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■ RESEARCH ARTICLES ON ENGLISH PHONETICS AND PHONOLOGY PUBLISHED IN NORTHERN EUROPE FROM 2002 TO 2022: A SYSTEMATIC ANALYSIS

OLEKSANDR KAPRANOV¹

NLA University College

Campus Oslo, Norway

Rad predstavlja sistematičnu analizu naučnih radova koji se bave fonetikom i fonologijom engleskog jezika objavljenih u severnoevropskim naučnim časopisima iz oblasti primenjene lingvistike, teorijske lingvistike i izučavanja engleskog kao stranog jezika (EFL) u periodu od 2002. do 2020. godine. Korpus časopisa u ovoj sistematičnoj analizi sastojao se od brojnih recenziranih publikacija koje imaju zajednički fokus na aspekte engleske fonetike i fonologije u kontekstu engleskog kao stranog jezika. Primenom smernica za sistematični pregled (Moher *et al.* 2009) na korpus naučnih radova, ustanovljeno je da radovi o engleskoj fonetici i fonologiji imaju pretežno jednog autora, da su fokusirani na podučavanje izgovora engleskog kao stranog jezika i zasnovani na kvantitativnoj metodologiji sa različitim tehnikama analize korpusa.

Ključne reči: engleski, fonologija, fonetika, naučni radovi, Severna Evropa, sistematična analiza.

1. INTRODUCTION

The article presents a study that attempts to analyse research articles (RAs) written on the topics that involve English phonetics and phonology, which have been published by peer-reviewed scientific journals in Northern Europe, in particular, Denmark, Finland, Norway, and Sweden. The focus of the study on Northern Europe is inspired by Čubrović and Paunović (2012: 3), who suggest that there is a need to synthesise “the diverse perspectives, approaches and interests of scholars working in the field of English Phonetics worldwide”. In unison with the suggestion, the study provides a summary of the results obtained by the linguists and phoneticians associated with Northern Europe. Hence, the Nordic orientation of the study might offer novel insights into the state-of-the-art research in English phonetics and phonology from the Northern European perspective.

1 Kontakt podaci (E-mail): oleksandr.kapranov@nla.no

Additionally, the study draws inspiration from Baker and Murphy's (2011: 29) observation that research into English phonetics and phonology, especially in the context of the teaching of English as a Foreign Language (EFL), seems to be limited. Their view is, to an extent, echoed and further specified by Pennington (2021), who posits that

Although the amount of research on pronunciation teaching is steadily increasing, there is still much more to explore about the effects and effectiveness of different approaches at different stages of learning and levels of proficiency. (Pennington 2021: 3)

In the wake of Pennington (2021), one of the aspects to be explored in the context of research on English phonetics and phonology involves a summary of different approaches to the state-of-the-art research that is published in Northern Europe. Currently, there are no studies that provide a systematic analysis, or in other terminology, a systematic review (Paré *et al.* 2015) of research on English phonetics and phonology that has been written and published in Northern Europe (Cabrelli Amaro/Wrembel 2016). Assuming that in 2022 there seem to be no studies that address this issue systematically, the present investigation might offer a novel and, hopefully, relevant insight into the state-of-the-art research in English phonetics and phonology associated with Northern European scholars and scientific outlets. Arguably, the novelty of the study is as follows. Firstly, the study bridges the current gap in the literature. Secondly, it applies the theoretical tenets of the systematic review reporting that have been formulated by the PRISMA Group (Moher *et al.* 2009) in order to identify common research themes in English phonetics and phonology in the Northern European state-of-the-art literature.

Against the aforementioned background, the study sets out to collect a corpus of RAs published in Northern Europe in order to answer the following research question (RQ):

RQ: What are the research themes and linguo-didactic foci in the corpus of RAs on English phonetics and phonology published by peer-reviewed journals in applied linguistics, theoretical linguistics, and EFL studies in the period of time from 2002 to 2022?

In addition, the specific aims of the study are to synthesise the meta-data associated with i) the RAs' authors and ii) the distribution of RAs in the corpus in diachrony. Guided by the RQ and the specific aims of the study, the article is organised as follows. First, an outline of the prior studies on systematic reviews in EFL contexts is provided in section 2. It is followed by the introduction of the present study, inclusive of the description of the corpus, research methodology, results and their discussion in section 3. The article concludes with the summary of the findings and their implications for linguistic theory and teaching practice.

2. AN OUTLINE OF THE PRIOR LITERATURE

As previously mentioned, there are no current studies that systematise research on English phonetics and phonology published in Northern Europe (Kapranov 2020). There is, however, a burgeoning line of publications that involve systematic reviews of the prior literature that focuses on i) the role of phonology in EFL contexts (Huo/Wang 2017; Seyedabadi *et al.* 2015), ii) EFL pronunciation instruction (Barrera Pardo 2004; Thomson/Derwing 2015; Zárata 2020), and iii) English pronunciation from theoretical perspectives (Foote/Trofimovich 2017; Pawlak/Szyszkka 2018).

