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Preface

We began publishing this journal in 2015. The decision to publish came from that fact that although Poland has a strong presence among second language acquisition and multilinguality researchers, which is demonstrated by both the large number of conferences and also book publications appearing every year, academic journals focusing on theoretical issues as well as practical concerns of SLA are fairly rare. The initial success of the journal is demonstrated by the fact that despite its short life, it is already indexed in several databases, including Scopus (from 2019). Thanks to this, it is also recognised by the Polish Ministry of Higher Education as a serious academic journal. We would also like to emphasize that the origins of our journal can be found in the success of the International Conference on Second/Foreign Language Acquisition which has been organized for over thirty years by the Institute of English at the University of Silesia in Katowice. It is an academic event that brings together many Polish and foreign academics every May. Its focus is on new trends in SLA research but also on fairly un-researched issues. The conference always has a leading theme, however, the scholars are invited to present their research even if it falls out of the scope of the main topic. Our journal quickly became an additional channel for publication of conference papers of high academic standard. However, we also warmly welcome other contributions, not connected with the conference itself. The whole process of paper submission is automated via an Open Journal System (OJS) and this embraces the article submission, referee assignment, and double blind-review process as well as the revisions, copyediting, and production stages. A team of experts from the University of Silesia Press are involved to make the whole procedure smooth and effective. The open access system allows for the generous availability of the most recent research in the field at no cost at all, thus promoting articles published in its issues to wide audiences.

We believe that our journal already serves an important need in projecting new and interesting research in SLA coming both from Polish and foreign scholars in the field. The journal is published bi-annually, in June and December. As mentioned earlier, each text is peer-reviewed in a double-blind referring process by referees selected by us from the Editorial Board, but also beyond. The Editorial Board itself consists of both Polish scholars and foreign experts in the area, and represents the wide range of research interests of its members. All updated information on the journal is available on the journal webpage at www.tapsla.us.edu.pl.

The present issue focuses both on general themes of SLA research, but also has a strong accent on development of different language skills in context by a bilingual/multilingual language learner/user. It opens with a text by the well-known multilinguality researcher, Gessica De Angelis entitled "The Bilingual Advantage and the Language Background Bias," in which the claim is made about the advantages that bilingualism has in various spheres of life, including healthcare and education but which also points to possible disadvantages of being bilingual. The author carefully examines evidence that comes from advanced research that demonstrates both advantages for cognitive development of a bilingual as well as its drawbacks. De Angelis points to certain discrepancies in the research evidence analysed, ascribing it to the language bias of the studies analysed. She also suggests a way forward in researching bilingual/multilingual advantage and its understanding. The following text by David Singleton entitled "Bi-/Multilingual Communication, Identity and the Posited Intermingling of Language Systems in the Mind" questions the way researchers talk about "the languages in the mind" and the conceptual dimensions of language. The author claims that knowledge of languages in the mind "is in fact in *all* its aspects highly differentiated" and to this end, he provides evidence from a variety of research areas such as language loss/recovery, bilingual/multilingual development and communication and importantly, the affective dimension of language differentiation. The following texts in the present issue take an interest in individual language skills development in EFL learners. Anna Kiszczak and Halina Chodkiewicz in their text "Text-based Student Questioning in EFL Settings: Long-term Strategy Implementation in Reciprocal Reading Tasks and Its Perception" focus on the importance of strategy training in the development of reading skills in a foreign language. The text reports on a classroom-based study the aim of which was to demonstrate whether a one-term training session on reciprocal reading would improve quality in the use of student-generated questions at different periods of time, that is, during and after the sessions. The results of the study and their discussion offer some insights as to the development of reading skills in a foreign language class, which are considered an essential aspect in FL learning achievement. The next text, "Influence of Background Knowledge and Language Proficiency on

Comprehension of Domain-specific Texts by University Students" by Justyna Kendik-Gut continues the theme of reading comprehension skills and not only the role in this process of language proficiency but also that of background knowledge. The results of a quantitative study analysed statistically (test scores) confirmed the initial hypothesis that background knowledge and the language proficiency have a strong influence on reading comprehension of domain-specific texts. The author also presents some implications deriving from the study results and their discussion for EFL classrooms. The next text by Agnieszka Ślęzak-Świat entitled "Complementarity of Reading from Paper and Screen in the Development of Critical Thinking Skills for 21st-century Literacy," though also focusing on reading skills, takes a different angle on the topic. The author observes changing reading habits due to the development of modern technology and to this end, she discusses reading preferences of 21st-century readers, whose practices embrace both reading digital texts online and traditional printed ones. The author comments on how the reading mode contributes (or otherwise) to the development of critical thinking, perceived as "understanding complex ideas, evaluating evidence, weighing alternative perspectives and constructing justifiable arguments." In the text to follow, María Begoña Ruiz Cordero's "Assessing English Writing Skills of Students from Bilingual and Non-Bilingual Schools in Castilla-La Mancha, Spain. A Comparative Study" takes up the theme of Content and Language Integrated Learning (CLIL) in relation to the development of writing skills in a foreign language. The aim of the study carried out by the Author was to compare the levels of writing in English achieved by learners in CLIL and non-CLIL programmes at different schools across various geographical regions.

The present issue finishes with two book reviews. The first one reviewed by Danuta Gabryś-Barker presents a commentary on the monograph by Wojciech Malec entitled *Developing Web-based Language Tests* (2018), which is a comprehensive literature overview of language testing-related issues with a strong focus on using modern technology in the process of language assessment. Apart from its in-depth theoretical part, it presents in details an on-line programme conceived by the author which can be of great help to all FL teachers in designing, analysing and finally assessing their test results. The second review by Grażyna Kiliańska-Przybyło looks at the second edition of a book by Lia Litosseliti (2018) *Research Methods in Linguistics*, whose focus lies in research methodology. It provides the readers with an overview of both quantitative and qualitative research methods employed in empirical studies in linguistics. The author advocates the use of a mixed method approach, which is necessary in the multidisciplinarity of modern research in linguistics.

We hope that this issue will be of interest to researchers working in the field of second language acquisition. We would also like to invite Polish and foreign academics to share their scholarly research with us by submitting their

work for the *Theory and Practice of Second Language Acquisition* journal published by the prestigious Polish academic publisher, Wydawnictwo Uniwersytetu Śląskiego (University of Silesia Press).

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Articles

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The Bilingual Advantage and the Language Background Bias

Abstract

The idea that bilingualism can give us an advantage in life is of great interest to the scientific community, due to its significant positive implications for healthcare and education. In recent years, several scholars have provided evidence in favour of the so-called *bilingual advantage or benefit*, which suggests a positive association between bilingualism and cognitive development. In order to understand whether the claim is fully warranted, this paper examines the evidence in support and against the existence of the possible bilingual benefit for individuals. Following a brief discussion on the use of the terms bilingualism and multilingualism in the literature, this paper aims to provide a summary of the possible advantages and disadvantages currently associated with prior language knowledge in the mind, highlighting some of the possible reasons for the different results that have been reported. In addition, this paper proposes that there are inconsistent experimental results due to a *language background bias*, which refers to the widespread failure to classify prior language background in a consistent and suitable manner in empirical research. The paper ends with some suggestions for future research that can help us move forward and increase our understanding of the bi-/multilingual advantage as a broader phenomenon.

Keywords: multilingualism, bilingualism, bilingual benefit, cognitive development

Introduction

The bilingual advantage or benefit refers to the range of benefits speakers of two languages seem to display when they go through the process of language learning or when they carry out tasks that are cognitively demanding and/or require a great deal of attention. The idea that bilingualism can give us an advantage in life is naturally of great interest to the scientific community

due to the significant positive implications for both healthcare and education. In recent years, the existence of an advantage for bilingual and multilingual speakers has been widely debated in academic papers as well as in newspapers, television, and social media.

As a result of these activities, there is now a much broader awareness of the importance of language learning for children from a very young age and all the way through life. Learning a language early in life is believed to be a great achievement and an added value in itself. While it has become more common for people to link bilingualism with some type of benefit for the individual, several questions have simultaneously been raised. As a result, there is now some disagreement about the extent to which bilinguals and multilinguals can be argued to be truly blessed with the long list of advantages that is attributed to them. The primary aim of this paper is to examine these issues more closely.

This paper begins with a brief discussion of the inconsistent use of the terms bilingualism and multilingualism in the literature and why more clarity is relevant for our understanding of the bilingual benefit as a general phenomenon. Then a summary of the evidence of advantages and disadvantages that are associated with prior language knowledge in the mind will be covered, which will highlight some of the possible reasons for the different results reported in the literature and will introduce the language background bias in empirical research. This paper will then conclude with some suggestions for future research that can help researchers and learners move forward and increase their understanding of the bi-/multilingual advantage as a broader phenomenon.

Bilingualism and Multilingualism: A Terminological Concern

In recent years we have seen the growing trend of using the term *multilingualism* to refer to both bilingual (two languages) and multilingual speakers (more than two languages). Within areas on societal multilingualism such a broad use might make sense, but the same cannot be said about research on individual multilingualism, as additional accuracy is typically required. The topic of the present paper—the possible effects of prior language knowledge on learning—is a good example of how important this distinction can be for research on individual multilingualism.

In order to examine the association between the languages acquired and the benefits arising from having become bilingual or multilingual, it is imperative that we make explicit reference to the number of languages an individual is familiar with. The presence of two languages in the mind, as opposed to three

or four, the different proficiency levels achieved in these languages, and the frequency of use in daily life may well make a difference for the individual are indeed argued by some authors who claim the increase in benefits to be dependent upon the number of languages known (Perquin et al., 2013). Therefore, a lack of distinction between bilinguals and multilinguals makes it virtually impossible for us to ask specific questions about the amount of language knowledge stored in the mind and its influence on cognitive development. For these reasons, the terms bilingual and bilingualism within this paper are strictly used to refer to speakers of two languages and phenomena associated with two languages, while multilingual and multilingualism are used to refer to speakers of three or more languages and phenomena associated with a minimum of three languages in the mind.

Review of the Literature

Our current understanding of the advantages and disadvantages associated with prior language knowledge and cognitive development remains quite limited to date for two main reasons. Firstly, the literature is largely based on studies that compared monolingual with bilingual speakers, therefore claims about multilingual speakers are often hypothetical rather than empirically-based. Secondly, research has mostly focused on Executive Function (EF)—a relatively narrow field of enquiry which investigates the cognitive processes that allow us to make a decision, reach a goal, obtain information, make plans, and so forth. These processes are typically examined in controlled laboratory settings.

In the literature, we find a long list of studies on the advantages associated with prior language knowledge and EF, but there are other studies which show disadvantages or no advantages at all. These positions are reviewed in the next two sections below.

Advantages

The core claim that we find in the literature is that bilingualism improves Executive Function (EF), therefore there is a set of cognitive processes that help us carry out a number of different tasks in our daily lives. Under the umbrella term of EF, we find studies on the processes that control what we pay attention to and how we suppress irrelevant information. EF also includes research on

the speed at which we switch between concepts, notions, and ideas, and there are other studies on the amount of information we can hold in our minds for short periods of time (working memory). Some of these functions are believed to be used simultaneously when we carry out complex cognitive tasks such as planning, reasoning or problem-solving.

Over the years bilingual speakers have been argued to show a number of different type of advantages in relation to EF (for a good review, see Adesope et al., 2010). Some of these include advantages in relation to information inhibition and attentional control (Bialystok et. al, 2004; Carslon & Meltsoff, 2008; Martin-Rhee & Bialystok, 2008), the ability to switch between different sets of information (Bialystok, 1999; Bialystok & Martin, 2004), improved working memory (Carslon & Meltsoff, 2008) visual processing and perception (Chabal, Schroeder, & Marian, 2015; Wimmer & Marx, 2014), phonological awareness (Bialystok, Majumder, & Martin, 2003) and stuttering (Kornisch et al., 2017).

Age is often under scrutiny as learning patterns naturally change as we grow, and benefits are believed to start early in life and last during our lifetime (Bialystok et al. 2004; Carlson & Meltzoff, 2008; Clare et al., 2016; Filippi et al., 2015, Fischer & Schweizer, 2014; Kazemeini & Fadardi, 2016; Gold, Johnson, & Powell, 2013; Gollan et al. 2011; Lazaruk, 2007; Mårtensson et al., 2012). While most studies examine behaviour at a single-point in time, some researchers are instead focusing on changes over time. An example is Ansaldo et al. (2015) who compared bilinguals' control abilities taking age into account. The authors found that older bilinguals and monolinguals seem to display a similar level of interference, but they also seem to achieve control using different neural substrates, suggesting more profound neural changes as we grow.

The positive influence of bilingualism has been further associated with Alzheimer's and dementia (Gollan et al., 2011). While we know that bilingualism does not prevent the illness, it seems to delay the onset of its symptoms of about four to five years (Alladi et al., 2017; Bialystok et al., 2007), which is a significant amount of time for those affected. Advantages are further argued to apply to those who are literate as well as illiterate in one of the languages, suggesting that education alone may not be a sufficient explanation for bilinguals' performance (Alladi et al., 2017).

Among the factors of interest to applied linguists and educators are language proficiency and language distance, as these factors are typically associated with differences in monolingual and bilingual behaviour and have implication for language acquisition and language development. Moreover, multilingual speakers frequently have different proficiency levels in their non-native languages, which creates a pressing need for researchers to understand the following: when the benefit might start, under what conditions, and how benefits may adjust to rapidly fluctuating proficiency levels. The bilingual advantage has been argued to grow as bilingual proficiency grows, as shown for instance in a study on

the increase of translation equivalents over a 7-month period (Crivello et al., 2016). The benefit has also been linked to advantages in language learning as well as mathematical learning in multilinguals (Dahm & De Angelis, 2017), and the advantages seem to arise even when there is minimal language distance between the two languages known to the speaker (Antoniou et al., 2016).

A recurrent explanation for the bilingual benefit (see Bialystok et al., 2004) is that bilinguals develop an increased ability to deal with conflict and distractions because of the frequent switching between their languages. The switching experience is argued to improve their ability to complete tasks associated with EF, to increase their ability to keep languages apart and to help them develop better working memories for storage and processing.

Most of the studies mentioned above focus on specific cognitive processes associated with EF, and the specificity of these processes is such that it is sometimes difficult for us to fully extrapolate the potential implications for language learning or other types of learning. Future applied research may give us additional insights on the relevance of these benefits for learning as a broader cognitive activity.

Disadvantages or No Advantages

Kenneth Paap and his colleagues are major advocates of the view that there are no bilingual advantages that can be associated with EF. The researchers attempted a replication of Bialystok et al. (2004) study which originally compared monolinguals (English L1) and bilinguals (Tamil-English) using the Simon task, but they were unable to obtain similar results. To investigate the matter further, the authors carried out a number of other experiments, but the evidence found did not provide additional support for the existence of a bilingual advantage (Paap & Greenberg, 2013). Paap, Johnson, and Sawi (2015) further claim that 80% of the tests carried out after 2011 show null results or are based on small samples, and discuss the need to introduce more rigour in terms of processes, procedures, and analysis, while advocating the use of bigger samples. Similar arguments appear in von Bastian, Souza, and Gade (2016), who also believe early effects may be task-specific and confined to small samples.

An area that requires further research relates to the role of proficiency and degree of bilingualism in EF. As is commonly known, language knowledge is not something that individuals either have or do not have, plenty exists in between, and studies that group participants according to language background are already showing the importance of these factors for EF. Gathercole et al. (2014), for instance, tested several measures of EF on balanced bilinguals and

monolinguals in Wales and found that there was an occasional advantage for those dominant in the language being tested rather than for bilinguals. Their results call for increased attention towards proficiency levels and the need to monitor language background more thoroughly. Similar suggestions appear in Kousaie et al. (2014) who recommend that future researchers move forward by focusing on the differences between language groups.

Other studies conclude that the bilingual advantage does not exist or it is restricted to very specific conditions and circumstances (Arizimendi et al., 2018; Dunabeitia et al., 2014; Papageorgiou et al., 2018). Some of these studies claim an advantage for monolinguals (Folke et al., 2016). Bilinguals have additionally been shown to have more difficulties than monolinguals when accessing low-frequency words (Runnqvist et al., 2013), and it is a well-known fact that ease of retrieval is linked to language proficiency and frequency of lexical access.

While the evidence against the existence of a bilingual advantage is beginning to grow, firm conclusions remain premature at this stage. In the literature, there is a general call for results to be interpreted with more caution (Goldsmith & Morton, 2018; Hartsuiker, 2015, Klein, 2015; Morton, 2010; Paap, Johnson, & Sawi, 2016). Some scholars even go as far as dismissing the existence of the benefit in its entirety, labelling it as a sheer myth and describing it as an "insufferable mixture of excessive claims and weak evidence" (Morton, 2014, p. 929).

Why So Many Conflicting Results?

The literature shows evidence that is both in favour and against the existence of a bilingual advantage for cognitive development and several explanations have been discussed to explain the inconsistencies. This section reviewed current explanations and argued for the existence of a bias that is too frequently overlooked in empirical research: the language background bias.

Publication Bias

De Bruin et al. (2015) present arguments which emphasise how only studies with positive results tend to be published while those with negative or no results are more likely to remain unpublished. The authors maintain that this difference generates a publication bias which creates a false impression of the overall significance of the published results. To test the hypothesis, the authors monitored 13 years of conference abstracts on the bilingual benefit and EF (from 1999 to 2012) and checked how many of those studies were ultimately published. Those with positive results were indeed published the most, while

those with negative or no results were published the least, and they argued that this difference did not have anything to do with sample size or test type.

Immigration Bias

Fuller-Thomson and Kuh (2014) have put forward the argument that bilinguals taking part in EF research are usually immigrants who should be regarded as a self-selected group, as those who migrate to build a new life for themselves are usually the most motivated and the most intelligent individuals. While this explanation might be plausible in some contexts with large concentrations of recent immigrants, it is very difficult to extend to most bilingual and multilingual contexts around the world where multilingualism is the result of different ethnicities sharing the same space for a long time. Perquin et al. (2013), for instance, found evidence in favour of the bilingual benefit in a study on dementia and the aging population of Luxembourg, a context where the multilingualism of its inhabitants has been the norm for decades and cannot be considered the result of recent immigration. The literature also presents the opposite argument, that there is a recurrent association between immigration and disadvantages in education as children with an immigrant background are typically linked to poor performance in school (Miller & Warren, 2011).

Language Background Bias

I believe in the existence of another type of subject-selection bias which is largely underestimated that can have a major impact on overall results: the *language background bias*.

The language background bias relates to the widespread failure to classify prior language background in a consistent and suitable manner in empirical research (see also De Angelis, 2017). Scholars typically assume that low proficiency background languages do not play a major role in bringing about benefits for the individual and accordingly classify participants on the basis of their "fluent" languages. Most people, however, have knowledge of other languages in addition to their mother tongue and are not "fluent" in all of their languages.

Forming groups that are not homogenous in terms of language background introduces a significant bias in empirical research. If fluency is the core criterion for subject selection, one can easily understand how true monolinguals may be grouped together with those who have knowledge of non-native languages but are not fully fluent in those languages. All participants would be labelled as "monolinguals" even though some of them might be bilingual or even multilingual. We already have evidence that even a few years of exposure

to a non-native language can influence the acquisition of subsequent languages (Bardel & Lindqvist, 2007; De Angelis, 2007, 2018; Rast, 2010) which is further reason for us to exercise some caution when embracing methodological practices that might be convenient but are not fully reliable. A great deal of research on the bilingual benefit comes from Canada and the work of Ellen Bialystok, for instance, and while bilingual fluency is not widespread, one does wonder how many monolingual Canadians can be found in a bilingual country where every adult is likely to have been exposed to either English or French as a second language in school. The same can be said about many other contexts around the world. For example, most young adults in the US will have studied some Spanish as a foreign language in school, and in most European countries foreign languages are typically introduced in primary school. Nowadays, true monolinguals are in fact difficult to locate, particularly in non-English speaking contexts.

The studies published over the past few decades did not use common subject selection criteria, and decisions for subject inclusion were typically informed by subjective beliefs about the amount of prior language knowledge that makes, or does not make, a difference in performance. Conflicting findings are often associated with inconsistent methodological practices, and if we consider the small amount of information usually available on subjects' prior language background in the published literature, the likelihood that a language background bias was introduced in many of the studies' designs is quite strong.

