligibility*

James (1998, p. 212)	**Intelligibility** - "the accessibility of the basic, literal meaning, the propositional content encoded in an utterance."	*Similar to Smith and Nelson's comprehensibility*, and Field's comprehensibility.
James (1998, p. 217)	**Communicativity** – lack of communicativity occurs "when the reader-listener blithely assigns a meaning (and interpretation) to an utterance, but his reading is not what was intended."	Similar to Catford's effectiveness, Smith and Nelson's interpretability and Kenworthy's communication.
Jenkins (2000, p. 78)	**Intelligibility** – "the production and recognition of the formal properties of words and utterances, and, in particular, the ability to produce and receive phonological form."	Similar to Catford's intelligibility, Smith and Rafiqzad's intelligibility, Smith and Nelson's intelligibility, Kenworthy's intelligibility and understandability and Field's intelligibility.
Field (2003, p. 35)	**Intelligibility** – "the extent to which the content of the message is recognisable."	Similar to Catford's intelligibility, Smith and Rafiqzad's intelligibility, Smith and Nelson's intelligibility, Kenworthy's intelligibility and understandability, and Jenkins' intelligibility.
Field (2003, p. 35)	**Comprehensibility** – "the extent to which a speaker's message is understandable, thanks to a combination of appropriate vocabulary, correct (or approximate syntax), sensitive pragmatics and mastery of basic features of pronunciation."	Similar to Smith and Nelson's comprehensibility and James' intelligibility.

TAB. 2 shows that every definition proposed by each of the scholars is similar to at least one other definition proposed by a different scholar. This means that the different terms proposed do not necessarily imply different definitions.

Considering the content of the concepts, it is possible to note that each scholar refers to at least one out of the three levels proposed by Smith and Nelson (1985). The first one, word and utterance recognition, is mentioned from 1950 to 2003 with the term *intelligibility*, by Catford (1950), Smith and Rafiqzad (1979), Smith and Nelson (1985), Kenworthy (1987), Bamgbose (1998), Jenkins (2000) and Field (2003). The second level, word and utterance meaning, was introduced by Smith and Nelson in 1985, and is referred to with the adoption of different terms by different scholars: while Smith and Nelson (1985) and Field (2003) use *comprehensibility*, Bamgbose (1998) and James (1998) use *intelligibility*. The third level, the listener's grasping of the speaker's intentions, was proposed in 1950 by Catford, and

has the highest variety of terms adopted by different scholars. These terms include *effectiveness* by Catford in 1950; *interpretability* by Smith and Nelson in 1985; *communication* by Kenworthy in 1987; *intelligibility* by Bamgbose in 1998; and *communicativity* by James in 1998. The number of levels included in the concepts can be regarded as a criterion which allows another way of comparing the definitions.

The diversity in the terminologies for intelligibility, the similarities existing among the various definitions proposed from 1950 to 2003, and the different levels in the use of language the concepts presented here refer to constitute aspects which indicate, in my view, how complex the measurement of intelligibility is. Owing to such complexity, it is important to define what the term intelligibility encompasses in any piece of research.

Recommendations for research

Although intelligibility is regarded as being very complex to measure, two different types of data collection can be adopted to assess foreign language learners' intelligibility.

The first involves the collection of genuine speech data interaction, containing breakdown in communication. Speakers could be of similar first language, such as groups of Brazilian learners of a foreign language, communicating with different groups of listeners, such as several groups of L2 speakers from different first languages, and native speakers. In adopting this data collection type, attention would need to be given to the interpretation of the cause of the communication breakdown. It would be necessary to ensure the linguistic level – phonological, lexical and/or grammatical – at which it occurred. This type of data collection has already been adopted by Jenkins (2000) with dyads of non-native speakers of English from different L1s.

The second involves the selection of samples produced by foreign language learners. This data collection enables the control of variables which contribute to facilitating or impeding intelligibility. The samples would be presented to different groups of listeners, and they would be asked to rate the samples for intelligibility and/or answer comprehension questions. The speakers' variables could be controlled, with the L2 samples containing only one type of error: phonological, grammatical or lexical. The listeners' variables could also be controlled, with distinctions made between listeners who have experience in language teaching or linguistic studies, and those who do not. A distinction could also be made between listeners who are

familiar with the speakers' accent and those who are not. This type of data collection has already been adopted by Thompson (1991) and Cruz (2004). In the former, experienced and inexperienced raters judged the degree of foreign accent in the speech of Russian speakers of English. In the latter, British listeners unfamiliar with the English pronunciation of Brazilians rated the pronunciation intelligibility of Brazilian learners.

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