Several systematic reviews problematise the application of RAs in English phonetics and phonology to the realistic EFL settings (Huo/Wang 2017; Seyedabadi *et al.* 2015). In particular, having systematically reviewed 15 RAs written on the topic of phonologically based EFL instruction, Huo and Wang (2017) point to the beneficial effects of phonologically based EFL instruction as far as young EFL learners are concerned. However, they indicate that there is not enough evidence to support the facilitative effects of phonologically based instruction in the teaching and learning of reading (*ibid.*). Similarly to Huo and Wang (2017), Seyedabadi *et al.*'s (2015) systematic review concerns various aspects of English phonetics and phonology in the EFL teaching and learning process. Based upon prior literature, Seyedabadi *et al.* (2015) have aggregated evidence of positive effects of phonological awareness in various EFL learning contexts.

The focus on pronunciation instruction in EFL settings is emphasised in the systematic review conducted by Barrera Pardo (2004), Thomson and Derwing (2015), and Zárata (2020). In total, Barrera Pardo's (2004) review involves 25 RAs that explore the effect of pronunciation instruction and their implications for the EFL teaching and learning process. Proceeding from the review, Barrera Pardo (2004) demonstrates that success in EFL pronunciation learning is closely linked to several exposure factors, for instance language immersion and substantial communication with the native speakers of English. Concluding the systematic review, Barrera Pardo (2004) argues that EFL instructors should facilitate EFL learners' exposure to real-life language situations in order to improve their pronunciation and communicative skills. Also set within an applied linguistic paradigm, Thomson and Derwing's (2015) systematic review is comprised of 75 RAs on EFL pronunciation. Thomson and Derwing (2015) indicate that the RAs in their corpus set native-like pronunciation as the target to be achieved by EFL learners. Another finding that follows from their systematic review points to the academic authors' attention to computer-assisted pronunciation teaching, which is employed in the acquisition of English segmentals. Additionally, Thomson and Derwing (2015) posit that whilst many of the RAs involve reading-aloud tasks, few of them deal with measuring spontaneous speech. Importantly, Thomson and Derwing (2015) note that some studies are characterised by a lack of control groups, which may discredit the positive instructional gains reported in the corpus. Just like the systematic reviews by Barrera Pardo (2004), and Thomson and Derwing (2015), Zárata (2020) reviews the effectiveness of pronunciation instruction, provides a synopsis of research on English pronunciation and examines EFL teachers' beliefs and training in EFL pronunciation instruction. Zárata (2020) concludes that there is a need to design classroom-based studies on EFL pronunciation paying particular attention to the use of digital technologies

and applying methodological rigour in order to enable future replications of the studies described in the corpus.

The systematic reviews by Foote and Trofimovich (2017), and by Pawlak and Szyszka (2018) seek to systematise RAs in phonetics and phonology from a number of theoretical perspectives. Specifically, Foote and Trofimovich (2017) analyse prior research for the presence of theoretical approaches to language learning and examine their relevance to EFL pronunciation. Their systematic survey is suggestive of the linguo-didactic considerations associated with the intelligibility principle, which is problematised as the extent to which an EFL learner's speech should be intelligible. Foote and Trofimovich (2017) contend that the intelligibility principle is exacerbated by the concomitant construal of comprehensibility that involves an EFL learner's perception of the ease and/or difficulty of understanding the utterance. The systematic review conducted by Foote and Trofimovich (2017) factors in complex relationships between an EFL learner and an interlocutor, who may not always be a native speaker of English, but rather, another non-native speaker in the lingua franca context.

In the same vein, Pawlak and Szyszka (2018) provide a systematic review of previous studies on pronunciation learning strategies. They pay specific attention to reviewing EFL learners' preferences concerning the use of pronunciation learning strategies. Pawlak and Szyszka (2018) suggest that whilst the majority of studies involve traditional approaches to pronunciation learning in EFL contexts, there are also RAs that explore metacognitive, affective and/or social approaches towards the application of pronunciation learning strategies. Pawlak and Szyszka's (2018) systematic review has revealed that the use of pronunciation learning strategies is related to such variables, as an EFL learner's gender, the level of anxiety, and learning styles. Generalising the findings of their systematic review, Pawlak and Szyszka (2018) conclude that pronunciation learning seems to be effective in explicit instructional settings, especially when it is delivered in conjunction with pedagogic interventions.