There are probably a number of other competing reasons that can help researchers explain discrepancies in the results. First, generalizations from past research may have been far too ambitious for the current level of understanding of the phenomenon and perhaps more caution would have been in order. Second, from a methodological perspective researchers have been comparing results from studies that used different types of tasks and, as just mentioned, whose participants' language backgrounds have been classified in an inconsistent manner. These two facts alone are a good recipe for inconsistencies to emerge. Participants have typically been grouped according to a broad set of different criteria, including origin, education, SES, immigrant status and cultural background. Benefits may well arise from a combination of different factors, and it is quite possible that bilingualism is only one of them rather than the only factor involved. Further research is required to evaluate this possibility and examine additional variables in isolation.

Looking Ahead

The purpose of this paper was to evaluate how feasible it is for researchers to claim the existence of a bilingual benefit for cognitive development on the

basis of our current understanding of the subject matter. The paper reviewed several studies that provided evidence in support as well as against the existence of a bilingual benefit, highlighting a number of methodological and procedural concerns which suggest that considerably more work needs to be done in order to clarify the matter in the future. On the whole, some caution must be taken as the research progresses.

If this debate about the benefits of bilingualism is to be moved forward in a meaningful way, then it is advisable to conduct large-scale studies, preferably longitudinal, that make use of similar or comparable batteries of tests, perhaps across different labs and different locations. In order to avoid incurring in the language background bias, participants also need to be classified by paying more attention to all the languages they speak, not just the ones in which they are fluent. There is simply no point for researchers continue to compare bilinguals with monolinguals, if the so-called monolinguals have knowledge of other languages as well, or the bilinguals are perhaps multilinguals. Bilinguals and multilinguals speak different languages at different proficiency levels and make use of their languages in different contexts and for different purposes, and the creation of fictitious categories that do not take into account the participant's actual background knowledge does not help researchers advance in any way. How can we claim that language knowledge provides an array of benefits if we do not even take that very knowledge into account in a systematic manner? Discrepancies arise when the same phenomenon is assessed using different criteria and different methodologies. In my view only additional methodological rigour will provide more clarity on the phenomenon and will allow us to identify the potential application of the benefit for bilingual and multilingual adults and children in healthcare and educational settings.

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Gessica de Angelis

Überlegenheit zweisprachiger Personen und sprachlich bedingte Einschränkungen

Zusammenfassung

Die Ansicht, dass die Zweisprachigkeit uns einen Lebensvorteil verschaffen kann, stößt bei Forschern auf sehr großes Interesse, weil sich daraus sehr positive Implikationen ergeben, die im Gesundheits- und Bildungswesen ausgenutzt werden können. In den letzten Jahren verwiesen zahlreiche Studien auf die Beweise, die von der so genannten Überlegenheit zweisprachiger Personen zeugen, und auf die Vorteile, die aus der Zweisprachigkeit resultieren. Dies lässt auf einen Zusammenhang zwischen der Zweisprachigkeit und der kognitiven Entwicklung schließen. Um besser zu verstehen, ob sich diese Behauptung in der Praxis bewährt, sollten in diesem Beitrag solche Argumente untersucht werden, die für und gegen die Überlegenheit der Zweisprachigkeit bei einzelnen Personen sprechen. Nach einer kurzen Diskussion über die Verwendung der in der Literatur präsenten Begriffe der Zweisprachigkeit und Mehrsprachigkeit fasst der Beitrag die Belege für die Vor- und Nachteile zusammen, die

derzeit mit dem Vorhandensein des früheren Sprachwissens im Kopf verbunden sind, wobei mögliche Gründe für Diskrepanzen in den Forschungsergebnissen herausgestellt und sprachbezogene Einschränkungen diskutiert werden. Der Beitrag wird mit Hinweisen für weitere Forschungen abgeschlossen, die unser Verständnis für solch ein umfassendes Phänomen wie die Überlegenheit einer zweisprachigen Person vertiefen und verbessern können.

Schlüsselwörter: Mehrsprachigkeit, Zweisprachigkeit, sich aus der Zweisprachigkeit ergebende Überlegenheit, kognitive Entwicklung

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Bi-/Multilingual Communication, Identity and the Posited Intermingling of Language Systems in the Mind

Abstract

This article addresses the claim that the notion of bounds between language-varieties in the mind should be abandoned. Such rhetoric has become standard in respect of the conceptual dimensions of language. The proposition does not, however, confine itself to underlying concepts; it calls into question the whole notion that languages in the mind are bounded entities in any of their aspects. The response to this position presented here is that knowledge of languages in the mind is in fact in *all* its aspects highly differentiated, and that this differentiation broadly follows traditional lines (always recognizing that demarcation between languages is occasionally permeable). Evidence in favour of this view is drawn from a number of areas, including language loss and recovery, bilingual/multilingual development and communication, and the affective dimension of language differentiation.

Keywords: bilingual, multilingual, boundedness, differentiation, identity, separate development, interaction, Quintus Ennius, strategic objectives, non-normative

Introduction

I should like to begin with a story e-mailed to me some years ago by the Finnish psychologist, Elizabet Service, about an experience her multilingual sister had had in France. With her permission I have cited it in a number of publications to illustrate various points, but it seems especially relevant in the current context:

> My sister, while studying in France, was once addressed on the street in Finnish. Only after several attempts by the speaker did she understand her own native language, the point being that she was expecting French.

Service goes on to relate similar episodes in her own life involving her L2, English, a language she speaks to a very high level of proficiency:

> I have had a very similar experience trying to make Finnish out of something that was easy enough to understand when I realised it was English.

I shall come back to such experiences, which many of us could probably add to, later. They cast severe doubt, it seems to me, on the proposition of radical intermingling of languages in the mind.

The notion of such radical intermingling is currently very much in the air, this direction of theorizing being encouraged in some people's minds by their interpretation of Dynamic Systems Theory (e.g., De Bot 2008, 2016; De Bot, Lowie, & Verspoor, 2007). There has been a tendency on the part of many researchers to want to abandon all talk whatever of boundaries or differentiation between languages and language-varieties in the mind. Indeed this is a standard position in respect of the semantic or conceptual dimensions of language (MacKenzie, 2016), where the received wisdom is that for all language-varieties known by the multi-competent user there is a common underlying "conceptual base" (Kecskes & Papp, 2000)—that is to say equivalence, fusion, and language-neutrality at the conceptual level (see also De Groot, 1992; Costa, 2005; Kroll & Stewart, 1994).

Athanasoupoulos (2016) has recently addressed this issue, speaking of the need to re-examine the notion of a common conceptual base in respect of the languages of bi-/multilinguals. Citing Pavlenko and Jarvis (Pavlenko, 2005; Jarvis & Pavlenko, 2008), he points out that most words that are considered "translation-equivalents" across languages do *not* share the same conceptual representation, even when they denote concrete entities (Ameel et al., 2005), and that there is increasing evidence, from investigations of bilingual cognition, of systematic cross-linguistic variation in the conceptual representation of a range of different domains of experience. His conclusion is that learning a new language involves creating new concepts and recalibrating existing concepts. The desire to dispense with boundaries does not, however, stop at concepts; for some years researchers, of a range of theoretical stances, going well beyond Dynamic Systems Theory, have been tending to call into question the whole notion that languages in the mind in general are bounded entities (e.g., Harris, 1998; Toolan, 2008; Vaid & Meuter, 2016).

The response to this position adopted here (cf. Singleton 2016, 2018) is that languages in the mind are in all their aspects, in fact, *highly* differentiated, and

that such differentiation broadly follows the lines recognized by the traditional boundaries which draw (always, of course, crossable and permeable) lines between languages. The article will make mention of a number of arguments from the evidence of bilingual and multilingual experience which favour the above stance.

Evidence against Unboundedness from Language Loss and Aphasia in Bi-/Multilinguals

Powerful evidence of separability comes from the phenomenon of the selective recovery of language-varieties known to bi-/multilinguals and lost as a result of brain damage. These patterns of selective recovery do not necessarily relate to distinct neural representations of the different languages, but may have to do with damage to *control* mechanisms located in the prefrontal cortex that activate the target language and inhibit the non-target language (see, e.g., Abutalebi, 2008), in other words, distinguish between different languages. There is also some mysterious but intriguing evidence from non-parallel aphasia (see, e.g., Fabbro, 1999, Chapters 12–16). In other words, when a bi-/multilingual experiences disruption of his/her language capacity, such disruption does not consistently affect all the languages he/she knows in the same way, as one would expect if language knowledge were an undifferentiated block, but often presents different recovery profiles and different phenomena from language to language.

Whitaker, for example (1978, p. 27), refers to the case of an English scholar in the area of the classical languages and literatures who, after losing all his languages, recovered first Ancient Greek, then Latin, both of which he had encountered as a schoolchild. He subsequently recovered French, which he had learned as an adult, and finally English (his L1). Grosjean, for his part, refers (1982, p. 260) to the instance of a Swiss multilingual who recovered first French (his chronologically third language) and later Standard High German (his chronologically second language), but who never recovered his native variety, Swiss German (which is, of course, very different from Standard German). Fabbro (2002, p. 204) reports the strange case of a person whose first language was Veronese (a variant of Venetian, very different from Standard Italian), who had exclusively used Veronese in all her daily activities, except for a few words of Standard Italian (her second language) very rarely, but who, following a brain injury, started communicating exclusively in Standard Italian. Her condition subsequently improved to the point where she could understand Veronese, but she persisted in her producing only Standard Italian. Another case is that of Jürg Schwyter (Schwyter, 2011), who, following a stroke, lost the use of every one

of his languages. He recovered receptive capacities in all his languages Swiss German (his chronologically first language), Standard German (his chronologically second language), English, Italian, and French (his later school languages), but has recovered full productive capacities only in his mother tongue, Swiss German, and his main professional language, English. As noted earlier, such selective (and patchy) recovery of languages constitutes an argument the notion that the knowledge and processing of these languages is a unitary phenomenon.

Concerning non-parallel aphasia, Paradis and Goldblum (1989) report the case of a trilingual subject who was a native speaker of Gujarati. The person in question lived in Madagascar, and had additionally acquired Malagasy, Madagascar's official language. At age six he had also learned French at school, and he used this language on a daily basis in his professional activities. Following a neurosurgical operation, he evidenced disorders typifying Broca's aphasia in Gujarati but no deficits in his other languages. Two years after the operation he had fully recovered Gujarati but had difficulties with Malagasy in terms of verbal fluency and syntactic comprehension. Four years after the operation no disorder was detected in either language. (Cf. also Gil & Goral, 2004). Thus, deep-seated language disorders, which are commonly assumed to affect the totality of languages known to an individual, are shown by such evidence sometimes to be "selective" in terms of the languages they target. Again, such evidence argues for the differentiation and boundedness of languages in the mind.

These cases of selective recovery and non-parallel aphasia are slightly puzzling from an identity perspective, in the sense that, as the above references and discussion indicate, it often seems to be the native language, with which identity would be thought to be strongest, which is longest lost or which is afflicted by disorders. Strong personal identification with a language does not, then, necessarily protect it from the kind of disruption associated with physiological problems affecting the brain. The above evidence certainly does point, however, to the notion that each language in the mind has its own processing dynamic, in other words, has a degree of, as it were, autonomy, of developmental individuality.

Evidence against Unboundedness from Bi-/Multilingual Development and Interaction

Let us return to the story told by Service showing that it is possible for a person not to understand a language in which he/she is highly proficient—including his/her mother tongue—if he/she is not expecting to encounter it.

Another case I was told of very recently by the corpus linguist Sylviane Granger, who was recently in China with her husband, a reasonably proficient learner of Chinese. Often when her husband spoke Chinese, it was not initially reacted to by their Chinese hosts (who also spoke English)—the point being that they were not expecting their L1 from a Westerner. As in the case of the earlier-discussed instances of language loss due medical reasons, identity with one's L1 or a very strong L2, fails to protect the languages in question—in this case from such occurrences of incomprehension. Such evidence strongly suggests that an L1 or strong L2—as entire systems—can in certain circumstances be set at a very low level of activation, a radically lower, comprehension-preventing level of activation, than the language(s) one is expecting to encounter. If it is possible for the mind to select a language to render "dormant" in this fashion, as opposed to another language/other languages rendered "ready for action," this clearly implies—speaks volumes about—differentiation of languages in the mind.

Turning to the early developmental front the individuality of the progress of each language is indicated by studies (Schelleter, Sinka, & Garman, 1997; Sinka & Schelleter, 1998; Sinka, Garman, & Schelleter, 2000) which looked at two children acquiring, respectively, Latvian and English and German and English. Latvian and German are both highly inflected languages, whereas English is, of course, not. The researchers found evidence of the development of functional categories in Latvian and German from the earliest stages, but not in English, from which the researchers conclude that the nature of Latvian and German input is rich enough to trigger early functional category development, whereas the English input is not. The faster development of functional categories in these cases seemed to have nothing to do with identification with the languages in question and everything to do with the nature of what the children were exposed to. The strong implication of these findings is, however, again that, whatever about identity, the languages acquired by a simultaneous bi-/multilingual develop separately. The question of whether this is in fact the case from the very earliest stages of acquisition has been quite a controversial one.

One much-cited view is that the simultaneous bi-/multilingual begins with a single language system and that his/her languages separate only at a later stage (e.g., Volterra & Taeschner, 1978; see discussion in Clark, 2016, pp. 386ff.). This hypothesis suggests that simultaneous bi-/multilinguals begin with a single language system, a single fused linguistic representation, and that it is only around the age of three years that they begin to differentiate their languages (see, e.g., Pettito et al., 2001, p. 455). According to this view, the child at the very early stages of language development is not in possession of translation-equivalents across languages, but rather he or she has a single lexical store, with a single word from one or other of his/her languages for any given meaning. On this basis, the evidence cited in favour of the above perspective tended to be that

of language mixing (cf. Macrory, 2006: 163; cf. Nicoladis & Genesee, 1997). The claim was that mixed utterances arose because the child at an early stage did not have access to translation-equivalents across languages, that he or she had just one lexical store, with a particular word from one or other of his/her languages for any given meaning.

It is irrefutable that language mixing goes on in the language use of young multilinguals, and that much of this mixing happens because a child may know an expression in one language for which he/she has no equivalent in other languages. Nicoladis and Secco (2000), for example, report that around 90% of the mixing they observed in very young bilinguals was explicable in terms of lexical gaps in one language or the other. That is to say, when the children lacked the expression they needed in one language but had it at their disposal in their other language, they simply drew on what they knew to supplement what they did not know. This strategy undoubtedly continues throughout childhood and indeed into adulthood simply because languages differ in their conceptual patterning and learners of every age have less than complete mastery of such patterning (cf. Gessman, 2014). Zhang (2006) demonstrates this with respect to sibling-sibling interaction between two Chinese-English bilingual children, where, for instance, the Chinese expressions *kao-ya* ('roast duck') and *fu-lu* ('pickle made from soya beans') were used in English matrix utterances because the English translation-equivalents were unknown (and in the latter case non-existent).

This is a very natural strategy for the multilingual child to adopt. It of itself says nothing about the question of the separation or integration of a young multilingual's languages. Quay (1995), for her part, shows the falsity of the notion that the multilingual's lexicon is systematically distributed across languages; and she, accordingly, strongly disputes the claim that there is a stage at which the multilingual has just one item in one or other language for a particular meaning (cf. also Deuchar & Quay, 2000). Bi-/multilingual children, in other words, generally keep their languages apart when using them, and they are highly adept—even at a very early age (see, e.g., Genesee, Nicoladis, & Paradis, 1995; Nicoladis, 1998)—at making decisions as to which language to speak to whom. It seems, moreover, that on occasions where languages are mixed, the mixing in question may evidence an awareness—again from an early age—of the language competencies of interlocutors (see, e.g., Lanza, 1997).

De Houwer puts it this way:

> Like monolingual children, bilingual children pay a lot of attention to the input they receive. They soon notice that this input differs depending on who is talking and in what situation someone is talking. Just like monolingual children, bilingual children attempt to talk like the people around them. Because of the bilingual situation, however, the bilingual child has

> more options than the monolingual one … [A]t a very young age bilingual children are skilled conversationalists who easily switch languages.
>
> (De Houwer, 1995, p. 248: cf. Chevalier, 2015, for some interesting insights into trilingual children's interaction)

The Affective Dimension and Quintus Ennius's Three Hearts

In their normal functioning adult bi-/multilinguals too, of course, are very attentive in their use or non-use of specific languages to the linguistic identities and competencies of their interlocutors. This is clearly a necessary condition of successful communication. The bounds of a language in the bi-/multilingual's mind are thus clearly set by, if by nothing else, the linguistic identities of *others*, and by the consequent limits of intelligibility. Especially interesting in this connection is the case of interlingual couples and families (see, e.g., Singleton & Pfenninger, 2018). Often two people who get involved romantically with each other and who speak different languages opt for one they identify as their "language of the heart" (Dewaele & Salomidou, 2016). This language is then set apart from other languages in their repertoire by strong, affective factors. Piller found that many couples perceive their private language as the foundation of their relationship: "[…] we were both happy then that we could speak German, and our relationship started with drinking coffee and speaking, and so speaking was very important to us and whenever we are having a serious conversation, it really needs to be in German, otherwise it doesn't go well, and it doesn't feel right" (Piller, 2002, p. 222). Usually the language in question is the L1 of one of the couple, but not always.

In this context, I should like to refer to the interesting case of a couple I came across quite recently. The couple, named for present purposes Solange and Jan, met in France where Solange grew up; Jan is Dutch. They have used English with each other from the start of their relationship. They are now married and living in the Netherlands and they both now have a good command of each other's language but they continue to identify English as their "language of the heart" for their private conversations. They have a three year-old daughter with whom Solange communicates in French and Jan in Dutch. The common language of the household is sometimes Dutch and sometimes French. The daughter does not yet know English and makes fun of her parents when she hears them speak their language of intimacy.

The differentiation of the use of the languages is thus clear:

Solange to daughter:	French
Jan to daughter:	Dutch
Solange to Jan to Solange (family matters):	French/Dutch
Solange to Jan to Solange (couple matters):	English

This is anything *but* a mish-mash. The bounds in the language users' minds are in this case set by, among other factors, the role of English as the couple's language of intimacy. The intelligibility factor also comes into the picture, though, in the sense that everyone in the trio understands French and Dutch, and in the sense that English is (for the parents happily) *un*intelligible to the daughter. (This latter situation will no doubt change with time and circumstances—especially when the child reaches school age).

This talk of intimacy leads inevitably to Quintus Ennius's much-discussed three hearts. Quintus Ennius, who flourished in the second and third centuries B.C., has been called the "father of Latin poetry." He was a prolific writer, but his works in the centuries after the early Roman emperors fell into disfavour, with the result that only fragments of his *opus* survive. His principal claim to fame is his remark (reported by the later author Aulus Gellius) that because he knew three languages (Latin, Greek, and Oscan) he had three hearts: "Quintus Ennius **tria cordia** habere sese dicebat, quod loqui Graece et Osce et Latine sciret."

It should be noted that the word for heart in Latin—***cor***—was applied to the seat of intelligence as well as the seat of the emotion. Part of what Quintus Ennius was saying, then, coincided with the truism of twentieth century linguistics (see Lyons, 1963, pp. 37ff.), according to which every language articulates the world uniquely in terms of its various structures and consequently in terms of its concepts and configurations of concepts, a truism which is not lightly to be discarded (see, e.g., earlier discussion of Athanasoupoulos, 2016). Its implication is that, in order to function intelligibly and comprehendingly in the relevant language communities, users of multiple languages need to make use of structural and conceptual systems specific to each of their languages, systems which are of their nature differentiated from those of their other languages. The reality of a degree of cross-linguistic permeability, influence and interaction, which has been recognized since the dawn of time, does not imply an undermining of the other reality of essential differentiation between language systems in the mind (cf. Singleton 2003, 2012).

Quintus Ennius was also undoubtedly talking, however, about the affective dimension of his three hearts, and this dimension is certainly a feature of modern research into the management of multiple languages. In emotion research (e.g., Keysar, Hayakawa, & An, 2012; Pavlenko, 2012) it has been suggested that words that label emotion are typically represented at a deeper level of conceptual understanding in a native or dominant language as compared to their second language representation. Also, Dewaele (2016) discusses Pavlenko's (2006) account of the feedback that emerged from the (Dewaele & Pavlenko, 2001–2003) Bilingualism and Emotion Questionnaire, where her findings was that almost two-thirds of participants reported feeling like different people when they switched languages—a phenomenon with which many

readers of the present text—as well as its writer—will identify. The evidence from the emotional level too, then, clearly favours differentiation between the multilingual's languages.