It follows from the outline of the prior literature that there are several systematic reviews of the current research in English phonetics and phonology that involve a variety of EFL settings (Barrera Pardo 2004; Seyedabadi *et al.* 2015; Thomson/Derwing 2015; Foote/Trofimovich 2017; Huo/Wang 2017; Pawlak/Szyszka 2018; Zárate 2020). It could be summarised that whilst the aforementioned systematic reviews are comprehensive and insightful, they, nevertheless, do not capture the major research trends and linguo-didactic foci associated with the applied linguistic landscape in Northern Europe. Seeking to bridge the current gap in scholarship, the study, which is further presented and discussed in the article, focuses specifically on systematising the RAs that i) have been written by the authors who are associated with Northern Europe, and ii) published in the scientific peer-reviewed outlets there.

3. THE PRESENT STUDY

The present study aims at collecting a corpus of relevant RAs and systematising them in line with the principles of a systematic research investigation that have been proposed by the PRISMA Group (Moher *et al.* 2009). Specifically, the study sets out to

uncover the research themes and linguo-didactic foci in the corpus of RAs on English phonetics and phonology published by peer-reviewed journals in applied linguistics, theoretical linguistics, and EFL studies in the period of time from 2002 to 2022 (see the RQ in the article's introduction). In addition to the RQ, the specific research aims of the study consist in analysing i) the authors' meta-data and ii) the distribution of the RAs in diachrony.

The corpus of the study is comprised of the peer-reviewed journals in applied linguistics, theoretical linguistics, and EFL studies that are associated with Northern European higher education institutions (HEIs): *Acta Didactica Norge* (Norway), *Apples - Journal of Applied Language Studies* (Finland), *Globe: A Journal of Language, Culture and Communication* (Denmark), *Hermes - Journal of Language and Communication in Business* (Denmark), and *Nordic Journal of English Studies* (Sweden). It should be specified that there are many more peer-reviewed linguistics journals in Northern Europe that are not necessarily associated with applied linguistics and EFL studies. In order to compile a relatively homogeneous corpus, however, the choice of *Acta Didactica Norge*, *Apples - Journal of Applied Language Studies*, *Globe: A Journal of Language, Culture and Communication*, *Hermes - Journal of Language and Communication in Business*, and *Nordic Journal of English Studies* is explained by their common focus on EFL aspects of English phonetics and phonology. In line with the PRISMA guidelines (Moher et al. 2009), the inclusion criteria of RAs published by the aforementioned journals are formulated in the manner that is summarised in Table 1 below.

#	Criteria	Inclusion
1	The type of publication is a research article (RA)	+
2	The article is published in one of the following journals: <i>Acta Didactica Norge</i> , <i>Apples - Journal of Applied Language Studies</i> , <i>Globe: A Journal of Language, Culture and Communication</i> , <i>Hermes - Journal of Language and Communication in Business</i> , <i>Nordic Journal of English Studies</i>	+
3	The journal is peer-reviewed	+
4	The journal is published in one of the following countries: Denmark, Finland, Norway, and Sweden	+
5	The article is published in the open access format	+
6	The article is published in English	+
7	The article's author is a Dane/Finn/Norwegian/Swede, or an author, who is affiliated with Denmark/Finland/Norway/Sweden by means of working/conducting research there	+
8	In case of multiple authorship, at least one co-author hails from Northern Europe and/or an author, who is affiliated with Denmark/Finland/Norway/Sweden by means of working/conducting research there	+
9	The article addresses a topic in English phonetics and/or phonology. The topic may be embedded in the context of another research direction associated with English linguistics	+

10	The article involves, at least, one of the following keywords in the context of English phonetics and/phonology: <i>accent/accents, articulation, consonants/consonants, fluency, fundamental frequency, intonation, intonation contour, listening, listening skills, mispronunciation, phonetics, phonetic repertoire, phonology, pronunciation, oral communication, oral comprehension, oral proficiency, oral skills, pronunciation, pronunciation error/errors, pitch, rhythm, segmental/segmentals, sound/sounds, speech, speech fluency, speech production, stress, stress patterns, suprasegmental/suprasegmentals, syllable/syllables, vowels/vowels</i>	+
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Table 1. The Corpus Inclusion Criteria

It should be noted that RAs on English phonetics and/or phonology written by academic authors whose backgrounds are not associated with Northern Europe are excluded from the corpus. In addition, the corpus collection factors out RAs in printed books, general interest periodicals and newspapers. Importantly, the corpus collection excludes RAs on English phonetics and/or phonology available in the peer-reviewed journals that are published outside of Northern Europe.

Guided by the aforementioned inclusion criteria, the corpus is comprised of the RAs whose descriptive statistics are summarised in Table 2 below.