A European Phenomenon?

The (distinctly racist) occasional riposte that I have (recently) encountered to all of the above is that differentiation may indeed be a feature of language management in European contexts but that all over Africa and Asia "mish-mash" is the norm. The idea seems to be that separating languages is a function of naming them, of standardizing them, of reading and writing them—as if these phenomena were, in any case, confined to European contexts.

I want to take just two examples to begin to "nail" this myth. The first is from Canagarajah's (2009) study of a job interview in Sri Lanka. The following quote is from the candidate for the position in question—mixing Tamil and English. This looks like "mish-mash" if ever there was such!

> *Naan* sociology of religion — *ilai taan* interested. *Entai* thesis topic *vantu* 'the rise of local deities in the Jaffna peninsula' … Oom, oru *ethnographic study* — aai taan itay ceitanaan. kittattatta *four years* — aai *field work* ceitanaan.
>
> It is in the *sociology of religion* that I am *interested*. My *thesis topic* was *'the rise of local deities in the Jaffna peninsula'*… Yes, I did this as an *ethnographic study* — I did field work for roughly *four years*.

Canagarajah's commentary, however, is that the candidate makes full use of his receptive multilingualism and of the English scholarly expressions at his disposal in coping with the interviewer's questions, and strategically draws on the English at his command to shift the interaction in his favour. What might have appeared at first sight to be a chaotic throwing together of Tamil and English is in fact a delicately patterned exploitation of the two languages, taking account of differences in their status and function—shot through with the different strategic objectives attached to the use of each of the two languages. No confusion here, then, but skilfully exploited differentiation at every turn of the way.

My second example is from Yager and Gullberg's (2019) account of semantic non-convergence in the competencies of Jedek-Jahai bilinguals in northern Peninsular Malaysia. Jedek and Jahai are lexically and typologically similar languages, and, therefore, on the basis of all the work on psychotypologically-related cross-linguistic influence, one would expect cross-linguistic interaction between them in Jedek-Jahai bilinguals. And indeed such there is, but—in this *non-normative*, *non-standardized*, *non-literate* setting, there is surprisingly little semantic convergence. To quote the authors: "Contrary to predictions, the results

did not reveal a general increase in the congruence of Jedek and Jahai extensions in the bilingual groups. Instead, there was an increase in incongruence only where there was also form overlap in the two languages." Obviously more work needs to be done on cross-linguistic interaction in such environments, but the notion that non-normative settings promote the wholesale blending of languages, is in the light of the above very dubious.

Envoi

To sum up, evidence from all of the areas discussed above point firmly in the direction of the differentiation of languages in the bi-/multilingual mind. Differential language loss and recovery as well as language disorders following stroke or brain surgery indicate that internalized language systems each have their own dynamic. The same conclusion is favoured by various aspects of normal bi-/multilingual development; in particular, the fact that different dimensions of language develop at different speeds in the bi-/multilingual's languages, the refutation of the claim that there is a stage at which the bi-/multilingual child has just one item in one or other language for a particular meaning/function and the evidence that bi-/multilingual children are adept from a very early age at deciding which language needs to be spoken to whom. The differentiation of the bi-/multilingual's languages is also apparent in the different affective roles they can have in family life and in the different ways people seem often to feel when using them. An important footnote on the above is that bi-/multilingual language use is no more characterized by "mish-mash" in places like Sri Lanka and Malaysia than it is in European settings.

An illuminating sidelight is cast on this matter by Werker's discussion of infant speech perception. Werker points out that the infant engaged in the process of language development has to deploy his/her perceptual knowledge of "the rhythmical properties of the [...] language, of the speech sound categories that distinguish one possible word from another, and of the sequences of sounds that are allowable within a word and/or the statistical learning of other cues to segmentation" (Werker, 2012, p. 50). Only in so doing, she says, can the child isolate different words and structures and map them on to meaning. The child who grows up in an environment involving more than one language, she goes on to point out, has to master the rhythmical properties, the phonetic categories, the phonotactic regularities, the word order patterns, the lexis–concept configuration and the conceptualisation of the world of each language. What is more, the infant bilingual must do this, she states, without interlingual confusion.

The obvious comment to add, of course, is that what applies to the child multilingual applies to multilinguals of any and every age.

Note

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Kommunikation zwei-/mehrsprachiger Personen, Identität und vermeintliche Durchdringung von Sprachsystemen im Kopf

Zusammenfassung

Der Beitrag setzt sich mit der Behauptung auseinander, dass das Konzept der Grenzen zwischen sprachlichen Variationen im Kopf aufgegeben werden sollte. Eine solche Rhetorik wurde zu einem Standard in Bezug auf die konzeptuellen Aspekte der Sprache. Diese Behauptung ist jedoch nicht auf die Grundbegriffe beschränkt; sie stellt das Konzept in Frage, dass Sprachen im Kopf ganzheitliche Systeme sind, die in jeder Hinsicht voneinander getrennt sind. Als Reaktion auf die Diskussion wird in diesem Beitrag die Auffassung vertreten, dass das Wissen über die im Kopf gespeicherten Sprachen tatsächlich sehr unterschiedlich ist und dass diese Differenzierung im Prinzip traditionellen Grundsätzen entspricht (wobei stets anerkannt wird, dass die Grenzen, die die Sprachen voneinander trennen, manchmal durchlässig sind). Die für diese Sichtweise sprechenden Beweise kommen aus vielen Bereichen, einschließlich des Sprachverlustes und der Sprachwiederherstellung, der Entwicklung und Kommunikation von zwei-/mehrsprachigen Personen und der affektiven Dimension der Sprachenvielfalt.

Schlüsselwörter: zweisprachige Person, mehrsprachige Person, Einschränkung, Vielfalt, Identität, eigenständige Entwicklung, Interaktion, Quintus Ennius, strategische Ziele, mangelnde Normativität

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Text-based Student Questioning in EFL Settings: Long-term Strategy Implementation in Reciprocal Reading Tasks and Its Perception

Abstract

It is common knowledge for contemporary teachers at all educational levels that reading literacy and learning attainment require adopting a strategic approach. This article reports the results of the classroom-based study in which a group of English Studies students were guided over a span of time in implementing text-based questions as a component of reciprocal reading tasks. The primary goal of the study was to trace changes appearing in the quality in the use of student-generated questioning in one-term reciprocal reading training and in delayed sessions, nine months later. Some changes were identified in the students' actual performance by assessing the quality of the questions the students asked throughout the training and delayed sessions. Also, the students' perceptions regarding the instruction routines they participated in were elicited by means of two interviews. The article puts forward some important insights from the study for organizing efficient classroom instruction in support of EFL students' reading and learning achievement.

Keywords: academic reading, reciprocal reading, students' generated questions, strategy training

Introduction

A strategic approach has been proved to play an important role in supporting L2/FL learners in text comprehension and disciplinary reading practice. It is broadly advocated in recent literature that the goals connected with compre-

hending academic text, building content-area knowledge as well as developing linguistic competence in the contexts of second/foreign language education can be substantially enhanced by means of the implementation of appropriate reading strategies by students representing all levels of language proficiency (Alexander & Jetton, 2003; Koda, 2005; Afflerbach, Pearson, & Paris, 2008; Grabe, 2009; Grabe & Stoller, 2014, 2019; Chodkiewicz, 2015, 2018; Dinsmore, 2017). Indeed, while exploring the role of a strategic approach in reading comprehension by means of theoretical considerations as well as empirical investigations, scholars report the influence of particular reading strategies on, among others, setting a clear purpose for reading, engaging more deeply in text analysis and information processing, building coherent text meaning, controlling text understanding, compensating for comprehension problems, and enhancing knowledge organisation and retention (Duke & Pearson, 2002; Kintsch, 2005; Graesser, 2007; Klingner, Vaughn, & Boardman, 2015; Handsfield, 2016; Koda & Yamashita, 2019). Therefore, the need for training students formally in the implementation of a range of strategies to be relied on in educational contexts should not be overlooked. It is vital that students are not only informed about the possibility of taking a strategic approach towards reading comprehension, but that they are given a solid strategy training in the use of particular strategies.

Theoretical Background of the Study

The concept of generating text-based questions by students that has gained considerable interest of teachers of different content areas at all educational levels has been acknowledged to be a fairly universal reading comprehension strategy. Much of the discussion of researchers on this strategy has focused on attempts at defining it and describing its role in the complex process of reading for the purpose of learning from text. As for the terminology used in the relevant literature, student questioning is referred to by a number of labels, among others "student self-generated questions," "question self-generation," "student own questions," "self-questioning," and "reciprocal questioning" (King & Rosenshine, 1993; King, 1994; Chin & Osborne, 2008; Taboada, Bianco, & Bowerman, 2012). All of the terms seem to concern the same idea of text-based questioning which can be broadly explained as "an environment in which learners are encouraged or compelled to ask questions while they study material" (Graesser & Wisher, 2001, p. 3).

The use of the strategy of questioning by students has already been the subject of investigation of several scholars representing diverse content-areas.

Key areas of their research concerned types of questions generated by students (e.g., Scardamalia & Bereiter, 1992; Watts, Gould, & Alsop, 1997; Taboada & Guthrie, 2006), the relationship between the quality of student-generated questioning and particular variables such as the level of prior knowledge or vocabulary knowledge (e.g., Harper, Etkina, & Lin, 2003; Taboada & Guthrie, 2006), the influence of students' use of the strategy of questioning on the level of their reading comprehension and the amount of content knowledge gain (e.g., King, 1994; Gunn, 2008; Taboada et al., 2012), or the comparison of the efficiency of student-generated questioning with other reading and learning strategies (e.g., King, Biggs, & Lipsky, 1984; Davey & McBride, 1986; Berry & Chew, 2008). However, a large body of those research studies concerned mainly L1 settings (e.g., Davey & McBride, 1986; Scardamalia & Bereiter, 1992; Taboada & Guthrie, 2006; Berry & Chew, 2008; Gunn, 2008), whereas the incorporation of this strategy into the context of L2/FL, especially at an academic level, seems to be still under-researched. Particularly scarce research has been done in order to trace the development of students' questioning skills even though such initiatives would be of immense importance for arriving at a more complete picture, not only of the use of the strategy by students, but also of the nature of text processing when accompanied by the strategy under discussion.

Although scholars in the field point out at the need for providing FL/L2 students with solid training in generating their own questions, the amount of empirical studies reporting it is very limited. A relatively recent investigation of students' questioning behaviour as influenced by formal instruction was conducted by Taboada, Bianco, and Bowerman (2012) who set to explore some instructional steps taken in order to help students improve their text-based questioning ability. The study participants, a group of ten fourth-grade ELLs, was trained in generating text-based questions during a period of six weeks. The instruction was composed of three standard stages, that is, as teacher modelling, guided practice, and the independent use of the strategy. The findings of the research demonstrated positive outcomes of the intervention as it was proved that notwithstanding the initial skills of questioning and language proficiency, all the ELLs improved their ability to ask higher-level questions. Furthermore, a meaningful correlation between questioning and reading comprehension was found. The researchers arrived at the conclusion that the strategy of questioning, if introduced and trained in an explicit way, can constitute a tool for developing science knowledge by ELLs who experience problems with comprehending content-area texts. While analysing research into text-based questioning in L2/FL environments, one can notice that the study by Taboada, Bianco, and Bowerman (2012) may be perceived as an exception since most of researchers who examine students' questioning skills and their role in reading either abandon strategic training or organise it in a very limited span of time (cf. Miciano, 2004a, 2004b; Dorkchandra, 2013; Safarpoor, Ghaniabadi, & Nafchi, 2015).

Student text-based questioning is frequently referred to as an element of a multiple strategic approach to reading called reciprocal reading instruction. A frequently used form of reciprocal reading is based on the combination of four reading and learning strategies (summarising, questioning, clarifying, and predicting), which help learners participate in collaborative text-based discussions (Palincsar & Brown, 1984). Nowadays, many teachers and educators decide to narrow down or expand the number of strategies used (Klingner, Vaughn, & Boardman, 2015) but the characteristic elements of reciprocal reading that should always be present are: scaffolded character of instruction, reciprocal dialogue, and close reading (Palincsar & Brown; 1983; Brown & Palincsar, 1986; Pilkington, 2016). Despite the fact that the instructional approach to reading is commonly implemented into diverse educational contexts whose objective is to enhance students' general text comprehension skills as well as their ability of reading to learn (Rosenshine & Meister, 1994; Cooper & Greive, 2009), the amount of research studies concerning its use is limited as far as foreign language education is concerned. What is more, although the approach strongly advocates the value of text-based questioning and strategy training students should receive, the current authors are aware of only one research project (Yoosabai, 2009) which has thoroughly explored the use of the strategy of generating questions as an element of a reciprocal reading session in L2/FL settings. Hence, much remains to be done in order to fill this gap in research, preferably by means of longitudinal projects which would make it possible to trace not only the results of strategy training given to students but also the entire process of developing questioning skills by readers by means of performing reciprocal reading tasks. The current study is an attempt to look more deeply, although at a small scale, at how the strategy of generating students' own text-based questions can be introduced and implemented for an extended period of time in a regular academic content-area course.

The Current Study

Study Purpose and Research Questions

This study is an expansion of the authors' research on the use of the strategy of students' generated questions in support of the enhancement of academic reading skills and acquisition of disciplinary knowledge in EFL settings (cf. Chodkiewicz & Kiszczak, 2019). It was a small-scale classroom-based study which involved a group of undergraduate English Studies students in performing a sequence of reciprocal reading tasks which served the purpose of training

and practice in the use of the strategy of student text-based questioning. The aim of the study was twofold. First, it was to carry out a repeated assessment of the students' actual performance while generating their own questions as part of reciprocal reading tasks performed over 13 sessions. Thus the students' evaluation covered their participation in the training and practice sessions over a period of one semester of an academic course (ten sessions), and then in three delayed practice sessions nine months later. Second, of no less importance in the study was to elicit and explore the students' perceptions regarding their performance while generating their own questions in reciprocal reading tasks. To this end, the students were interviewed twice so as to handle their responses concerning respectively the one-semester training and practice sessions and the delayed practice sessions.

The following research questions were addressed in order to explore the students' text-based questioning behaviour in the ten training and practice sessions and in the three delayed practice sessions:

1. Were the students able to ask questions relevant to the content of the texts and clear to a recipient?
2. Did the students pay attention to the formal quality of the questions they asked?
3. What types of questions did the students tend to generate?
4. How did the students evaluate the procedure of asking text-based questions as part of reciprocal reading tasks and their own performance?

Participants and Study Context

Two intact groups of second-year undergraduate students of The Department of English, Maria Curie-Sklodowska University in Lublin, attending an obligatory EFL Didactics course, were introduced to a specially designed strategy training and practice sessions incorporated into their regular classes. Their general purpose was to support the enhancement of the students' academic skills by training them how to use the strategy of generating their own questions while performing reciprocal reading tasks. The students' language proficiency level was estimated to fall between B2 and C1 according to the standards of the Common European Framework of Reference for Languages (Coste, North, Sheils, & Trim, 2003).

In order to offer a comprehensive qualitative analysis of the students' actual performance and their self-reported perceptions of the procedure of asking text-based questions as part of reciprocal reading tasks, the data for the current study were gathered from a sub-sample of the population, that is, from five female and one male student. The six participants were chosen on the basis of their final exam scores in Introduction to EFL and in Practical English so

that the performance of students of varying language proficiency and content-area knowledge could be investigated. The students' agreement to participate in the interviews was also a crucial selection criterion taken into consideration. Focusing on the performance of this small group of the students over an extended period of time made it possible to trace and thoroughly examine the qualitative changes that appeared in the participants' questioning behaviour focused upon in this study.

Research Instruments and Materials

The research instruments and materials used during the reciprocal reading sessions comprised a taxonomy of questions, thirteen practice texts, reading comprehension tests, questioning forms to be filled in by the students during each reciprocal reading session, as well as the recording and the transcripts of two semi-structured interviews.

The taxonomy of questions adopted in this study was developed by consulting a number of classifications of questions developed in relevant literature (Graesser & Person, 1994; Taboada & Guthrie, 2006; Taboada, et al., 2012). Its suitability for the present study's objectives and clarity for the study participants was checked by piloting it (see Chodkiewicz & Kiszczak, 2019). Taking into account the cognitive difficulty of the questions, their form and content, the questions were classified into five types, that is, factual information, description, explanation, pattern of relationships, and judgmental questions. The questions of the first type concern elementary information about the main ideas conveyed in the text and they are the least cognitively demanding kind of questions. Description questions, which require a global statement about a key idea, also seem to be relatively simple, yet describing a particular concept may cover multiple facts and generalizations. A more elaborate response is needed in the case of explanation questions, which most often address a specific aspect of a concept. Pattern of relationships questions, on the other hand, can be characterized as requests for information about connections or networks between two or more concepts or between their specific aspects. Judgmental questions, the most cognitively challenging question type dealt with in this study, demand that readers take a critical stance on the leading ideas discussed in the text and get engaged in a deeper reflection on the information processed.

Additionally, in order to make the procedure of generating questions easier to follow for the students, a handout containing the questions' classification, as well as a number of question stems and prompts widely recommended for this kind of instruction was prepared (Graesser & Person, 1994; King, 1994, 2008; Gunn, 2008; Taboada et al., 2012). The participants were encouraged to use it while creating their own questions. The taxonomy of questions established for

the study was used not only during the training and practice sessions by the students and by the teacher-researcher, but also in the process of data analysis by the two judges who evaluated the questions and identified the question types chosen by the students over the entire period of the study.

For the purpose of the ten training and practice sessions as well as three delayed practice sessions 13 expository academic texts were rigorously selected, one to be used per session. These were extracts of TEFL books' chapters on the topics which concerned teaching the four language skills, storytelling, the use of games, songs, and chants, and CLIL in a foreign language. As it was assumed that the students would work with authentic academic texts, no changes were introduced into the original academic texts. The average level of language difficulty of the texts was calculated to be 14.8 according to Coh-Metrix L2 Readability Index (Coh-Metrix 3.0; McNamara, Graesser, McCarthy, & Cai, 2014). The passages were on average 410-word long each. Each text was accompanied with a reading comprehension test consisting of five multiple-choice questions.

Special questioning forms mentioned above were constructed in order to help the students in writing up their questions in an organized way during each reciprocal reading session and to be of help in the process of data collection. While completing the questioning forms, the students were supposed to provide their three questions with the answers that they believed to be accurate. They also marked if their questions were answered and received peer feedback, and decided on the final versions of their questions.

Two semi-structured interviews served probing the participants' self-assessment of the efficiency of their performance in asking text-based questions, as well as their attitudes towards the implementation of the procedure of student text-based questioning in regular academic classes. In the first interview the students were asked six questions developed around the issues of the usefulness of the questioning strategy and reciprocal reading tasks, students' individual procedure of generating questions, and their opinions on the use of particular question types. The second interview, which contained four basic questions, focused on eliciting the students' perceptions regarding the development of questioning skills, changes in their personal questioning procedure, and potential plans of using the strategy of generating own questions in the future.

Research Procedure, Data Collection, and Analysis

The current research study was incorporated into the regular classes belonging to the EFL Didactics course and lasted a total of sixteen months. Whereas the first part of the project, a one-semester long strategy training, spread throughout ten classes, its second part, the delayed practice, took place

in three subsequent classes nine months later. This means that overall the participants attended thirteen sessions in which they performed reciprocal reading tasks with the key component of generating their own questions. It is important to note, however, that the three delayed practice sessions did not contain any further formal guidance for the students, who were supposed to draw on the questioning strategy competences they had already developed. One week after the first part of the project had finished and a week after its second part had been completed the students took part in individual semi-structured interviews. As already mentioned, the responses concerning their views and perceptions developed as a result of participating in the reciprocal reading sessions in the two parts of the study were recorded by the teacher-researcher. The long-term nature of the study enabled the researchers to discern the changes in the students' task performance and their perceptions regarding the innovative reading routines provided to them in an academic course.

The first two sessions of the study were of introductory character. More specifically, the participants were familiarised with the benefits of reciprocal reading and asking their own text-based questions, and were instructed how to formulate the five types of questions focused upon in the study. Moreover, the implementation of the strategy of text-based questioning as part of reciprocal reading tasks was explained and modelled by the teacher, and then taken up by the students. At the beginning of each reading session the participants read a selected text individually and answered a set of comprehension questions based on it. Then, they generated three questions related to the contents of the text and wrote them down in the questioning forms. The next stage of the session involved answering each other's questions in pairs and giving reciprocal feedback on their form and content. Subsequently, the participants worked individually again in order to correct or improve their questions, and decide on their final versions. A class discussion about the main ideas of the text read and the students' questions was the last stage of the procedure. All the questioning forms completed by the participants were collected by the teacher to be analysed by the judges, and given back to the students.

In order to evaluate the efficiency of the students' performance, that is, the quality of all the questions formulated by the participants, special scoring system was adopted so as to assess each question on the basis on three criteria by two judges—university teachers. First, the judges decided whether a particular question was relevant from the perspective of the content of the text (1 vs. 0 points). Second, the questions were assessed in terms of their clarity from the point of view of the recipient (1 point for a clearly-stated question). Then, the linguistic accuracy of the question was checked—1 point was awarded if the question was correct and 0 points if it was incorrect. Additionally, the judges determined which type the particular question belonged to in accordance with

the taxonomy of questions established for the study. The two judges analysed the data during three conferencing sessions; the first one took place after the fifth reciprocal reading session, the second one—after the tenth, and the last one at the end of the study, that is, after the thirteenth session. Importantly, during the last conferencing session, the judges analysed all the sets of students' questions again in order to ensure that all their judgments were appropriately made.

The two semi-structured interviews made it possible to collect the relevant data at two points of time in order to observe the potential change in the students' views, opinions, and general perceptions concerning their performance in question generation and reciprocal reading tasks both during the training and practice part and in the delayed sessions. All the students' responses were recorded and then transcribed for the purpose of comprehensive analysis.

Results and Discussion

As a result of the analysis of all the collected data the aims of the study were successfully achieved and a number of significant findings concerning the issues focused upon were made. As intended in the study, the quantitative-qualitative analysis of the research data made it possible to (1) examine the performance of six advanced users of English as a foreign language on a set of reciprocal reading tasks involving the use of the strategy of asking and answering students' own text-based questions, and (2) get insight into the students' perceptions of their task performance and attitudes towards the procedure they got acquainted with and implemented in their academic reading practice. It was possible to increase the understanding of the development of the students' awareness and efficiency of the implementation of the question generating strategy, as well as its contribution to systematic practice in reciprocal reading tasks. Also, due to taking a micro-level perspective, the performance of the behaviour of individual students could be explored at more depth.

The first question in this study sought to determine whether the questions asked by the six participants of the study were relevant to the content of the texts and clear to a recipient. It was found that all of the 234 questions the participants generated, both during the first part of the project (180 questions) and during the second one conducted in the delayed sessions (54 questions), were relevant. In other words, the students did not encounter any problems with detecting the main ideas in the texts they read and addressing them in their questions. Similarly, they generally succeeded in posing clearly stated questions. As shown in Table 1, 89.4% of all the questions generated during the strategy training sessions and 96.2% asked in the delayed sessions fulfilled

the criterion related to the clarity of questions. These findings are consistent with those the researchers obtained from their previous study investigating the use of the strategy of generating readers' own questions in reciprocal reading instruction at academic level (Chodkiewicz & Kiszczak, 2019).

Table 1

Number of the students' questions across the texts assessed by the raters as relevant and clearly stated (n = 18)

	Training and practice sessions											Delayed practice sessions				Final
	Text										Total	Text			Total	Total
	1	2	3	4	5	6	7	8	9	10		1	2	3		
Relevant questions	18	18	18	18	18	18	18	18	18	18	180 100%	18	18	18	54 100%	234 100%
Clearly stated questions	18	14	16	15	15	13	18	17	18	17	161 89.4%	16	18	18	52 96.2%	213 91%

With regard to the second research question, the findings revealed that at the beginning of the study the participants struggled with posing linguistically correct questions. Overall, during the first part of the project 65 out of 180 students' questions, that is, 36.1%, were not correct in terms of the language used. It is important to note that the problem of formulating linguistically correct text-based questions by EFL students, even at an advanced level of language proficiency, has also been observed in other studies related to the topic under discussion (cf. Miciano, 2004a, 2004b; Dorchandra, 2013). An optimistic comment that should be made with reference to the results obtained is that the number of linguistically appropriate questions tended to increase in each task from the fourth to the ninth questioning sessions and was relatively high in the second part of the study. As demonstrated in Table 2, the amount of correct questions that appeared during the first four strategy training and practice sessions was considerably lower than the average, whereas during the last two training and practice sessions and the last two delayed practice sessions, the students' questions were formed correctly, with only one erroneous item found per text.

It may be speculated that the participants improved their ability of asking linguistically correct questions, which could have been attributed to the students' general development of language proficiency over time as well as to the systematic practice in generating their own questions on the basis of the EFL Didactics course materials and the increasing awareness of the problem.

Table 2
Number of the students' questions across the texts assessed by the raters as linguistically correct (n = 18)

	Training and practice sessions											Delayed practice sessions				Final
	Text										Total	Text			Total	Total
	1	2	3	4	5	6	7	8	9	10		1	2	3		
Linguistically correct questions	6	8	7	7	10	13	14	16	17	17	115 63.9%	15	17	17	49 90.7%	164 70%

The third question in this research study concerned the types of questions the students tended to generate. It is evident from Table 3 that the group of the six participants preferred to use two particular question types, that is, description questions and explanation questions. They did not change this preference even after a nine-month period of not working with the strategy of generating questions in the classroom. As a matter of fact, 30.3% of all 234 questions asked by all the participants throughout the study were description questions whereas 29.1% were explanation questions.

Table 3
Number of particular question types generated by the students across the texts (n = 18)

	Training and practice sessions											Delayed practice sessions				Final
	Text										Total	Text			Total	Total
Question types	1	2	3	4	5	6	7	8	9	10	(180)	1	2	3	(54)	(234)
Factual Information	2	2	8	3	2	3	1	1	1	2	25 (13.8%)	2	1	2	5 (9.3%)	30 (12.8%)
Description	8	4	3	6	10	8	3	4	4	4	54 (30%)	5	6	6	17 (31.5%)	71 (30.3%)
Explanation	4	2	4	7	2	5	5	6	6	7	48 (26.7%)	6	8	6	20 (37%)	68 (29.1%)
Pattern of Relationships	3	3	0	1	4	1	8	4	5	5	34 (18.9%)	4	2	2	8 (14.9%)	42 (17.9%)
Judgmental	1	7	3	1	0	1	1	3	2	0	19 (10.6%)	1	1	2	4 (7.4%)	23 (9.8%)

In a similar vein, the students' resistance to the use of judgmental questions did not change across the study and only 9.8% of all the questions posed were classified as representative of this category. As for factual information questions, a slight decrease in their number could be observed from the seventh

training and practice session in the first part of the project. The questions of this type were also rarely asked during the delayed practice sessions as they constituted only 9.3% of all the questions generated at this stage of the study. This may have resulted from the instructions and explanations given by the teacher-researcher to the students who encouraged them to ask more cognitively demanding questions instead of questions addressing solely facts and figures. Overall, the tendencies noted in the group may suggest that the students found it important to ask and learn about descriptions and explanations of main concepts and about some relationships between key ideas, however, they were not able to take a critical stance on the information conveyed in the texts. These results reflect those of Miciano (2004a, 2004b) and Taboada, Bianco, and Bowerman (2012) who also found that students tend to ask intermediate questions, which require text understanding but do not demand the activation of critical thinking skills.

In order to answer the last research question the students' personal evaluation regarding reciprocal reading practice and their performance in it was gained through two interviews that accompanied the two parts of the study. The analysis of the students' responses has shown some remarkable insights into the way the students approached the procedure of asking text-based questions while accomplishing reading tasks and self-assessment of their performance. When asked about their opinion on the usefulness of the procedure of reciprocal reading, the participants were unanimous in the view that it helped them organise their reading and learning process and stay focused on the content of the text in order to identify the main ideas and remember them. As one of the participants, Paulina, highlighted in the post-study interview, generating own text-based questions and performing reciprocal reading tasks *definitely helped to systematize knowledge and organise it.* She explained her view in the following way:

> I had to plan my goal and as a result, I focused on information which was in the text more deeply because I knew why I should do it. And I memorised better information because it was in the text and also in the questions and discussions. And it was really helpful to read the short texts like summary. I think the whole procedure helped to focus on information which was crucial for understanding the text and to organize knowledge from the whole course, and helped to prepare for the tests.

What is important to emphasize is that the participants' positive standpoint on the use of the strategy of generating their own questions while reading academic texts did not change over the course of the study, even when in the delayed practice sessions no further support in the students' strategy implementation was formally offered. Indeed, the students shared the same opinions

and provided similar justifications supporting their views during both of the interviews. However, only two students expressed their plan to ask text-based questions on their own in the future. Even though the remaining participants were convinced about the benefits of working with the questioning strategy, they found it applicable mainly only while studying short texts, that is, of similar length to those they read in the classroom, and not to entire book chapters or academic articles.

Another strand of the interviews was to get some insight into potential changes in the participants' questioning behaviour across all the reciprocal reading sessions. In the accounts of their individual procedures of generating questions, the six students declared that they adhered to the same cycle throughout the thirteen sessions and found it practical not to introduce any changes into it. Out of the students' descriptions of their ways of working with the texts in order to ask questions based on them, two main patterns of behaviour have emerged. Four students (Paweł, Michalina, Izabela, and Monika) claimed that first they read the target text in order to perform the multiple choice comprehension task. Yet, bearing in mind the next step of the procedure which concerned generating their own questions, the students already attempted to identify and underline the information they could ask about later. Having answered the reading comprehension questions, they read the text again very slowly to make sure whether the ideas they had underlined were worth being asked about and learning about. They stopped reading each time when they arrived at such an idea and wrote their questions addressing it together with their own answers to them. Paweł and Monika finished the procedure of generating questions at this point, whereas Michalina and Izabela went through the text once again to ensure the relevance of their questions. Slightly a different questioning routine was adopted by Paulina and Agata, who read each target text for the first time only with a view to answering the comprehension questions, without any reflection on the text in terms of ideas which they could subsequently address in their own questions. Then, they read the text carefully and generated three questions referring to it. The last step of the procedure concerned reading the texts for the third time in order to provide answers to those questions. All of the study participants admitted that when they found the texts more demanding in terms of content, they had to read them more times. Importantly, regardless of the order of the steps the students took while reading the texts and generating questions on their basis, all of the participants automatically embarked on the strategy of re-reading.

As discussed above, the students did not modify their individualised ways of working with texts with the use of the questioning strategy over time, however, they reported some other changes related to their questioning behaviour. All of the students, apart from Michalina, mentioned that they started paying more attention to the clarity as well as to the linguistic correctness of the

questions they posed. In the cases of Monika, Paweł, and Izabela, the increase of linguistic awareness was caused by the collaborative part of the reciprocal reading procedure, that is, by the fact their questions were to be answered by their peers. Monika's comments are as follows:

> When I noticed that Paweł didn't understand my questions I knew it was something wrong with them. So I knew I had to change their language or be more clear what I mean. And next times I was more careful. So now, after so many classes I think that my questions are more correct than at the beginning.

Agata and Paulina, on the other hand, claimed that it was the teacher-researcher's feedback that they received on the quality of their questions which helped them notice some basic linguistic problems that regularly appeared in their questions. Practising asking questions proved to be helpful for them to work on their linguistic performance. A crucial point needs to be raised here, namely, the participants' perceptions related to the linguistic correctness of their questions were consistent with the objective evaluation of the questions performed by the judges, as already reported in this paper.

As far as the types of questions generated by the participants are concerned, all of the students admitted that they had their own preferences for given categories of questions. What is more, the students, who participated in this study, were able to explain their preferences by referring to the characteristics of the particular types of questions they usually opted for and their role in text processing. By way of illustration, Paweł, who most frequently posed judgmental questions, justified his preference by stating that:

> I like questions which would require personal thinking. The best would be critical thinking like you have to think about the idea in many different ways, look at this in many different views. So it requires you, for example, to compare one to another or to give your own thoughts or just to think from experience because we had those practices already so I like to ask some questions also about real-life experience and text. For me scanning the text is not enough.

Five out of the six study participants stated that they made attempts at using a number of question types apart from those they personally preferred, yet, they did it for different reasons. Two students experimented with question categories as they felt that were expected to do it rather than make choices out of their own willingness, two students did it to test themselves on the ability of asking questions of different types, and one student did it to introduce some variety to her sets of questions. Four students, Agata, Paulina, Monika, and Izabela

indicated that the handout with the taxonomy of questions was an important source of help for them in the process of generating questions representing different categories both during the one-semester strategy training as well as in the delayed sessions. Overall, it may be inferred from the students' views that they personalised the strategy of generating text-based questions and developed their own preferences and opinions concerning particular question types they drew upon over the period of the study.

Conclusion

The present study, although limited in its size, has confirmed that asking text-based questions by EFL students can be both an effective and instructionally manageable strategy in academic settings. Such a view can be supported with reference to the results obtained in both the training and practice sessions, with explicit explanation and guidance provided by the teacher, and in the delayed sessions, when the students worked independently using the already practiced procedure. Generally, with the appropriately chosen difficulty level of content-area texts, as also shown by the results of this study and in Chodkiewicz and Kiszczak (2019), EFL students are capable of asking questions relevant to the content of texts, answerable and clear to the recipient, which undeniably shows that having understood the texts students are able to effectively address the text content in their questions.

Of some problem for English language learners, as it has been demonstrated even at an advanced language proficiency level, is to formulate linguistically correct questions (cf. Miciano, 2004a, 2004b; Dorchandra, 2013; Chodkiewicz & Kiszczak, 2019). However, the current study has also revealed that the number of linguistically appropriate questions tended to increase as a result of the amount of practice the students completed. One can conclude, then, that the use of the strategy of text-based questioning can play a role in overcoming students' language deficiencies when this interactive element is added to receptive reading tasks. Worth emphasizing is the data informing about the participants' choice of different question types. The students showed preference for asking description and explanation questions, that is, the ones at a lower cognitive level while resisting the use of judgmental questions. This confirms the tendency observed by Chodkiewicz and Kiszczak (2019), as well as the results obtained by Miciano (2004) and Taboada, Bianco, and Bowerman (2012), who found that students choose to ask intermediate questions as those that do not require enacting critical thinking skills.

The findings from the interviews generally matched those from the objective analysis of the quality of the students' questions, apart from the fact that some valuable information regarding the students' views and perceptions of the use of text-based questioning was added. The participants of this study unanimously underlined that generating their own questions contributed to organising their reading and learning from text. They expressed a positive standpoint on the use of the strategy of generating their own questions over the whole course of the study. They also declared the strategy to be helpful in adopting a more individualized processing of the texts they read. As for the use of different question types, the students showed preferences for some of them, giving different reasons for their choices. Among them they mentioned the role of a given question in text comprehension and content processing, satisfying the requirement of using different question types, experimenting with different question types, or testing the ability to ask particular question types. Of interest has also been the description of the cycle in which the particular students implemented the strategy of text-based questioning since they embarked on varying pathways to reach their goals.

To sum up, proper guidance offered by the teacher can make students more responsive to the texts they read and more reflective on the use and contribution of question generating strategy to the reading and learning process. It is also important to make students aware of taking a more critical approach in asking their own questions, as well as improving their linguistic accuracy of verbal expression. Text-based questions generated by students while reading and learning from expository texts can undoubtedly play a key role in enhancing reading literacy skills by fostering the strategicness of the reading process.

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Stellen von eigenen Fragen in Anlehnung an einen fremdsprachigen Text: Zur langfristigen Anwendung und Wahrnehmung dieser Strategie beim Lesen im Team

Zusammenfassung

Der strategische Ansatz zur Entwicklung der Lesefertigkeit ist derzeit eines der wichtigsten Konzepte in der Sprachdidaktik. Dieser Beitrag widmet sich den Ergebnissen einer Studie, in der Studierende der Anglistik einem Langzeittraining unterzogen wurden, in dem sie ihre eigenen Fragen auf der Basis eines Textes formulierten, der beim Lesen im Team verwendet wurde. Diese Studie bestand aus zwei Phasen: in einem Semester erhielten die Studierenden detaillierte Erklärungen und Hilfe beim Verfahren der Fragestellung, wobei der Schwerpunkt auf den Fragen unterschiedlicher Tiefe der kognitiven Textverarbeitung lag. Neun Monate später machten sie dieselben Aufgaben ohne Hilfe einer Lehrkraft. Ziel der Studie war es, Veränderungen in der Qualität der Fragen zu bewerten, die sich die Studierenden in den späteren Lesephasen zu zweit stellten, sowie von Studierenden – mittels eines Interviews – Informationen über die Wahrnehmung von Aufgaben zur Fragestellung und über die Nützlichkeit dieser Strategie bei dem Verstehen eines wissenschaftlichen Textes und der gezielten Verarbeitung seines Inhalts zu bekommen. Die Studie zeigte, dass die Studierenden keine Probleme damit hatten, solche Fragen zu stellen, die aus der Sicht des Empfängers klar und inhaltlich relevant waren. Durch die Teilnahme an mehreren Team-Lesesitzungen konnten sie die sprachliche Form von Fragen auf Englisch besser beherrschen. Nach Meinung der Befragten ist die Strategie, Fragen durch den Lesenden auf der Grundlage des wissenschaftlichen Textes zu stellen, hilfreich für das Verstehen und das Beherrschen des Fachwissens in Anlehnung an seinen Inhalt.

Schlüsselwörter: akademisches Lesen, gegenseitiges Lesen, Fragen von Studierenden, Strategietraining

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Influence of Background Knowledge and Language Proficiency on Comprehension of Domain-specific Texts by University Students

Abstract

This paper presents the results of a quantitative study that explores two factors contributing to reading comprehension of domain specific texts, namely, the level of language proficiency and background knowledge. Overall, 32 students participated in the study by taking two custom-designed reading comprehension tests. The test scores were further analyzed using SPSS statistical software. The results of statistical tests revealed the differences between study groups as well as the effects of compensation. More precisely, the most proficient group scored higher on almost all tests and completed the tests more quickly than the remaining groups. The statistical tools used to test the data showed that there are significant differences between all the groups in their performance on Proficiency Level Test and in timing. Hence our hypothesis concerning the influence of background knowledge and language proficiency on reading comprehension of domain-specific texts has been confirmed. Finally, the paper discusses limitations of the study as well as implications for EFL teaching.

Keywords: reading comprehension, background knowledge, language proficiency, domain-specific texts

Introduction

Text comprehension is a complex phenomenon. Each person has a unique experience as he or she is brought up in various social communities, learns about many traditions related to his or her family, visits places and encounters different people. What is more, young students learn about specific domains of

knowledge, such as physics, music, or tourism. All these factors, and many more, shape their personality and have an influence on their worldview. Due to them, every person understands the received messages differently. The influence of experience and knowledge on the students' learning process has become a matter of discussion for different researchers. It has been also an intriguing issue for linguists interested in the processes of reading. They have conducted many studies concerning the influence of one's background knowledge on comprehension of different texts types (Carrel, 1983; Erten & Razi, 2009; Joag-Dev & Steffensen, 1995; Keshavarz & Atai, 2007; Ridgway 1997; Yin, 1985). The general purpose of these studies was to check whether background knowledge can affect reading comprehension and, if so, how strong this influence can be.

This research[1] focuses on the problem of background knowledge and its effects on one's reading comprehension. I observed that despite the high level of proficiency, some learners may face problems while reading a text on a specific subject matter. Very often, the terminology of some professions is opaque and not available to a layperson, hence the mere linguistic knowledge may not be enough to fully comprehend a text. Nevertheless, due to the high level of proficiency, some students of a foreign language may activate other factors in order to compensate for the lack of background knowledge.

Reading, Reading Comprehension, and Background Knowledge

Reading is a very important activity in people's lives. People read for different purposes—searching for information, entertainment, or learning, among others. However, the readers usually do not wonder what exactly reading is and what kind of processes are involved in this complex activity. Grabe and Stoller (2002, p. 9) claim that "reading is the ability to draw meaning from the printed page and interpret this information appropriately." Moreover, Urquhart and Weir (1998, p. 37) state that reading "largely takes place in the mind." At this point, it may be assumed that reading is not only the process of producing sounds corresponding to the signs printed on paper, but it also involves many mental processes that are activated while reading. According to Gough, Hoover, and Peterson (1996, p. 3),

[1] This research is a part of my MA thesis conducted under the supervision of Prof. Liliana Piasecka at the University of Opole in 2014.