#	Descriptive Statistics	Value
1	The total number of RAs	19
2	The total number of words	173 884
3	Mean words	9151.8
4	Standard deviation	2043.6
5	Minimum	4550
6	Maximum	12900

Table 2. The Descriptive Statistics of the Corpus

The study involves the following procedure of the corpus analysis. The RAs were searched online for the keywords listed in #10 in Table 1. The online search was carried out on the respective journals' websites. Once the relevant RA was identified, it was downloaded and converted into a Word file. The RA's descriptive statistics comprised of the total number of words, mean words, standard deviations, minimum words and maximum words were computed in the computer program Statistical Package for Social Sciences, SPSS (IBM 2011). Thereafter, the RAs in the corpus were coded in SPSS in accordance with the guidelines developed by the PRISMA Group (Moher *et al.* 2009). In particular, the RAs were coded for the year of publication, the number of authors and/or co-authors, the author/authors' gender, and the author/authors' affiliation. Then, the research themes and linguo-didactic foci were extracted from the RAs in the corpus on the grounds of the authors'/author's reference to them in each respective RA. The data concerning the research themes and linguo-didactic foci were coded in SPSS and summarised in the subsequent section of the article.

3.1. RESULTS AND DISCUSSION

Prior to discussing the RQ in the study (see the introductory part of the article), let us dwell upon the specific research aims that are associated with the authors' meta-data and the distribution of the RAs in diachrony. The systematic analysis of the corpus has yielded the results concerning the authors' meta-data that are summarised in Table 3 below.

#	Meta-Data	Descriptive Statistics
1	The total number of authors	22 (100 %)
2	The total number of female authors	14 (63.6 %)
3	The total number of male authors	8 (36.4 %)
4	The total number of single-authored articles	16 (84.2%)
5	The total number of co-authored articles (two authors)	3 (15.8%)
6	The author's/authors' affiliation by university	
	Stockholm University (Sweden)	4 (18.2%)
	The University of Jyväskylä (Finland)	3 (13.6%)
	The University of Gothenburg (Sweden)	2 (9.1%)
	The University of Oslo (Norway)	2 (9.1%)
	The University of Helsinki (Finland)	1 (4.5%)
	Aalborg University (Denmark)	1 (4.5%)
	Linköping University (Sweden)	1 (4.5%)
	Roskilde University (Denmark)	1 (4.5%)
	The University of Bergen (Norway)	1 (4.5%)
	The University of Copenhagen (Denmark)	1 (4.5%)
7	The author's/authors' affiliation by country	
	Sweden	8 (36.4%)
	Finland	5 (22.7%)
	Denmark	5 (22.7%)
	Norway	4 (18.2%)

Table 3. The Authors' Meta-Data

Judging from Table 3, the majority of RAs in the corpus could be approximately described as single-authored by a female researcher, who is associated with a Swedish HEI. Interestingly, nearly all RAs that are written by Norwegian researchers and published in Norway belong to the male academic writers. Irrespective of the gender variable, the most productive academic authors who publish RAs on English phonetics and phonology are affiliated with Stockholm University (Sweden) and The University of Jyväskylä (Finland), respectively. Presumably, the frequency of the RAs by the academic authors who are affiliated with these HEIs is concomitant with the respective HEIs'

scientific schools and programmes that prioritise research in the scientific field of English phonetics and/or phonology. However, as regards the quotation frequency, the results of the systematic review point to the Danish academic writers as the most quoted in the corpus. In particular, it has been established that whilst the total number of quotations of the RAs in the corpus on Google Scholar is 520 (mean = 32.5, standard deviation = 54.8, minimum = 0, maximum = 217), the total number (N) of the Danish academic writers' quotations is 252. As to the frequency of quotation on Google Scholar, they are followed by Swedes (N = 165), Norwegians (N = 51), and Finns (N = 37). Apparently, there are no Icelandic academic writers, who publish research on English phonetics and/or phonology in EFL contexts in the Northern European peer-reviewed outlets. Also, it should be observed that the systematic review analysis has yielded no RAs on the topic that are published by academic writers associated with HEIs that are located on the Faroe Islands (a Danish dependency) or on the Aland Islands, an autonomous region in Finland.

In addition to the meta-data associated with the RAs' authors, it should be, perhaps, reflected upon a relatively small sample of RAs in the study (N = 19). The small size of the corpus could be accounted by the stringent inclusion criteria that have factored out a substantial body of research written by non-Northern European academic writers. However, in addition to this quite obvious explanation, let us also consider the corpus size in other systematic reviews. For instance, Huo and Wang's (2017) corpus consists of 15 RAs, the corpus collected by Barrera Pardo (2004) involves 25 RAs, and Pawlak and Szyszka's (2018) review summarises under 50 RAs. The observation concerning the size of the corpus in the present and prior systemic reviews begs the question whether or not research in English phonetics and phonology might not be exceptionally prolific these days, at least, in the Northern European research contexts.

The systematic review of the corpus has revealed that the distribution of the RAs varies in diachrony, as illustrated by Figure 1 below.