> [a] child who cannot decode cannot read; a child who cannot comprehend cannot read either. Literacy—reading ability—can be found only in the presence of both decoding and comprehension. Both skills are necessary; neither is sufficient.

Such a point of view shows that the reading ability is inevitably connected with the comprehension. In other words, reading any discourse without understanding it would be pointless.

Comprehension of a text is an essential issue in the process of decoding a printed text. It may be seen as a process of assigning meaning to any discourse and "getting information from written text" (Urquhart & Weir, 1998, p. 85). Sousa (2014, p. 101) lists five actions that a reader engages in order to comprehend a text, and these are "identifying words by using knowledge outside the text, accessing word meaning in context, recognizing grammatical structures, drawing inferences, and self-monitoring." Hence, it can be assumed that comprehension of a text is a complex phenomenon, and the different interactive processes require a reader to become an active reader responsible for the meaning that he or she derives from a text.

Comprehension involves a number of factors, and those are predicting the content of a text, confirming predictions with the content and, eventually, changing or complementing predictions (Goodman, 1971). The predictions are connected with readers' knowledge about the world and a subject matter. On the basis of Goodman's view, Coady (1979) proposed a basic model of English as a second language (ESL) reader. He states that during the process of reading and comprehending the text, ESL reader uses his or her conceptual abilities, which means a reader's intellectual capacity, processing strategies, including "e.g. grapheme-morpho-phoneme correspondences, syllable-morpheme information (deep and surface), lexical meaning and contextual meaning" (Carrel & Eisterhold, 1987, p. 219) as well as background knowledge. Each of these components integrate with others resulting in comprehension. Moreover, as Piasecka (2008) notices our understanding of a written text is bound to the frameworks of our culture and society. It is easier for a reader to comprehend a text that is closer to his or her cultural context. This issue is also connected with the reader's background knowledge. As Clarke and Silberstein (1977, p. 137) claim, "skill in reading depends on the efficient interaction between linguistic knowledge and knowledge of the world." Hence, in order to establish a working definition of reading, it may be concluded that every act of reading, or decoding a written text, should be strictly connected with comprehension that requires from a reader an active participation in a reading process, using particular information stored in his or her mind––in other words, his or her background knowledge.

Looking at factors that affect reading, Bernhardt (1996, p. 93) comments that "knowledge can be defined as that information held by the writer and assumed to be known to the reader." Many researchers claim that the knowledge which a reader brings to the reading activity is crucial in understanding any discourse. Saville-Troike (2006) assumes that the progress in reading depends on how much background knowledge a reader has when he or she starts reading.

According to Bernhardt (1996), there are three types of knowledge, namely, local-level knowledge operating among a specific group of people, culture-specific knowledge that includes familiarity with rituals or history of a given group, and domain-specific knowledge, the latter being the focus of this study. Throughout the school education, one learns specific domains of knowledge such as history, music, physics or math. However, this kind of knowledge does not have to be gathered by institutional learning only.

Carrell and Eisterhold (1987, p. 220) maintain that the text alone does not carry any meaning in itself; it is rather one's prior knowledge which directs the reader's attention to the meaning of the text. They also state that the reader's "previously acquired knowledge structures are called schemata," which means that when reading a text, readers relate its content to their already existing schemata which may not be literally and explicitly written down. Thus, many readers may comprehend the same text in the different ways, as everything depends on their prior knowledge connected with a text's subject matter.

Research Review on the Readers' Prior Knowledge

The influence of background knowledge on text comprehension has been already addressed by researchers (Joag-Dev & Steffensen, 1995; Yin, 1985; Ridgway, 1997; Keshavarz & Atai, 2007; Erten & Razi, 2009). For example, Steffensen and Joag-Dev (1995) explored why proficient language learners have difficulties in understanding texts in a foreign language. The main focus of their research was schema theory and the functions of schemata in text comprehension. The authors formulated some hypotheses, one of which was that the readers would recall more information from the text in their native language than in a foreign language. Moreover, it was believed that students will make more culture related connotations, even if they are not literally stated in the text. What is more, it was predicted that the participants would need more time to read in the foreign language than in their native one.

The results showed that the cultural knowledge significantly affects text comprehension as the readers make more or less appropriate inferences while trying to derive meaning from the text. If the readers lack specific kind of

background knowledge, they will attempt to use the knowledge they have already gathered and adopt it into a text.

The study conducted by Yin (1985) concentrates on whether readers' prior knowledge influences their comprehension of domain-specific texts. The author focused specifically on background knowledge, considering it as a factor which can significantly influence reconstructing the meaning of a text. Hence, she sees prior knowledge as the sum of knowledge about language and other kinds of relevant knowledge that a reader has already accumulated. Yin (1985) maintains that one needs prior knowledge in order to correctly interpret a written message.

The results of the experiment conducted by Yin (1985) confirmed the assumption that readers' prior knowledge connected with a content of a text and the linguistic proficiency play an important role in understanding domain-specific texts. The experiment also revealed that the absence of one factor, for example, prior knowledge or linguistic proficiency, can be compensated by the activation of the other. Hence, the author implies that the second language teachers should focus more on the process of reading than on the sole product of it. They should make students aware of the factors influencing reading, and they should develop troubleshooting or problem-solving strategies among students by using all kind of knowledge and skills that the students have already acquired.

Keshavarz and Atai (2007) investigated whether the content schemata have a significant effect on text comprehension and attempted to verify whether it interacts with the readers' proficiency and text simplification. The results proved that content schemata affect comprehension stronger than simplification.

Erten and Razi (2009) focused on the background knowledge connected with the readers' culture as they aimed to provide evidence that cultural familiarity with a short story exerts influence on reading comprehension. The said researchers found that the readers comprehend more and are more motivated while reading a text connected with their experience and culture.

The objective of Ridgway's study (1997) was to verify whether effects of schemata would occur only between two linguistic thresholds. The results partially confirmed the author's assumption, as they revealed that the students always use background knowledge but its effect is not always seen.

In a similar vein, the main goal of the study presented in this paper is to verify whether the students' background knowledge and linguistic proficiency influence their understanding of a text on a specific subject matter. This study provides a complementary perspective on the relationship between background knowledge and reading comprehension as it does not take into consideration the cultural background of the participant, but it takes into account an influence of participants' linguistic proficiency. The methodology and research material used in this study are described in the following section.

Research Material and Methodology

Aim of the Study and Research Questions

As it was previously mentioned, background knowledge is a significant factor influencing readers' text comprehension. Thus, the goal of this study is to check how students of different study programmes (law, computer science, English philology) would perform on texts devoted to various subject matters, and whether the prior knowledge has a significant impact on text comprehension. What is more, apart from background knowledge also the readers' level of proficiency affects the process of text comprehension. Hence, another goal of this study was to check whether the readers who are more proficient in language would perform similarly or better on the texts that are not connected with their interest or study programme than the students who are less proficient, but who read the texts based on a subject matter familiar to them.

Hence, the hypothesis put forward in this study implies that the participants will perform better on the texts based on the topics familiar to them. What is more, it is also assumed that the participants' higher level of proficiency will compensate for their lack of domain-specific knowledge. As a result, this study aims to provide answers to the following research questions:

1. Does background knowledge influence comprehension of domain specific texts?
2. Does the higher level of linguistic proficiency compensate for the lack of domain-specific knowledge?

Participants

All in all, 40 participants took part in the study, however, since eight students did not take the second test they were not taken into consideration in overall findings. The participants were the students of law, computer science, and English philology at the University of Opole. The first group of participants were the students of law (LFG) who were in their second year of their study, aged between 20–23 years, with the mean-age of 20.8. Generally, 20 participants from this group took part in the study, but only 12 of them took both tests; there were seven female and five male participants. On average, they had been learning English for 12 years, ranging from six to 18 years. The second group were students of computer science (CSG), who were also in their second year of study. The mean-age was 21.9, ranging from 20 to 23 years, and they had been learning English for ten years at the time, ranging from 15 years to three years. There were 11 males in the group. The third group were students of

English philology (EPG) in the fourth year of their study, aged between 22–24 years; their average age was 22.8. There were nine participants in the group, that is, one male and eight females. They had been learning English for 13.9 years on average, ranging from 12 to 17 years.

Materials

The data subjected to the analysis included the results of two tests. The first test consisted of two parts, namely, personal questionnaire and a test assessing the participants' level of linguistic proficiency. The tasks varied in the level of difficulty. The maximum score on the proficiency level test was 49 points.

The second test comprised three texts arranged randomly. One text was connected with the domain of law and dealt with the history of Common Law. The other text was devoted to Computer Science and its subject was a review of a PC. There was also a neutral text based on the topic not connected with the aforementioned study programmes; it dealt with the beginnings of religion in ancient Scandinavia. The maximum score for text from the legal domain text was nine points, for the text devoted to Computer Science—nine points, and for the neutral text it was five points. Hence the total number of points was 23.

Procedure and Stages of the Study

As it was mentioned earlier in the paper, there were three groups and each participant had to take two tests. All the participants were asked to sign the tests, as the results of the first test were then related to the results of the second one. The first group that took the test was LFG. They had to fill in personal questionnaire and deal with tasks for determining the level of linguistic proficiency. Two weeks later, during the second meeting, the students were given three texts arranged randomly, thus each participant had a different order of the texts. Meanwhile, the CSG took the first test, and after two weeks, the second test was administered to this group. The last was EPG, who were administered the first test in June, and the second one in October, which was due to the vacation period. The SPSS program was used for statistical analysis of the test results.

Results

The results of the tests are presented in the form of figures. The first tool used in the study was the linguistic proficiency level test. The results of the test are provided in Figures 1, 2, where minimum and maximum scores, means, as well as standard deviation are presented for all the three groups. The highest standard deviation (SD) in score was recorded for EPG (5.38) and in time—CSG (8.96), which means that these groups are more differentiated. The lowest SD in score (4.52) is found in CSG, and in time (3.35) in EPG, which means that these two groups are more homogenous. It can be observed that the EPG not only achieved the highest score on the proficiency level test, but also completed the test the fastest of all. What is more, the CSG group that scored the lowest needed more time than the remaining groups to complete the task.

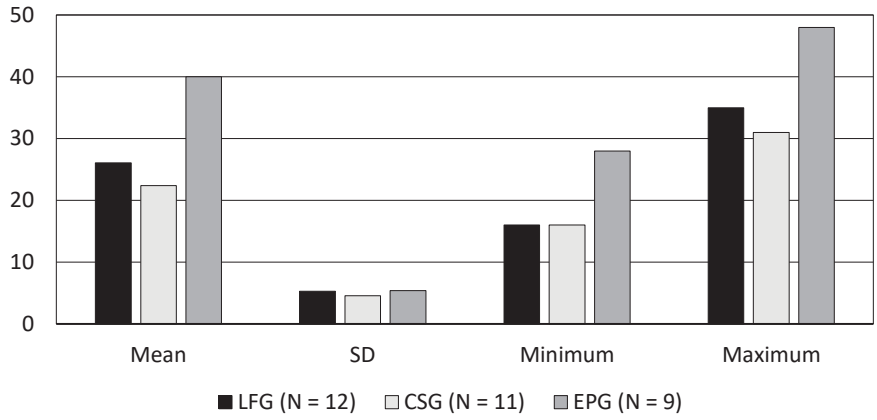

Figure 1. The results of the proficiency level test (maximum score 49 points).

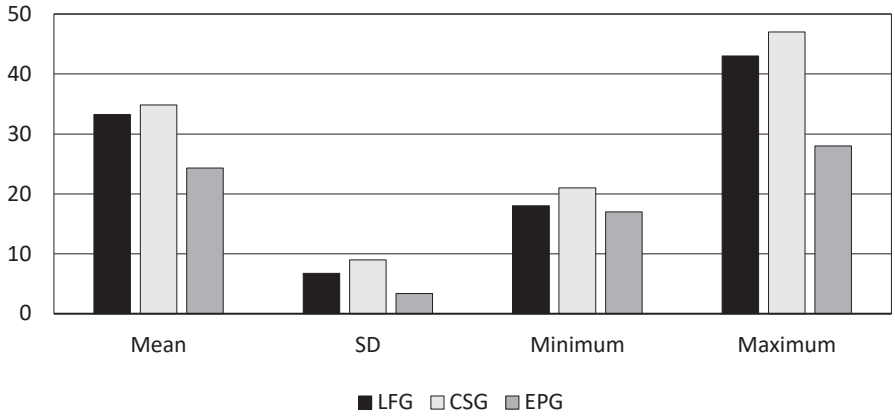

Figure 2. Time of performance of the proficiency level test.

Figures 3, 4, 5 present the results of the second test. According to the data, the lowest mean for all three texts were recorded in LFG, although they scored better on the proficiency level test than CSG. An interesting finding is that LFG has the lowest score on the text connected with the subject matter of their studies, namely, the text about the history of common law. This group scored better on the text which was on the topic unfamiliar to them, that is a computer science text. It is presumed that there are at least two factors which influenced the LFG students' performance and these are their approach to test two, which was rather unconcerned, and the omnipresence of various electronic and computer devices in our day-to-day life. According to our assumptions, the CSG performed best of all the three groups on the computer science text. EPG not only has the highest score, but also performed best on the proficiency

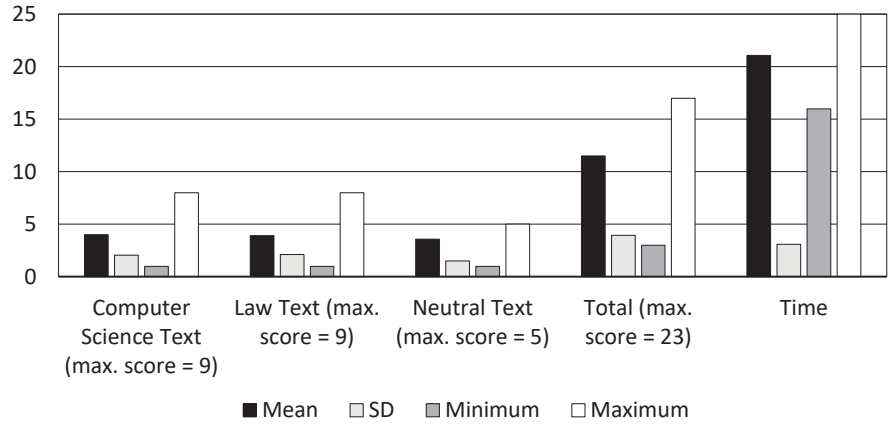

Figure 3. The results of test two—LFG.

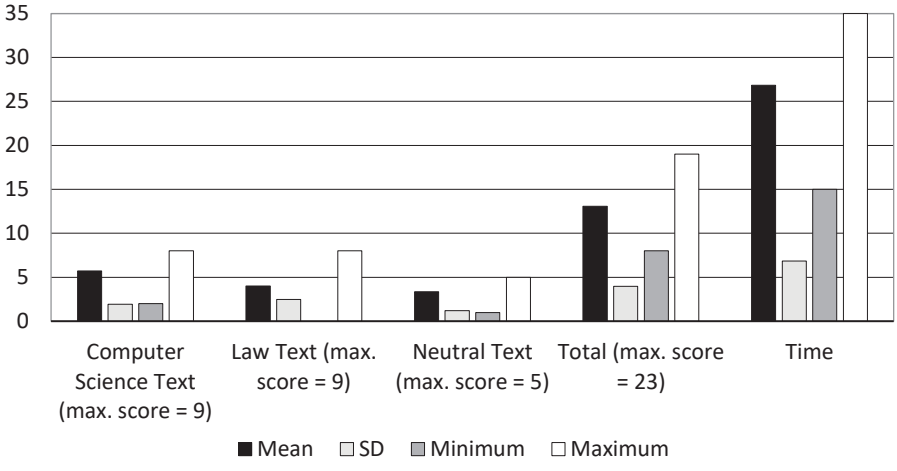

Figure 4. The results of test two—CSG.

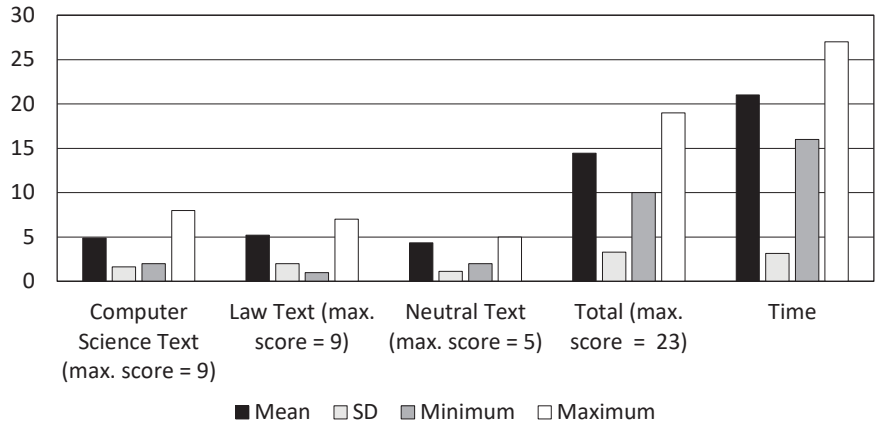

Figure 5. The results of test two—EPG.

level test. This group appears to be the most homogenous since the standard deviation in this group is 3.28.

What is more, the non-parametric Kruskal-Wallis test for ranked data was used to verify whether there are statistically significant differences between the groups under scrutiny. Figure 6 presents the results of the Kruskal-Wallis test. The non-parametric Kruskal-Wallis test shows that there are almost no significant differences between the groups. Hence, a relation between the students from different study programmes and the reading comprehension of domain-specific test cannot be assumed. The test presents only two significant differences, the first one in Proficiency Level Test (p = 0,00), and the second one in Time 1 (time of performance of Proficiency Level Test) (p = 0,005).

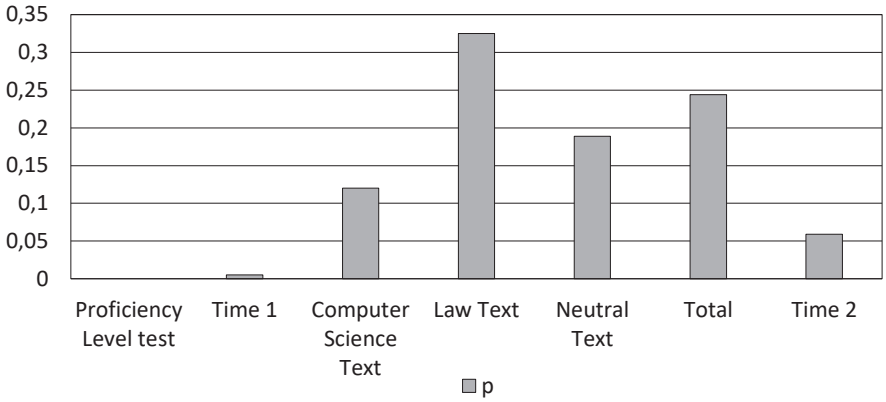

Figure 6. The Kruskal-Wallis test.

Furthermore, I checked the correlation between the results from the proficiency level text and the scores from test two. The results are presented in

Figure 7 and show that the correlation between the level of proficiency and comprehension of domain-specific texts holds three cases. The level of proficiency of the students from EPG correlates positively with comprehension of the neutral text (p = 0.02, correlation = 0.77). What is more, the total score from all three texts also shows a positive correlation with EPG level of proficiency (p = 0.01, correlation = 0.78). Moreover, the scores from all three groups from the proficiency level test correlate positively with the scores from the neutral text (p = 0.03, correlation = 0.38). Nevertheless, in these three cases, the results present a moderate correlation between the variables, hence a cause and effect relation between the level of proficiency and the reading comprehension cannot be indicated. LFG's and CSG's level of proficiency does not correlate positively with text comprehension (p > 0.05).