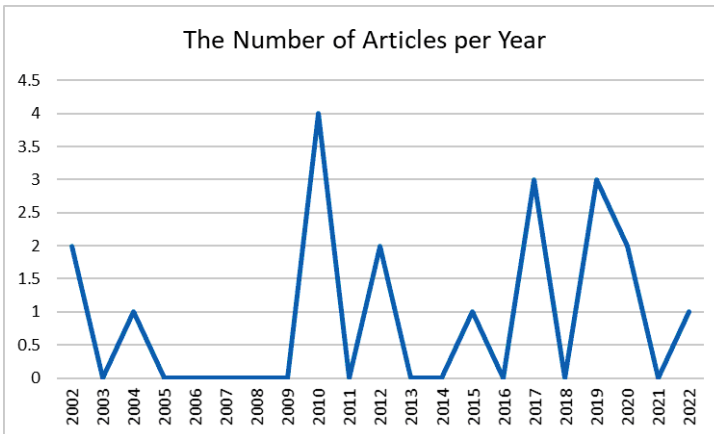


Figure 1. The Distribution of RAs on English Phonetics and Phonology in Diachrony

It should be noted, however, that the uneven distribution of RAs in diachrony (see Figure 1) is not a unique phenomenon in academic publishing. For instance, a systematic

research review of the corpus of RAs on digitalisation in Norwegian EFL settings has demonstrated that there are several sharp increases associated with a relatively high publication frequency of RAs on the topic of digitalisation, which are in contrast to the periods of time in diachrony that are marked by either substantial decreases in the number of RAs or absence of RAs on the topic (Kapranov, forthcoming). In the present data, the absence of RAs on English phonetics and/phonology in 2003, 2005–2008, 2013–2014, and 2018 could be suggestive of the Northern European researchers' insufficient attention to this problem area. However, the sporadic increases in the number of RAs in 2010, 2017, and 2020 could be concomitant with, for example, a heightened interest in the topic, which does not seem to be consistent (see Figure 1). In line with the findings, we could assume that the RAs on English phonetics and/or phonology are infrequently published by the Northern European scientific outlets.

Having outlined the general profile of the academic writers who conduct research in English phonetics and/or phonology, let us discuss the RQ in the study, which seeks to shed light upon a range of possible research themes and linguo-didactic foci in the corpus of RAs on English phonetics and phonology published in the period of time from 2002 to 2022.

3.1.1. THE RESEARCH THEMES AND LINGUO-DIDACTIC FOCI OF RAS IN THE CORPUS

The systematic analysis of the present corpus has pointed to two groups of RAs as far as their research themes and linguo-didactic foci are concerned. Judging from the analysis, there is a group of RAs whose foci appear to be associated exclusively with English phonology and/or phonetics (see Table 4). Another group of RAs, however, seems to embed the topic of English phonetics and/or phonology in a range of other research foci (see Table 5). Table 4 below summarises the results of the systematic review in terms of RAs' exclusive research themes associated with English phonetics and phonology, as well as presents their linguo-didactic foci, provided that they are formulated, at least, implicitly, in the RAs. It should be observed that the summary in Table 4 follows the chronological order from 2002 to 2022.

#	RAs' Author/ Authors	The RAs' Research Themes and Linguo-Didactic Foci
1	Fabricius (2002)	Theme: The exploration of the current and changing status of Received Pronunciation (RP) in the wider sociolinguistic landscape of Britain Linguo-didactic focus: The need to facilitate the choice of RP as a model variety of English for Danish EFL learners
2	Rydland (2002)	Theme: The historical development of Middle English /I/, /ε/, /ʊ/ + intervocalic /r/ in Northumbrian English Linguo-didactic foci: not formulated
3	Simensen (2010)	Theme: The concept of speech fluency in EFL is regarded from different perspectives Linguo-didactic focus: The discussion of speech fluency in EFL assessment and lesson planning, including the choice of appropriate classroom activities

4	Tergujeff (2012)	<p>Theme: The teaching of English pronunciation is explored in Finnish EFL contexts by means of analysing responses from EFL teachers working in Finland</p> <p>Linguo-didactic foci: The role of English pronunciation in EFL teacher training, teaching materials and methods, assessment of pronunciation, status of pronunciation teaching, and a pronunciation model</p>
5	Sundkvist (2012)	<p>Theme: The investigation and discussion of pulmonic ingressive speech in the Shetland Isles in order to further understand the current distribution of ingressive speech in the Shetland speech community</p> <p>Linguo-didactic focus: A potential for the revival of the local dialect on the Shetland Islands is implied</p>
6	Jensen and Thøgersen (2017)	<p>Theme: The investigation of the effect of a foreign accent in English on the understanding of spoken texts in different contexts</p> <p>Linguo-didactic focus: The methodological implications of accented speech in English is relevant for English-Medium Instruction (EMI) at Nordic universities</p>

Table 4. The RAs' Exclusive Research Themes Associated with English/EFL Phonetics and/or Phonology and Linguo-Didactic Foci