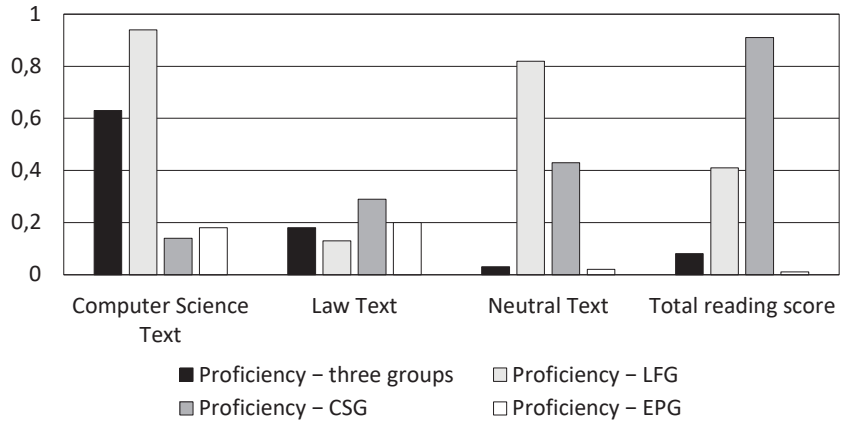

Figure 7. The correlations.

Discussion

The data collected during the study proves that there is almost no statistically significant influence of background knowledge on the comprehension of texts devoted to a subject matter familiar to readers (Figure 6, 7). There was only one case where the prior knowledge influenced comprehension, and it occurred in the group of students of computer science, who achieved the highest score on the computer science text, however, the result does not prove to be statistically significant. In contrast, students of law scored the lowest on the text on the subject matter that was supposed to be familiar to them. Although the results show that there are differences in the groups' performance on texts with different subject matters (Figures 3, 4, and 5), the tools used to process the data show that these differences are not statistically significant.

The results from the correlation test (Figure 7) show that there is a correlation between the students' level of proficiency and text comprehension. The correlation holds in the case of English philology students, who achieved the highest score on the proficiency level test, and their results moderately correlate with the scores from the neutral text and their total score from comprehension test. It is also seen that the English philology students achieved the highest scores on almost all texts. The exception here is the group of computer science students, who scored better on a computer science text.

The two hypotheses presented in this study state that the participants will perform better on the texts describing the topics familiar to them, and that the participant's higher level of linguistic proficiency will compensate for the lack of domain-specific knowledge. In the light of the reported results, both hypotheses can be confirmed only partially. The students of computer science performed better on the text familiar to them, nevertheless, the students of law scored the lowest on the text connected with their studies. This group performed better on the computer science text. Similar findings were also reported in the study conducted by Ridgway (1997), who assumed that some concepts are more universally available, hence even a layperson can access information on them, for example in mass media. Nowadays, people are surrounded by different kinds of electronic devices, thus the wording connected with this subject matter could be familiar not only for the computer science students. What is more, the vocabulary used in the domain of law is more difficult and opaque, notably for a layperson, and that is why it may cause more problems while reading and comprehending the text. In addition, legal texts usually contain many terms of Latin origin, which can further hinder text processing and understanding by readers. However, the students of law admitted in the questionnaire that they know Latin language.

Finally, it was found that the group of English philology students proved to be more proficient linguistically, and they scored the highest on almost all texts. What is more, the Kruskal-Wallis test shows significant differences between the groups in the Proficiency Level Test (Figure 6) and the total score of test two proves to be statistically significant and correlates positively with the English philology students' level of proficiency (Figure 7). Saville-Troike (2006) states that advanced reading is more demanding as it includes the knowledge of both basic and domain-specific vocabulary. The sentence structure of domain-specific texts is also more complex. Thus, understanding specialized texts "requires extensive exposure to written text because vocabulary, grammar and discourse structures differ in the kind of language used for academic versus interpersonal purposes" (Saville-Troike, 2006, p. 159). This assumption offers an explanation to the highest score of the English philology students. Not only are they more proficient in language skills, but also they are more exposed to various types of academic and subject-specific texts written in English throughout their en-

tire study programme. Moreover, the timing from both tests also appears to be significant as the students from the English philology group needed less time to complete the tests, as compared with the remaining groups. The Kruskal-Wallis presents statistically significant differences between the groups in time of performance of the first test (Figure 6). However, their automaticity in reading and processing information was conscious so they completed the tasks accurately. In Yin's study (1985), it appeared that the proficiency in language can compensate for the lack of background knowledge, which means that the results reported in this study confirm Yin's findings. Nevertheless, one has to admit that 180 participants took part in the study conducted by Yin (1985), while only 32 students were participants in the presented study. Hence, the small number of students can also be the factor that influenced the results, which should not be construed of as definitive. That is why it is important to further verify the results of this study by conducting it with a higher number of students. It may be expected, among others, that the level of linguistic proficiency will have a greater influence text comprehension.

Conclusions

As the role of background knowledge and linguistic competence in reading comprehension is rather multifaceted, I realise that this study has certain limitations. As mentioned earlier, the first limitation is the number of participants. The total number of students in my study was 32 whilst in other studies there were, for example, 69 students (Ridgway, 1997) or even 180 (Yin, 1985). It can be assumed that with the greater number of participants, the influence of both prior knowledge and language proficiency might prove to be stronger.

Secondly, the omnipresence of technology and different kinds of electronic devices might have also affected the results of the study, as the students might be well-familiar with the vocabulary connected with the subject of computer science. It can be assumed that the participants could have already gathered the background knowledge connected with computers, even if they do not study computer science. On the other hand, there are also some domains where wording is more opaque and difficult for non-specialists (e.g., law). Obviously enough, since I did not assess the participants' domain-specific knowledge, this issue is a mere theoretical speculation.

Another factor that could have played an important role in the study is the students' motivation and attitude toward the research. According to Norris-Holt (2001, para. 20) "motivation is an important variable when examining successful second language acquisition." It was noticed that one group's approach

was rather indifferent (LFG). Such an approach can affect the final results, as nonchalance does not facilitate text comprehension.

Finally, the format of the test could also have influenced the results. On test two the participants were asked to fill in the gaps. It can be speculated that if the students were administered the recall test, which requires producing their own answers, the scores would be different.

Implications for ESL Classroom Teaching

As the study proves, background knowledge facilitates comprehension of written discourse. Carrell and Eisterhold (1987) suggest that while administering reading exercises to students, teachers should activate appropriate schemata that the students already have and use in order to help them understand a text. This can be achieved by providing the students with cues in the text. In that case, graphic images may be very helpful as the students may easily associate them with the written language and information conveyed in the text.

Although the students may be given the cues, they may still not comprehend a text because they may lack those schemata. Thus, the teachers should provide their students with the background knowledge before reading tasks. As Richgels (1982) notices, it is much easier for the students to understand or elicit meaning from a text which describes a topic familiar to them. It is important to adequately prepare the students before assessing their knowledge of an unfamiliar subject. The different kinds of pre-tasks that aim at providing the students with background knowledge are useful as the starting point of reading. Moreover, according to Keshavarz and Atai (2007), the teachers should not teach new linguistic items (words, expressions or phraseologies) on the texts which concern unfamiliar topics. This approach might be too challenging for the students as they may not find any cues in the text.

It is also important to develop the process of active reading in the students. This means that the students should actively participate in reading exercises by noticing textual cues, interpreting them correctly, making inferences and using every kind of knowledge that is available to them. The students should also get to know how to use language resources, for example monolingual and bilingual dictionaries and, if possible, language corpora. As Yin (1985) notices, the teachers should focus on the process of learning a language, not only on its product. Teaching students to become more conscious and independent in their process of acquiring a target language is crucial as it leads to success in language learning.

Nevertheless, students may have appropriate knowledge, but they might find it difficult to activate it due to a low level of language proficiency. Teachers should therefore encourage the students both to develop a rich vocabulary and to

learn about language structures, as it leads to greater comprehension of a written text. The study proves that some of the reading problems may be caused by a lower level of linguistic proficiency. The students who lack background knowledge try to activate every source possible in order to facilitate reading. Hence, developing all language skills is a crucial factor in the process of reading and text comprehension.

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Justyna Kendik-Gut

Zum Einfluss des Fachwissens und des Sprachniveaus der Studierenden auf das Verstehen von Fachtexten

Zusammenfassung

Diese Studie befasst sich mit dem Einfluss des Fachwissens auf das Verstehen von fremdsprachigen Fachtexten. Darüber hinaus wird das Problem der allgemeinen Sprachkenntnisse aufgeworfen, zu untersuchen ist dabei, ob ein höheres Sprachniveau den Mangel am Fachwissen ausgleichen kann. An der Untersuchung nahmen 32 Studierende der Universität Oppeln teil – 12 Jurastudierende, 11 Informatikstudierende und 9 Studierende der Englischen Philologie. Die umfassende Analyse der Umfrageergebnisse ergab, dass das Fachwissen keinen statistisch signifikanten Einfluss auf das Textverstehen hat. Die Analyse der Zusammenhänge zwischen dem Sprachniveau und dem Textverstehen zeigte, dass ein höheres Sprachniveau nicht nur das bessere Textverstehen beeinflusst, sondern auch den Leseprozess beschleunigt. Einer der Faktoren, der zu Forschungseinschränkungen führen kann, ist die geringe Teilnehmerzahl. Es ist möglich, dass bei ihrer größeren Anzahl die Auswirkungen von Fachwissen und Sprachniveau höher sein könnten.

Schlüsselwörter: Lesefertigkeit, Hintergrundwissen, Sprachkenntnisse, fachspezifische Texte

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Complementarity of Reading from Paper and Screen in the Development of Critical Thinking Skills for 21st-century Literacy

Abstract

The skill of reading undergoes dramatic changes due to the change of reading interface readers are exposed to. Readers who want to be active participants of knowledge society need to perceive it as more than just a receptive skill.

The study aims to assess the condition of *homo legens*, diagnose what kind of reading interface preferences characterize 21st-century readers, how they respond to texts considering reading both digitally and in print, accepting or viewing critically the underlying ideology of the text.

The analysis of the collected data attempts to determine if the reported preferences are conducive to the development of critical thinking skills for 21st century literacy, which include understanding complex ideas, evaluating evidence, weighing alternative perspectives and constructing justifiable arguments.

Keywords: literacy, screen vs. paper reading, note-taking, critical thinking skills, digital literacy.

Literacy under Construction

The act of reading is a fairly recent learned behavior that uses the neural circuits initially developed for language, coordination, and sight. Taking into consideration recent finding of the remains of homo sapiens in Morocco dating back to 300,000 BC (Gibbons, 2017) and the Danube script from 5th millennium BC in Central Europe, it can be roughly estimated that literacy accompanies *homo sapiens* in only 2% of its evolution. As Wolf (2010, p. 3) claims we were

never born to read, but our neural circuits recycled to do so from cortical areas that were originally devoted to different functions like spoken language and encoding visual objects (Daheany, 2009, p. 121). For centuries literacy remained a skill limited to a small number of people (12.05% in 1800) who were associated with power, prestige, and intellectual elite. It has taken over 200 years to reverse the ratio of the illiterate (14.70%) to literate population and to become more democratic. The last two centuries again constitute just 2% of *homo legens* evolution, which gains its momentum now. At present, it is the 85.3% of global population who may identify themselves as *homo legens*, this dramatic change is illustrated in Figure 1, which presents literacy for the period 1800–2014.

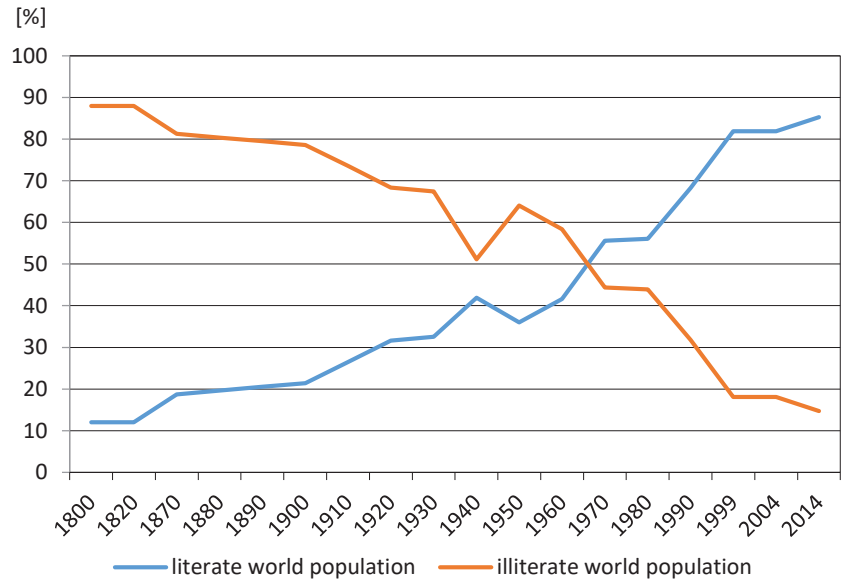

Figure 1. Literacy for the period 1800–2014 (data based on Roser & Ortiz-Ospina, 2018).

What is more, at present over 54% of global population are active Internet users (www.statista.com), which can be compared to the literacy level in 1990. It is interesting whether readers' interface preferences will keep pace with the development of technology and the Internet. More and more people have access to the electronic media; yet, irrespective of their reading purposes their reading comprehension both in L1 and L2 is often impaired. It may result from the fact that they have not developed sound skills to comprehend a paper written text. As Vidal-Abarcal, Mañá, & Gil (2010) emphasise the sound reading skills developed form reading a paper text support the location of relevant information in digital texts. Location is impaired because of the distractions present in the hypertexts, which do not leave cognitive resources for viewing critically the

underlying ideology of the text. That is why Salter (2018) emphasises the importance of developing different set of skills: digital literacy and navigation skills.

The development of digital literacy and navigation skills would contribute to the increase of critical thinking which is the ultimate goal of tertiary education. As far as the skills of a critically thinking reader are concerned, they are best summarised by Schumm and Post (1997) who divide them into: basing judgements on evidence, asking penetrating questions and evaluating ideas, distinguishing between opinions and facts, and reflecting on ideas. The important factor underlying all of the above-enumerated skills is time and concentration which in case of reading from the screen are decreased. However, the study by Wu and Chen (2011) shows that students have an intuitive understanding of how best to find, comprehend and retain the text, as majority of tertiary students will begin their research using screen-based text (benefiting from advanced search functions and the like), and then after having chosen the appropriate text will often print it to be able to better digest the text.

As Salter (2018) indicates, we are all on a journey of finding a balance between reading on paper and reading electronically. The fundamental assumption of the study is the increase in electronic reading preference and a wider range of application of electronic tools supporting the reader, which result in the development of most important skill at the tertiary education level–critical thinking. As critical thinking skills involve an ongoing questioning of taken-for-granted assumptions (Santos & Fabricio, 2006), the aim of this work is to examine the existing interface preference of the readers and show how finding balance between interfaces influences development of critical thinking skills. We acknowledge that there are considerable discussions among the researchers as to what can be defined as a critical thinking skill, however, for the purpose of our study we employed only four major ones. The first skill involves comprehending complex ideas, undeniably only after having comprehended an idea one can proceed to asking penetrating questions. Then, the two skills of basing judgements on evidence and evaluating ideas indicated by Schumm and Post (1997) are combined into a single skill of evaluating evidence. Finally, distinguishing between opinions and facts and constructing justifiable arguments are examined to see which interface is the most conducive to their development.

Reading from Paper versus Reading from Screen

The major difference between paper versus screen reading is the fact that reading from paper is a linear experience involving concentration and emotional

engagement (Durant & Horava, 2015) and screen reading is a multi-layered experience (Walsh, 2016), as electronic documents allow readers to leave one resource and explore a range of alternative resources (Anderson-Inamn & Horney, 2007). The other areas of difference involve: preferences, manipulation, eye-fatigue and movement, as well as comprehension.

Reading Interface Preference

As the concept of 'digital natives' has been debunked by Bennett, Maton, and Kervin (2008), it cannot be assumed that all students are comfortable with technology. The correct generalisation would involve the assumption that different students will display different media skills. Ramirez Leyva (2006) proved that nearly 80% of 687 surveyed students preferred to read text on paper as opposed to a screen in order to "understand it with clarity," and Nicholas and Lewis (2008) showed that when it comes to reading a book, even millennials (generation born between 1980–2000) prefer print.

Text Navigation and Manipulation

One of the reasons of a strong paper interface preference may result from the fact that reading has to be considered not only an intellectual but also a physical activity. The implicit feel of where you are in a physical book turns out to be more important than we realized (Sellen & Harper, 2002), and the smooth feel of paper and the rich colors of illustrations are largely lost in e-book reproductions (Paul, 2013). Yet another aspect of physicality involved in reading is indicated by Jabr who emphasises the physical aspect of it claiming that

> text is a tangible part of the physical world we inhabit; turning the pages of a paper book is like leaving one footprint after another on the trail—there's a rhythm to it and a visible record of how far one has traveled. All these features not only make text in a paper book easily navigable, they also make it easier to form a coherent mental map of the text. (2013, p. 100)

Additionally, Jabr (2013) claims that modern screens and e-readers fail to adequately recreate certain tactile experiences of reading on paper that many people miss and prevent people from navigating long texts in an intuitive and satisfying way. The study such as Mangen, Walgermo, and Brønnick (2013) suggests that the ability to identify your passage through a text in a tactile way is important to learning, and Wästlund et al. (2005) prove that scrolling requires

a reader to consciously focus on both the text and how they are moving, and it drains more mental resources than turning a page, which is a simpler and more automatic gesture.

Eye Movements and Fatigue

Yet another reason of a strong paper interface preference could result from the fact that less attention is needed when reading from paper. Gudinavičius (2016) suggests that less attention is needed to read from paper in comparison to any size or type of screen. Fatigue, being the physical aspect of reading, also cannot be overlooked as far as reading is concerned. Jeong (2012) in the study regarding eye fatigue proves that students had significantly greater eye fatigue after reading e-books than after reading paper books. As regards eye movement, thanks to eye-tracking technologies, Zambarbieri and Carniglia (2012) show that reading from paper and screen do not differ significantly in terms of oculomotor behaviour. The discomfort that people feel when reading from a screen, rather than paper, is described by Gerlach and Buxmann (2011) as "haptic dissonance," which is explained as an unfamiliarity with the feel of e-books compared to print books.

Comprehension

Dillon (1992), reviewing literature on reading from paper versus screens concludes that comprehension of material is not negatively affected by interface it is presented on; however, having well developed single-text comprehension skills (acquired in reading for paper) improve navigation and make readers less distracted by misleading cues (Salmerón, Cerdán, & Naumann, 2015). Kaufmann and Flanagan's (2016) study proves that using computer screens for learning worsened abstract thinking (e.g., recalling why some events occurred), but improved recall of concrete details (e.g., recall of dates of certain events). Several studies show that misleading cues such as task switching tend to impair learning and decrease comprehension of digital texts (Kirschner & van Merriënboer, 2013).

Description of the Study

The study focuses on basic concepts referring to paper versus digital reading aiming to determine general reading and studying interface preferences of the first year students of English Department. Furthermore, it is also interesting to check the need to print electronically available materials and the interfaces students found most conducive to remember new information. As far as paper/screen preferences of a critically thinking readers are concerned, they will be analysed in the following categories: understanding complex ideas, evaluating evidence, weighing alternative perspectives, and constructing justifiable arguments.

Table 1
Age and gender of study participants

Students' age and gender	19	20	21	22	23	24	F	M
paper	1	44	16	1	1	2	57	8
paper/screen	1	4	1				5	1
screen		4					2	2

The subjects of the study are 75 first year students at the University of Silesia in Katowice, Poland (57 females and eight males). The age range of study participants is 19–24, falling into three groups of students preferring either paper, paper/screen, or just screen (Table 1). The data collection tool employed in the study includes a questionnaire with 41 questions. The subjects filled in the questionnaire on April 25 and May 9, 2018.

Results and Analysis

Subjects' Preferred Reading Interface

One of the crucial aims to find out in the study related to students general reading interface preferences. In Figure 2, which presents the subjects' answer concerning their preferred medium for reading, it is clear that the percentage is strikingly higher for paper, which confirms findings from previous studies by Ramirez Leyva (2006), and Nicholas and Lewis (2008).