It follows from Table 4 that the RAs, which are marked by a central and explicit focus on the research themes associated with English phonetics and/or phonology, seem to pay attention to the socio-linguistics peculiarities of English varieties (Fabricius 2002; Sundkvist 2012), whereas the studies on segmental properties of English in the diachrony are less numerous (Rydland 2002). Clearly, there is a substantial research direction that involves a linguo-didactic turn (Simensen 2010; Tergujeff 2012; Jensen/Thøgersen 2017), which is employed in the discussion of fluency, foreign-accented speech, and assessment of oral skills. To an extent, these findings echo those of Barrera Pardo (2004), who has discovered that the studies on English phonetics have an explicit connection to EFL instructional contexts and mirror real-life communicative concerns and situations that an EFL learner might encounter. In addition, the RAs by Jensen and Thøgersen (2017), Simensen (2010), and Tergujeff (2012) resonate with the prior literature (Foote/Trofimovich 2017; Pawlak/Szyszkka 2018) in the sense that they strive to provide a solid theoretical footing as far as the nexus between English phonetics and the EFL theories are concerned.

A prominent linguo-didactic approach towards research issues in English phonetics and/or phonology is evident from the RAs that appear to embed phonetics (and very rarely phonology in its pure form) into the applied EFL agenda. These RAs are outlined in Table 5.

#	RAS' Author/ Authors	The RAS' Research Themes and Linguo-Didactic Foci
1	Lindström (2004)	Theme: Phonology is embedded into the main theme of determining the nature and degree of English influence on contemporary spoken Swedish on the phonological and morphological levels Linguo-didactic focus: Attention to the language transfer and cross-linguistic influences on Swedish as the first language (L1)
2	Hellekjær (2010)	Theme: EFL students' oral comprehension and listening skills are embedded into the main theme of lecture comprehension in the English-Medium instructional settings Linguo-didactic focus: The improvement of the quality of lecturing in English in EMI settings as well as the lecturers' and students' English proficiency
3	Björkman (2010)	Theme: EFL students' speech production skills are embedded into the study on the role of pragmatic strategies in content lectures where English is a lingua franca Linguo-didactic focus: The importance of pragmatic awareness of the target language usage in lecturing in English
4	Drew and Pedersen (2010)	Theme: Pronunciation and fluency are embedded into the use of Readers Theatre in EFL lessons with groups of academically challenged EFL students in a Norwegian lower secondary school. Linguo-didactic focus: A facilitative effect of Readers Theatre as a motivational variable
5	Jensen (2015)	Theme: A comparison between two quantitative corpus studies of Tyneside English has revealed an involvement of socio-psychological processes that link linguistic forms to the local Tyneside area and speaker identity Linguo-didactic focus: The importance of corpora as a valuable resource in the study of varieties of English
6	Olkkonen (2017)	Theme: Speech fluency in EFL is embedded into the investigation of relationship between fluency of lexical access and EFL proficiency Linguo-didactic focus: The assessment of fluency in EFL should be approached with caution, given that speech fluency does not necessarily presupposes accuracy
7	Pollari (2017)	Theme: Pronunciation is mentioned within the central research theme of EFL assessment Linguo-didactic focus: Assessment in EFL could be a cause of considerable anxiety to EFL students
8	Erman and Lewis (2019)	Theme: Speech production is mentioned within the central research theme of the between-group comparison of English vocabulary Linguo-didactic focus: More emphasis on vocabulary knowledge should be placed in EFL speech production

9	Borger (2019)	Theme: Oral comprehension in the form of listening is mentioned within the main research theme of speaking skills assessment in Swedish EFL contexts Linguo-didactic focus: Implications for speaking skills assessment that should factor in language teacher cognition, language teacher assessment literacy, and learning-oriented language assessment
10	Nilsson (2019)	Theme: Speech production in EFL in the form of oral classroom participation is mentioned as one of the factors of foreign language anxiety experienced by young EFL learners during English lessons Linguo-didactic focus: new perspectives on research methodology with respect to young EFL learners' foreign language anxiety
11	Sanden (2020)	Theme: Speech production in the form of employer-employee communication is mentioned within the research theme that involves Danish manufacturing companies and their communication with the blue-collar employees located in foreign production units Linguo-didactic focus: Attention in corporate communication, among other forms, in the oral mode, between office and blue collar employees
12	Paakki (2020)	Theme: Speech production in EFL is embedded into a broad research theme associated with self-reported experiences of speaking English by intermediate EFL speakers Linguo-didactic focus: The importance and relevance of normativity in overcoming the difficulties oral communication in English
13	Tuomainen (2022)	Theme: Speech production in English is embedded into a broader research theme of university lecturers' communicative skills in EMI settings in Finland Linguo-didactic focus: The necessity to increase awareness of the use of English by EMI lecturers in order to enhance the quality of their communication and teaching

Table 5. The RAs' Whose Research Themes Mention and/or Indirectly Refer to English/ EFL Phonetics and/or Phonology and Linguo-Didactic Foci

It is evident from Table 5 that various aspects of English phonetics and/or phonology are mentioned in the broader context of instructional issues that are, essentially, related to the practicalities of the EFL teaching and learning processes. Judging from Table 5, research issues in English phonetics and/or phonology exhibit a high level of combinability with other research themes of applied linguistic orientation, which range from an EFL learner's anxiety (Pollari 2017) to an EMI lecture's communicative style during the lecture delivery (Björkman 2010; Tuomainen 2022). It could be argued that in the RAs, which are summarised in Table 5, the issues in English phonetics and phonology are acting, metaphorically, in disguise of other, perhaps, more relevant and topical research themes (Kapranov 2019). Such an approach is not unique to the Northern European research agenda, given that a number of systematic reviews (Seyedabadi *et al.* 2015; Huo/Wang

2017; Foote/Trofimovich 2017) have uncovered a robust tendency of combining some aspects of research in English phonetics and/or phonology with a strong focus on the EFL teaching and learning processes that involve, for instance, reading (see Huo/Wang 2017) and oral comprehension (see Foote/Trofimovich 2017), respectively.

As far as the methodology and instruments in the RAs in the corpus are concerned, we can observe that eight RAs (42.1%) employ quantitative methodology, seven RAs (36.8%) involve qualitative methodology, and four RAs (21.1%) use mixed methods (i.e., a combination of qualitative and quantitative methodology). These findings are summarised in Table 6.

#	RAs	Methodology
1	Fabricius (2002)	Qualitative: A review and systematisation of prior research
2	Rydland (2002)	Qualitative: A phonemic analysis of the Orton Corpus
3	Lindström (2004)	Quantitative: An analysis of written corpora
4	Björkman (2010)	Quantitative: A morphosyntactic analysis of oral corpora
5	Drew and Pedersen (2010)	Mixed: An evaluative observational analysis of the teacher's logs and lessons
6	Hellekjær (2010)	Quantitative: A survey analysis
7	Simensen (2010)	Qualitative: A review and systematisation of prior research
8	Tergujeff (2012)	Mixed: A survey analysis
9	Sundkvist (2012)	Qualitative: An observational analysis of the participants' speech
10	Jensen (2015)	Quantitative: A standard variationist annotation of the previously compiled written corpora
11	Jensen and Thøgersen (2017)	Quantitative: An analysis of listening comprehension tests
12	Olkkonen (2017)	Quantitative: An analysis of inaccuracies in word recognition and retrieval
13	Pollari (2017)	Mixed: A component analysis and regression analysis of the questionnaire data, a qualitative analysis of the questionnaire data
14	Erman and Lewis (2019)	Quantitative: Analyses of oral and written corpora
15	Borger (2019)	Qualitative: A content analysis of the participants' ratings
16	Nilsson (2019)	Quantitative: A questionnaire analysis
17	Sanden (2020)	Qualitative: An analysis of semi-structured interviews and document data
18	Paakki (2020)	Mixed: A content analysis of semi-structured interviews
19	Tuomainen (2022)	Qualitative: A qualitative analysis of written reflections

Table 6. Methodology in the Corpus

Based upon the description of methodology summarised in Table 6, it seems possible to generalise that the majority of the RAs in the corpus involve various techniques of corpus analysis (26.3%), survey and questionnaire analyses (21.1%), review of prior research (10.5%), interview analysis (10.5%), content analysis (10.5%), observational analysis (10.5%), and assessment analysis (10.5%).

In terms of the participants, the RAs in the corpus involve 1 798 participants in total (mean = 128.4, standard deviation = 160.4). Notably, only four RAs (21.1%) do not report the involvement of participants in the study design, whereas one RA (5.3%) does not specify the number of participants tested. These findings are presented in Table 7 below.

#	RAs	N of Participants	Category of Participants
1	Fabricius (2002)	No	No
2	Rydland (2002)	No	No
3	Lindström (2004)	No	No
4	Björkman (2010)	13	University lecturers who conduct EMI courses
5	Drew and Pedersen (2010)	36	Lower secondary school EFL learners
6	Hellekjær (2010)	411	University students who are EFL speakers
7	Simensen (2010)	No	No
8	Tergujeff (2012)	103	EFL teachers
9	Sundkvist (2012)	The number is not specified	Native speakers of English who live on the Shetlands Islands
10	Jensen (2015)	121	Native speakers of English who live in Tyneside area
11	Jensen and Thøgersen (2017)	20	University students who are EFL speakers
12	Olkkonen (2017)	563	Primary and secondary school EFL learners
13	Pollari (2017)	146	Upper secondary school EFL learners
14	Erman and Lewis (2019)	30	University students who are EFL speakers and their controls who are native speakers of English
15	Borger (2019)	31	EFL teachers
16	Nilsson (2019)	225	Primary school EFL learners
17	Sanden (2020)	12	EFL speakers who work at international companies in Denmark
18	Paakki (2020)	56	EFL speakers whose first languages are Finnish and Japanese, respectively
19	Tuomainen (2022)	31	University lecturers who conduct EMI courses