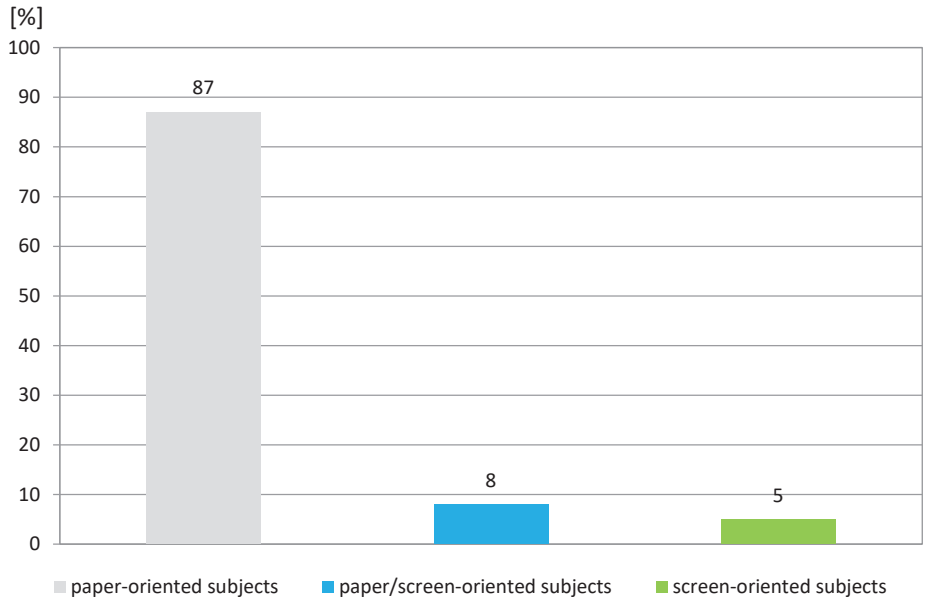

Figure 2. Subjects' preferred reading interface.

Subjects substantiate their answers with the following comments, which are presented according to the interface they preferred.[1]

Paper (55)—*it's better for my eyes* **(17)**, *I focus better* **(14)**, *I like to touch real paper* **(13)**, *more convenient* **(10)**, *it's easier to make notes* **(6)**, *I like the smell of pages* **(4)**, *I don't get tired easily* **(4)**, *I like traditional way of reading* **(3)**, *more practical* **(2)**, *it's easier to remember important things* **(2)**, *it's easier to understand issues presented in books* **(2)**, *it enables me to go through pages faster, I feel more engaged, it feels more real*;

Paper/screen (6)—*it doesn't make any difference to me*;

Screen (4)—*less tiring for eyes, option of changing fonts and I can take it anywhere, I can easily organise my materials and take them anywhere with me, it's more convenient*.

A we can see, the paper-oriented readers seem to be more aware of the processes underlying reading, indicating not only to convenience, which was most highlighted by screen-oriented subjects. The paper-oriented students take into consideration the processes of remembering, comprehension as well as the sense not included in the studies so far, that is, the sense of smell. It is important to note that previous studies do not indicate that sense of smell is essential as far as reading is concerned.

[1] All the answers have been given in the original spelling.

Interface Preferred for Studying

Another point of interest is interface chosen by students for studying. Here the results overlap with their general reading preferences, that is why only their substantiations for their choices are presented. They are presented according to their reading interface preference as well as the following features: facilitated focus and recall, fatigue, proximity, manipulation, and studying effects, which are all enumerated by paper-oriented subjects (55).

Facilitated focus and recall: *I don't like learning from the electronic devise; When studying I prefer to print stuff, it helps me remembering things; when I study for a test I prefer to make source notes on computer then I print them; It's easier to remember it but sometimes I just look at my phone (when I don't want to waist my time); I prefer paper than screen; If I used electronic version I would get easily distracted; They're more reliable (usually); I feel like they are more trustworthy; I focus on the most important facts and the screen distracted me; Nothing else distracts my attention; I can focus better on them; It's better for me because I can easily focused on what I am reading; I can focus more, when I study from paper sources.*

Fatigue: *It's better because I don't make my eyes tired.*

Proximity: *I prefer to learn from my notes because I have all close to me.*

Manipulation: *I can mark important sentences and make notes; It's better cause I take notes and circle things I have problem with; Important information can be highlighted; We are given many handouts on paper; I can make notes and focus later on them; I like touching paper and making notes when necessary; I can make notes on them, highlight, underline them; I usually highlight the most important information and it is easier for me to learn it later; I like to highlight and write information on the side; I can make notes; Paper because I can make notes; I can make notes on it; Sources on paper are handy and I can highlight or underline most important pieces of information; Of course I refer to the sources on paper because it's more convenient for me and thanks that I could add my own notes to the notes on paper; I can underline some important things for example; I can write on a page of paper; I can use markers and find key words; I can easily highlight the most important informations. I can make notes underline things highlight them; I can make notes at the same time which helps me remember it better; I have my sources on paper not on screen; it's easier way to remember things; I can change them by writing everywhere; It is more comfortable having notes on paper and reading it in bed for example; I have everything organized so I have easy access to them; I can highlight sources and make notes next to the next. I prefer the sources on paper because I can take notes on it; I can easily highlight the most important info; Because I can mark a lot of different things, underline the most*

important thing; It's easier to make notes; On paper because I prefer notes which are made by myself; Because I do a lot of notes and I can take them everywhere; I can underline important facts, write my thoughts; I like to write on a handouts; I borrow some books for the library; It's easier to make notes on them + they are more reliable; On paper – I can highlight whatever I want and it is easier to focus; I can highlight the most important information; I like taking notes on paper I work on; If they are available; I'm able to take notes on paper and highlight information; Paper – I study by making notes.

Studying effects: *I tend to learn faster and more efficiently when reading a paper version of the test; I learn the most by writing on paper & reading it later; I think is easier to learn; I prefer sources on paper because it help me learn enough good; I learn easily from paper; I learn better and can focus better while looking at paper I can make notes on paper; Because it is more comfortable to learn from the paper notes; It is easier for me to learn from paper, I can't explain it.*

As far as paper-/screen-oriented subjects' comments (6) are concerned, it was difficult to categorize them, which is why they are only randomly listed here: *I use both paper and digital sources; It's a habit from the past; It depends in what form I have it; only if that's necessary; it's hard to get it currently it's easier to learn from the sources from the Internet on screen; I prefer using sources on screen.*

Screen-oriented subjects' comments (4): *when I study I prefer the fastest ways to find proper informations, sources; I write notes in the electronic version; I find informations on the internet; it's easier to find any informations on computer.*

The most important factor which makes students choose paper refers to manipulation. The reason of their choices can be motivated by the strong inclination to avoid "haptic dissonance" and to feel familiarity with the print books and the ease of taking hand-written notes is the most salient factor in manipulation of the text. The results obtained from the screen-oriented students show that studying for them is mere information finding.

The Frequency of Printing Electronic Materials

The next question refers to the frequency of printing electronic materials and the reasons why the students actually did it. Figure 3 presents the collected data. The results here are not univocal as paper-/screen-oriented subjects are also indicating the habit of printing the available electronic materials. The most numerous group constitute subjects who always print electronic materials, substantiating for their choices with the following arguments.

Always: *Always, because I prefer to write on my notes, Always. I learn better that way; Always. Because I can make notes; Always. Because I like to have paper version; Always. I hate reading on computer screen; Everyday; It is convenient to read and learn from paper sources; I prefer reading on paper, because it's more comfortable for me, I can add my own annotations on paper; I always print because it is need for classes; I always print what I have to read; Almost all the time because it is more comfortable for me to have things on paper; Always; Always because I hate reading on screen I do not do it if I do not have to; Very often because I don't like reading on screen; Very often I like have copies in hand; Always, because I want to make notes and I prefer reading on paper; Almost always because I have to have this on my lessons; Always it is the easy form to learn for me; I always print because it's more practical. For me; Almost always because I like physical contact with things; Always because I prefer to have paper version; Always when its obligatory; Almost all the time, it's easier; Almost always, it is easier for me to focus and I do necessary notes; I print everything I can; Always because I prefer reading form a paper; Because I prefer reading on the paper; Because I prefer reading on paper; Everyday; It happens daily I believe.*

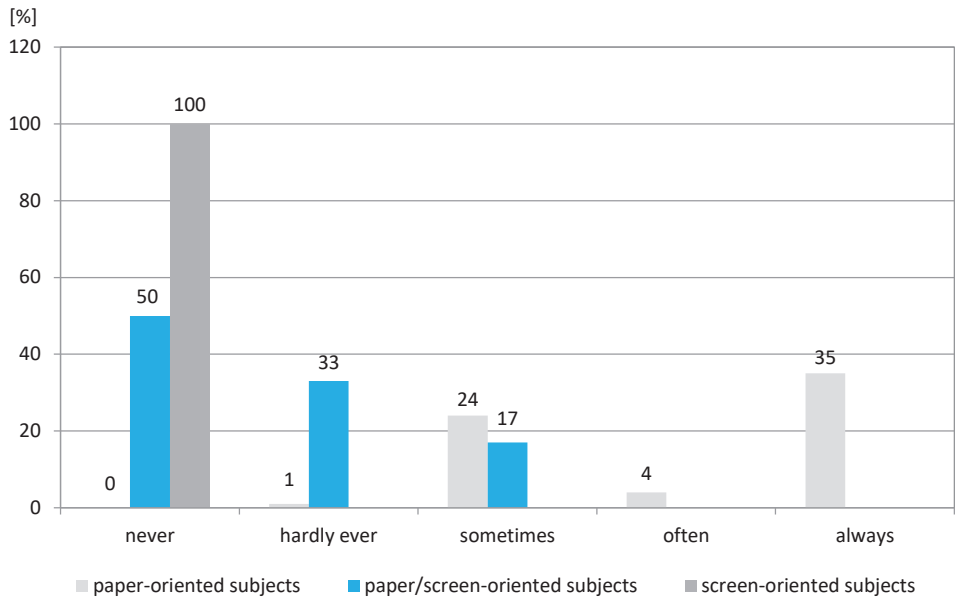

Figure 3. The frequency of printing electronic materials.

Often: *Almost always, I prefer reading on paper, Almost always, because I can then make notes more freely; Quite often, because it's cheaper than buying books; Often, 70% I prefer reading on paper; Almost always – I don't like*

reading in the screen; Often because it is easier and more practical; I usually do, because it helps me to focus on what I'm reading; Almost always, because I like to hold paper in my hand; I print it very often because it is obligatory to the uni; Very often because I prefer text on a paper; Very often because is more convenient; If it's short – often; In 70% of the situation, when I had to take notes or when it's obligatory; Often to organize it better; Most of All; Very often. I want to have notes physically, because of no access to laptop and low memory in smartphone; Very often because it's easier for me to read from paper and more comfortable; Very often, for my class; Quite often, because I like collecting materials; As often as can. Because I prefer to read on paper; Pretty often, because it's easier for me to read on paper.

Sometimes: *Only print material readed during classes; When I have to understand something profoundly; Because I like reading on the paper; Only if I have to mark some things; It depends; I print something when I need to read – always; Everytime I have classes; Few times in a week, because there are materials for school; I print what I have to read after classes at the university or before exams; Sometimes it depends on a subject; Usually I print things which are need to the university; Sometimes if it's obligatory for school; Sometimes, I print it when I want to note sth on the text; I like to have it with me if I want to read it; I have to bring it to Uni; Before exams & when a teacher asks to do it; Only if I need it for classes because of notes I'd take.*

Hardly ever: *Not too often, I don't like wasting paper on stuff I can read on screen, I don't cause paper is expensive.*

Never: *I don't own a printer(x3), Never.*

The action of printing the materials required for studying is the link connecting the two media, showing that students naturally find ways of developing interaction patterns between two media in question. From these results it is clear that the major reason for printing out the electronic texts is the same subjects provided in their preferred reading interface, it is a strong need for manipulating and alternating the original layout of the text.

Self-perceived Ability to Remember the Information Read on Screen

Another question refers to the ease of retrieval of the information presented electronically in which students are supposed to indicate why they think it is conducive to their retrieval of new information. The answers to the question are presented in Figure 4 in high, low or no difference category. It is important to highlight that none of the paper-oriented subjects indicated that information presented on the screen was conducive to the retrieval of new information.

Low: *I can't focus at all, I can't stay focused; Not really, but if that would be the case, it would be only because I don't make notes on scree; Dunno, this*

is how I am, how God created me; I don't know; I can't focus while reading on screen; There are other distractions that way (Facebook etc.); Coz I can't make notes; I don't know why; When I try to read on screen, I can't remember anything; It doesn't matter if I read sth on screen or paper; I'm easily distracted while reading on screen; I don't like reading on screen, because it is disturbing me; Because I tired after half hour; Because things I read on screen stay in my mind for a short period of time; I don't like reading on screen; Because I don't like reading on screen; Sometimes I forget what I've been reading immediately after I've read it, No. Because I can't focus on the information but on FB messages, I need writing those information; My eyes are tired; I couldn't concentrate on the text, which I read on screen; Because of having only files is smartphone which has small screen; I don't know why; I do not use e-books; The paper is more physical for me; I don't like reading things on screen; Because a lot of thing burn me; I cannot focus on screen because I always distract myself by doing some other things; I don't know, maybe because I prefer paper; Because reading on screen makes me tired quickly; Because I can't remember where I learned about sth; Because I'm distracted; It's too bright and the font's too small; I can't make notes and focus properly; I can't easily focused when I have to read something on the screen; I think this method of learning is distracting; I feel tired when I spent my time in front of

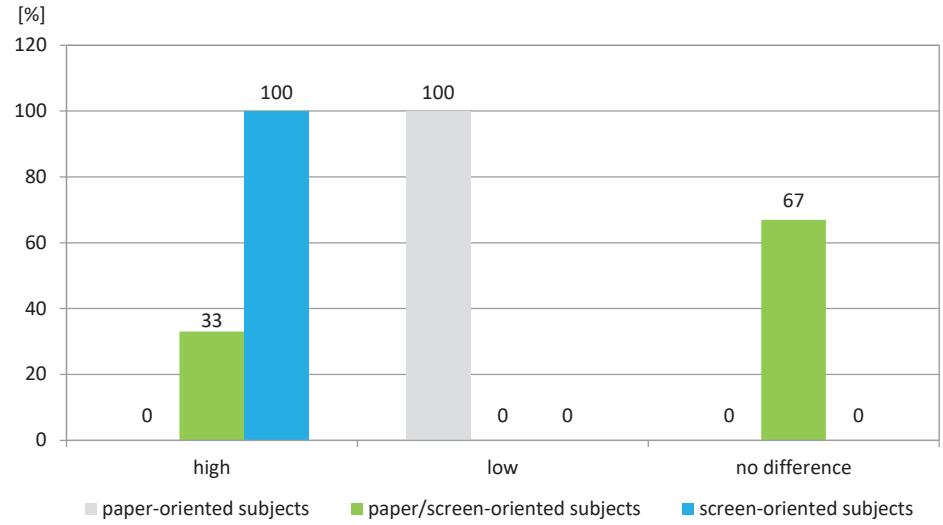

Figure 4. Self-perceived ability to remember the information read on screen.

High: *I don't know; Yes. Because I'm totally the cyber type of person who really remember info from the screen…*

No difference: *It doesn't matter which material I read; No. I think it's the same or worse; I don't think there is a difference; I think it is a matter of feeling comfortable); No opinion; No, It's same for me; No difference.*

The paper-oriented readers seem to be more strategic as they intentionally avoid distractions and attempt to provide for themselves an environment that would be most conductive for learning. They are also more aware and observant as far as their memory functioning is concerned.

Critical Thinking Skills

The last set of questions regards critical skills involving understanding complex ideas, evaluating evidence, weighing alternative perspectives and constructing justifiable arguments. Subjects' preferred interface for understanding complex ideas is illustrated in Figure 5. As the results show, the majority of subjects choose paper for comprehension of complex ideas, which indicates their intuitive understanding of how to use note taking, graph drawing, and highlighting possibilities, which are offered by manipulation of paper, to their best advantage.

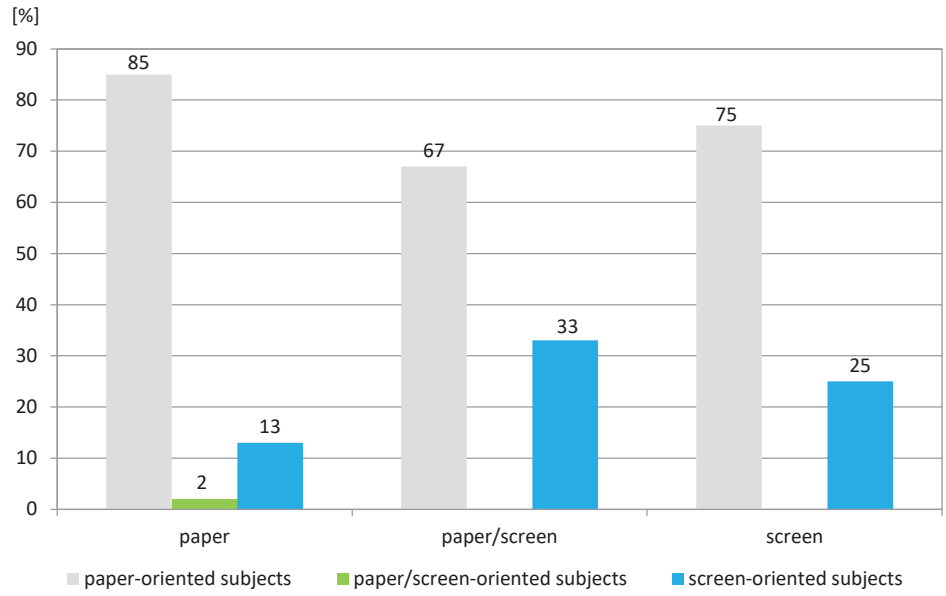

Figure 5. Interface chosen for understanding complex ideas.

As far as interface preferred for evaluating evidence, the results, which are quite surprising, are shown in Figure 6.

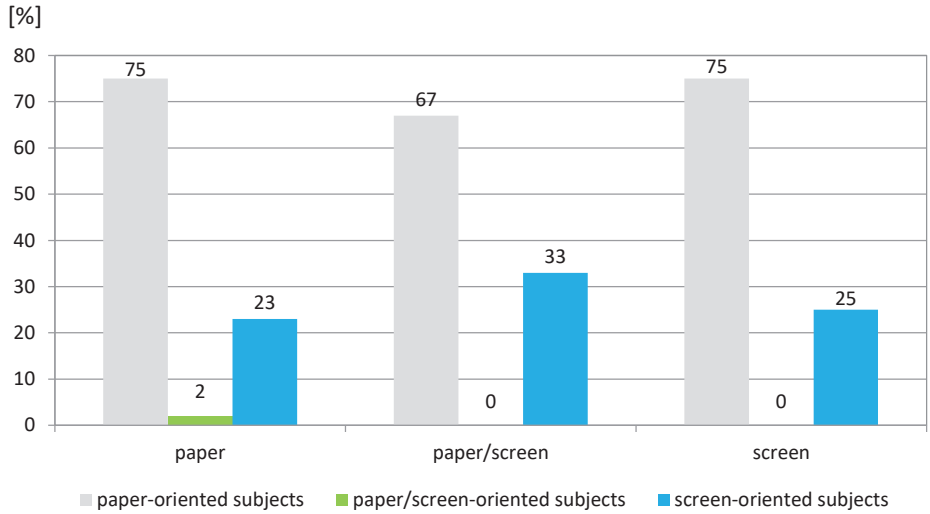

Figure 6. Interface chosen for evaluating evidence.

The slight decrease in paper preference by subjects who are paper-oriented can be observed in the results, the surprising answers are yielded by both paper/screen and screen-oriented subjects, as their choices do not involve paper/screen option. This is the element that might be due to their lack of expertise in doing research and this is the element that will hopefully be developed when writing their BA and MA projects.

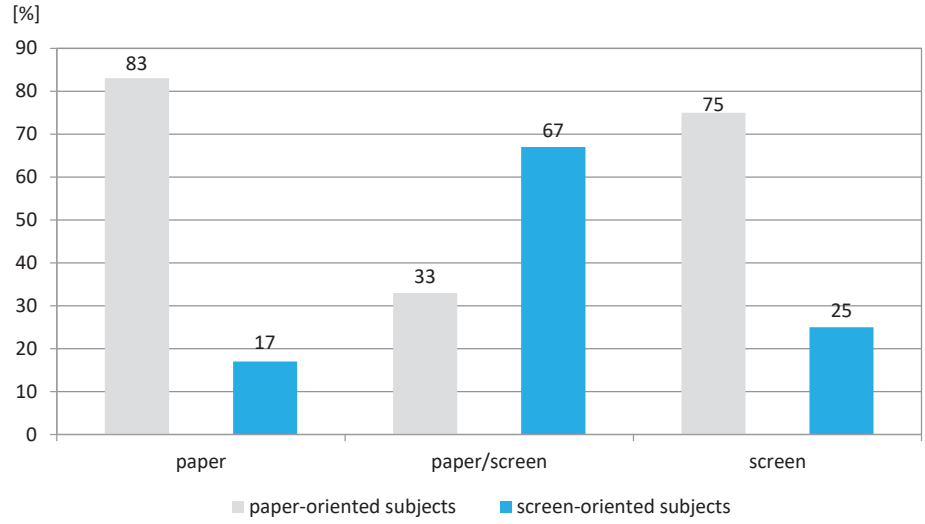

Figure 7. Interface chosen for distinguishing between facts and opinions as well as constructing justifiable arguments.