Table 7. The Number of Participants and Categories of Participants

As far as the categories of participants are concerned, 11 RAs in the corpus are conducted with the cohorts of participants who are associated with the education sector either by means of working there as EFL instructors (four RAs, 21.1%) or studying at primary and/or secondary school (four RAs, 21.1%) and university (three RAs, 15.8%). Four RAs in total refer to the category of participants outside of the education sector. In particular, native speakers of English are reported as participants in two RAs (10.5%), whereas adult EFL speakers, who are not related to the education sector, are mentioned in two RAs (10.5%).

4. CONCLUSIONS AND LINGUO-DIDACTIC IMPLICATIONS

The article has introduced and discussed a systematic review of the corpus of RAs on English phonology and phonetics published by peer-reviewed scientific outlets in Northern Europe (Denmark, Finland, Norway, and Sweden). The results of the systematic review of the corpus point to the current trends in research in English phonetics and/or phonology in Northern Europe published within the period of time 2002-2022. It can be summarised that a typical RA on a topic in English phonetics and/or phonology is predominantly related to the EFL settings. It is single-authored and, most likely, written by a female researcher associated with a Swedish HEI. Whilst Swedish female researchers appear to dominate the field of research in English phonetics and phonology published by Northern European scientific peer-reviewed journals as far as the number of publications is concerned, RAs written by the Danish academic writers are the most frequently quoted ones (48.4%).

Several other generalisations could be drawn from the present study. First, judging from the findings, RAs that focus exclusively on the issues in English phonology and/or phonetics are not numerous (31.6%). Second, they seem to be unevenly distributed in the diachrony between 2002 and 2022, which could be suggestive of the insufficient amount of attention awarded to the research agenda in English phonetics and/or phonology by the Northern European scientific community. Third, it can be observed that the current RAs on English phonetics and phonology, which are published in Northern Europe, do not seem to involve the problematics posed by such features as articulation, intonation, rhythm, segmentals, and stress. Fourth, instead of the apparent lack of focus on the aforementioned features, a Northern European perspective of English phonetics and phonology involves, presumably, an applied linguistic approach to the EFL teaching and learning as its focal point. The Northern European agenda appears to involve various combinations of English phonetics and/or phonology with a welter of research themes that are typically related to EFL didactics, assessment, communicative skills, and oral comprehension. Fifth, the current Northern European perspective of English phonetics and/or phonology is corpus driven and, as such, is concomitant with a quantitative approach to the description of linguistic phenomena.

As far as the linguo-didactic implications of the present study are concerned, the following could be formulated. It could be suggested that the Northern European research agenda exhibits an apparent trend of problematising English phonetics and/or phonology in conjunction with other focal points in applied linguistics and EFL

studies. Regarding the current applied linguistic bias in the Northern European research landscape, the author of the article concurs with Pawlak and Szyszka (2018), who indicate that any future research agenda in English phonetics and phonology should factor in an EFL learner's realistic and classroom based problems associated with English pronunciation and facilitate the process of deep learning of the systemic properties of English phonetics and phonology that would be of practical value to an EFL learner and an EFL educator alike. Concurrently with the aforementioned implications that seem to be relevant to applied linguistics and EFL studies, it appears possible to suggest that there is ample room for theoretical studies in English phonetics and phonology that might reflect a Northern European perspective that could be associated with research on socio-linguistics peculiarities of English varieties as well as segmental properties of English, as previously demonstrated by Fabricius (2002), Rydland (2002), and Sundkvist (2012).

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SUMMARY

RESEARCH ARTICLES ON ENGLISH PHONETICS AND PHONOLOGY PUBLISHED IN NORTHERN EUROPE FROM 2002 TO 2022: A SYSTEMATIC ANALYSIS

The article presents a study that aims at providing a systematic analysis of research articles (RAs) on English phonetics and phonology that have been published by Northern European peer-reviewed journals in applied linguistics, theoretical linguistics, and studies in English as a Foreign Language (EFL) from 2002 to 2022. The corpus of the journals in the present systematic analysis was comprised of a number of peer-reviewed outlets that seemed to share a common focus on EFL aspects of English phonetics and phonology. By means of applying the systematic review guidelines (Moher et al. 2009) to the corpus of RAs, it was established that RAs on English phonetics and phonology appeared to be, predominantly, single-authored, focused on the teaching of pronunciation in EFL settings, and based upon quantitative methodology in conjunction with a variety of techniques of corpus analysis.

KEYWORDS: English, phonology, phonetics, research articles, Northern Europe, systematic analysis.

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