As regards assessing subjects' preferences as far as distinguishing between facts and opinions and constructing justifiable arguments are concerned, the interface chosen is either paper or screen without the option of both. That is why only the two of them are presented in Figure 7.

The results in this area are polarised in that subjects either choose paper or screen, which indicates the fact that switching between links may appear difficult and attention draining. In this particular question it appears to be surprising as it can be assumed that distinguishing between facts and opinion would automatically involve the shift between available media. On the whole, it can imply the flaw of the question asked, which for further study should be divided into two questions, namely, distinguishing between facts and opinion as a separate question, and another one for constructing justifiable arguments. It is the construction of justifiable arguments that could have biased the answer to the question as paper is associated by subjects with greater reliability. It would be interesting to investigate how students' critical thinking skills develop during the course of their tertiary education training and how their views on application of both interfaces change.

Conclusions and Further Study Suggestions

From the results presented above, several conclusions can be drawn. The first one does not support our initial assumption concerning the increase in paper/screen orientation of the readers caused by the rapid development of technology. On the contrary, since Ramirez Leyva's (2006) study there is a 7% increase in paper preference in ours. Despite the fact that our study suffers from the limitation connected with a considerably small number of subjects, we might speculate that such increase in paper preference might be due to the olfactory determinant that readers are not aware of, but subconsciously strongly attached to. There is only one subject who reported to *like the smell of pages* and it has not been mentioned in previous studies but deserves to be further investigated. It would also be interesting to view students preferences longitudinally and examine if they change during the course of their studies. Writing BA and MA projects constitutes a powerful tool for teaching thinking skills and students will certainly benefit from accessing and utilising electronic tools available for doing research.

The next conclusion that can be drawn from our study is that the instant access to any material one wishes surprisingly neither contributes to a rocketing foreign language learning results nor contributes to the development of critical thinking. On the above basis, it can also be concluded that teachers cannot take

for granted that students know how to function in knowledge society. That is why teachers should be aware of students' preferred reading interface and their teaching techniques have to be based on real science, not rumour or mythology. The mere indication of the differences between e-reading and paper reading can constitute a powerful awareness raising tool. As the results show, subjects seem to have the intuitive understanding of how best to find, comprehend, and retain the text, as they start looking for data on-line and then print them out for in-depth studying, this intuitive understanding has to be reinforced by an overt digital literacy training.

In addition, our findings provide insight into students' overconfidence regarding what they really understand when they read from digital interface. As the results show, it is the screen-oriented group who makes greatest number of mistakes, especially in cases of language irregularities (that first have to be noticed to be stored), for example *informations* (original spelling). Teaching them to be mindful in their digital reading (for instance, by writing down key words from the text and sharing them with their mates in social media) may facilitate learning, which is yet another skill that has to be overtly trained and developed.

Our results on the interface preference as far as the facility of remembering information are broadly consistent with the results regarding students' preferred reading interface, again indicating strong paper orientation. What is also apparent from the results obtained is the fact that digital reading is not the sort of reading likely to nurture the critical thinking. That is why developing digital literacy skills should go hand in hand with the development of critical thinking skills. The data collected in the study clearly indicate that both paper and screen-oriented students do not use the full potential offered by reading texts in an electronic version, as for most of the critical thinking skills they chose paper interface. However, as far as basing judgement on evidence is concerned, digital texts read from the screen, no matter how distracting they may be, provide hyperlinks, which if used strategically and in a disciplined way are an indispensable tool for collecting data. With reference to the component of evaluating evidence, it is possible to assume that asking penetrating questions, which is instantaneously at students' fingertip when using search engines, will be facilitated by a simple print out of core ideas/materials. Future studies could fruitfully explore the issues of weighing alternative perspectives and constructing justifiable arguments with reference to the fact that electronic text approaches new issues, offering visual clues allowing the reader to switch between hypertext and videos. The fact is that students need to be trained in both paper and digital literacy skills, to complement and use the potential available in both interfaces. The academic performance of paper, paper/screen, and screen-oriented groups of subjects constitutes an interesting further research suggestion so as to check which of the groups uses their preferences to their

best advantage. Further studies should investigate the issue of improving students digital literacy by means of developing basic computer skills in the area of electronic annotation mechanism.

Looking forward, further research concerning changes the reading skill undergoes will provide a sound base for the development of the congruent pattern of interaction between paper and screen interface, as they both have a great influence on critical thinking skills of the readers. Further studies should also investigate how the new technologies follow the results of the studies on reading from both paper and screen interface, at the same time focusing on well-developed paper literacy as a point of departure.

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Agnieszka Ślęzak-Świat

Zur Entwicklung der Lesefertigkeit im 21. Jahrhundert: Komplementarität der Papier- und Elektroschnittstelle

Zusammenfassung

Die Lesefertigkeit unterliegt eindeutigen Veränderungen, weil die Lesenden den Zugang zu Texten nicht nur in gedruckter, sondern auch in elektronischer Form haben. Eine der Fragen, die in diesem Beitrag erörtert werden, betrifft die Präferenzen der Lesenden in Bezug auf die (Papier- oder Elektro-)Plattform, aus der sie den Text lesen.

Die durchgeführte Studie zielt darauf ab, *homo legens*, insbesondere Studierende der Englischen Philologie aus dem ersten Jahr, hinsichtlich ihrer Präferenzen, Lernweise und ihrer kritischen Einstellung zu einem sowohl in gedruckter als auch in elektronischer Form verfügbaren Text zu bewerten. Die Analyse der gesammelten Daten ermöglicht es eindeutig, auf den Text in gedruckter Form zu verweisen, die durch die überwiegende Mehrheit der Befragten (87%) als eine bevorzugte Plattform für die Übermittlung eines Textes bezeichnet wird, was auch die Ergebnisse der zuvor durchgeführten Untersuchungen bestätigt.

Die Beobachtung der Veränderungen in der Dynamik der Präferenzen von Texten, die in gedruckter und elektronischer Form zugänglich sind, trägt zur Schaffung eines optimalen Interaktionsmusters dazwischen bei, wodurch auch die Fähigkeit zum kritischen Denken verbessert wird.

Die künftigen Forschungen sollten sich darauf konzentrieren, wie *digital literacy* unter Verwendung der Papierschnittstelle als Ausgangspunkt erfolgreich entwickelt werden kann.

Schlüsselwörter: *literacy,* Lesen vom Bildschirm vs. Lesen von Papier, Notizen machen, kritisches Denken, *digital literacy*

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Assessing English Writing Skills of Students from Bilingual and Non-Bilingual Schools in Castilla-La Mancha, Spain A Comparative Study

Abstract

The teaching of foreign languages and the use of CLIL (Content and Language Integrated Learning) methodology is hugely popular in Spain nowadays. Many families are interested in this type of academic training because they are convinced the academic results are positive, but the question is whether it is in fact the case that foreign language level increases. The aim of this study was to analyse the different level of English writing skills of 4th grade students from both compulsory bilingual and non-bilingual secondary schools in Castilla-La Mancha (Spain). From the results of the study, we were able to examine whether bilingual programs help students improve their English writing skills as well as to compare the results obtained by bilingual schools in Castilla-La Mancha with those developed in other Spanish, or even European, regions.

Keywords: bilingual teaching, effectiveness, writing skill, compulsory secondary education

Introduction

Most bilingual programmes follow a CLIL (Content and Language Integrated Learning) methodology nowadays. The interest and credibility of this educational approach, well justified by Mohan in 1986, have increased over the last few years due to its usefulness as a means of learning another language in a natural way. The establishment of subjects taught in a foreign language through this methodology, focused more on the subject content learning than on language learning itself, is spreading increasingly throughout Spain. Several scientists

such as Mehisto, Marsh, and Frigols (2008), Coyle, Hood, and Marsh (2010), and Marsh (2013), highlight the innovative power of this approach, even though its effectiveness varies depending on the context in which it is being developed.

There are numerous studies on the assessment of the use of CLIL methodology in the acquisition of foreign language communicative competence. Most of them show beneficial results (Lasagabaster & Ruiz de Zarobe, 2010; Jiménez Catalán & Ruiz de Zarobe, 2009; Villarreal & García Mayo, 2009; Gallardo del Puerto et al. 2009; San Isidro, 2010; Hughes & Madrid, 2011). Also, they revealed that bilingual programmes can help students raise their foreign language knowledge level. Nevertheless, do 4th grade Compulsory Secondary Education students who attend bilingual programme state schools in the Autonomous Community of Castilla-La Mancha get better results in the assessment of their English language writing skill than those who attend non-bilingual programme state schools? Our research focused on answering this question.

Throughout this paper several ideas have been discussed, namely, the first section introduces the origin of bilingual programmes in Castilla-La Mancha and presents the nature of the research. It explains the type of students involved, the tasks those students had to perform, and the place where these tasks were performed. The second section presents and analyses the results obtained in the test. The next section provides the comparison of the data with other Spanish and European regions where similar research has been developed. Finally, conclusions of our study regarding students' writing skills have been presented.

Theoretical Background

Bilingual teaching in Castilla-La Mancha started in 1996 with the introduction of the British Council-MEC Project in seven Pre-school and Primary Education Schools in addition to seven Secondary Education Schools. The Autonomous Community established its own bilingual teaching programme (Order 07/02/2005) with the creation of 36 "European sections" in 2005. This initiative coincided with the beginning of other bilingual programmes in monolingual Spanish regions, such as Madrid, Extremadura, and Andalucía, which started to develop their own bilingual programmes the same year (Nieto Moreno de Diezmas & Ruiz Cordero, 2018). The last of these regions, for example, introduced a plurilingual development program through the Order BOJA 05/04/2005.

Afterwards, the regulation of bilingual teaching was modified in 2014 through the Order 16/06/2014. Subsequently, the "European sections" were called "linguistic programmes." This regulation, which still applies, establishes three types of linguistic programmes: (1) Introduction programmes, in which the

content subject is taught completely in the foreign language; (2) Development programmes, in which only two content subjects are taught in a foreign language; (3) Excellence programmes, in which three content subjects are taught in the foreign language and at least one of the teachers must show proof of a C1 language level according to the European Framework. However, the new Decree 47/2017 became effective in the school year 2018/2019. Its aim is the implementation of a unique programme through which pre-schools and primary schools can teach content subjects using the foreign language they determine. The amount of time they have to do so is no less than 200 minutes in each of the levels of pre-primary education grades, and between 25% and 50% of the daily schedule in each of the primary education grades. The amount of time devoted to this way of teaching in secondary school varies from 30% to 50% of the daily schedule. Additionally, this law applies in high schools and in basic professional training (medium and higher level grades), where the amount of time allotted to learning content subjects in the chosen language of the school varies from 20% to 50% of the total daily schedule in each of the grades.

The number of bilingual schools has increased since the commencement of bilingual programmes. Currently, the goal of the above-mentioned new rule is to incorporate bilingual teaching in all non-university grades in Castilla-La Mancha. In fact, Castilla-La Mancha had 599 linguistic programmes established in 520 primary and secondary schools in the school year 2017/2018. These linguistic programmes are distributed among the five regions that make up the Autonomous Community and are as follows: Toledo, with the highest number of linguistic programmes, followed by Ciudad Real, Albacete, Cuenca, and Guadalajara.

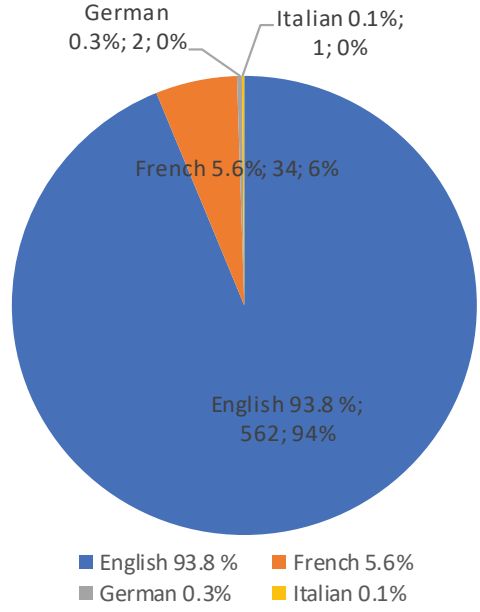


Figure 1. Percentage of Linguistic Programme Languages in Castilla-La Mancha in the 2017/2018 school year. Source: author's own elaboration.

The foreign language most frequently used in the bilingual teaching programmes in Castilla-La Mancha is English. Out of the 599 linguistic programmes in the school year 2017/2018, 562 programmes were conducted in English, 34 programmes in French, one programme in Italian, and two programmes in German (Figure 1).

Study

Methodology

The present study intended to test and compare the level of English writing skills of 4th grade students of compulsory secondary education state schools (hereafter as CSE) with and without linguistic programmes in Castilla-La Mancha (Spain). Once the main objective of this paper was defined, the following research questions were addressed:

1. Is the level of English writing skills of compulsory bilingual secondary schools students higher than the one of those attending non-bilingual secondary schools in Castilla-La Mancha (Spain)?
2. Do the bilingual programs help students improve their English writing skills?
3. Are the results obtained in Castilla-La Mancha (Spain) similar to those developed in other Spanish and European regions?

To carry out the study a few interesting methodology ideas have been explained. First of all, the characteristics of the participants taking part in this study have been outlined. Secondly, we focus on the way in which the schools these students attend have been chosen. Next, a description of the instrument (the writing test the students in 4th grade CSE take, from both bilingual and non-bilingual schools, as well as the assessment criteria adopted to reach these results) has been provided. With the information obtained from this analysis, we were able to answer the research questions.

Participants

Two hundred and one 4th grade CSE 15- and 16-year-old students took part in this test. Seventy-three of them receive bilingual tuition in secondary education schools, whereas 128 attend non-bilingual secondary education schools. The students' cultural and socioeconomic levels vary, regardless of the fact whether they come from rural or urban areas.

The students were asked to complete a writing test (see section Instruments). They belong to eight different secondary education state schools in the Autonomous Community of Castilla-La Mancha. Four of the secondary schools have bilingual linguistic programmes and the remaining four do not. Bearing in mind that the students attend schools that offer different linguistic programmes, we were able to test the different foreign language writing skill levels of the two groups of students. All the participants were tested anonymously, as they provided their class number only, and, what is more, they were unaware that the tests would be used for research. They thought it was just

to know their English level. As a result, the test was completed in a relaxed, non-pressurised manner.

As far as the tested students' previously acquired English language knowledge is concerned, it must be highlighted that all the students attending bilingual programme secondary education schools come from primary education schools with bilingual systems operating from, at least, 3rd grade primary education. Therefore, these students are considered "bilingual" as for eight years their language of instruction was English and, in fact, they had three times more English than their counterparts in non-bilingual programme schools. This implies that, apart from the subject of English Language, the bilingual programme school students have attended, at least, two other content subjects where English is the medium of instruction through a CLIL methodology. According to some of the students' teachers, many of these students also attend private English lessons outside school. In contrast, such private English tuition after school for those students attending non-bilingual schools is minimal, even though it is important to mention that most students have access to resources at home, such as the internet, allowing them constant contact with English. These data were supplied by teachers from the schools partaking in this research.

Secondary Schools

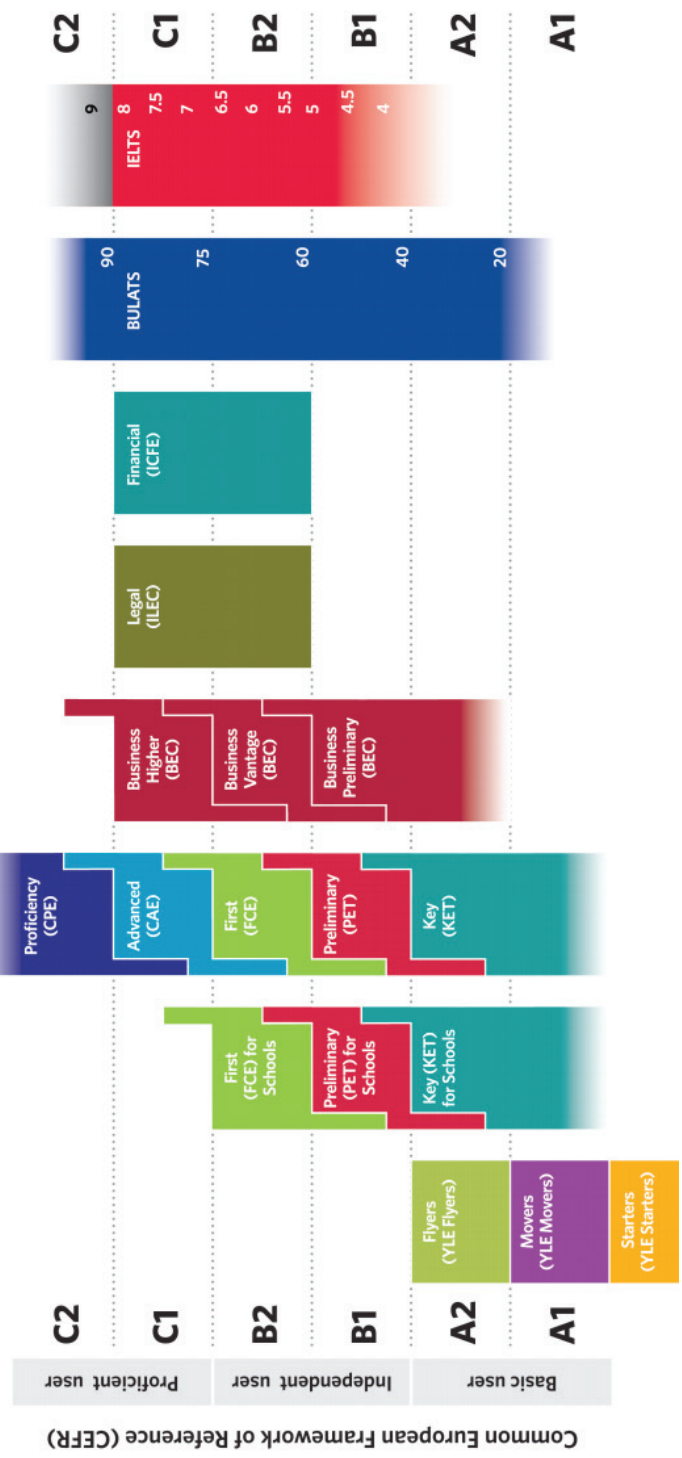
Some students from eight high schools were chosen randomly to be tested on English language writing skills in Castilla-La Mancha. The schools' participation in this project has been voluntary. Therefore, it is a randomized sample in which four bilingual schools decided to participate in the study. The four high schools concerned were matched to other non-bilingual high schools with similar features (depending on the type of students, sociocultural level, rural or non-rural area, size and proximity to the schools).

Instruments

The instrument used has been a writing test. The writing test was designed to test the level of the writing skill of a few students in 4th grade CSE from Castilla-La Mancha. The level of the assignment was that of PET (Preliminary English Test), which is equivalent to an intermediate level of English language. The test, which can be seen in Annex I, is consistent with the B1 level of the CEFR (Common European Framework of Reference) as shown in Table 1.

We asked for help with the "English Language Assessment" for the completion of this test in the school year 2017/2018 with the aim of making the data collection as objective as possible. This is the linguistic assessment supplier

Table 1
Cambridge Language Assessment Tests and their corresponding CEFR levels



that relies on the biggest research team exclusively devoted to the development and control of the quality of their tests. In Table 1, which is seen as follows, both the tests developed by this institution and their level according to the CEFR can be seen.

The test the students took included three activities:

– The first activity (Annex 1: writing. Part 1). The student has to rewrite a sentence using the word provided.
– The second activity (Annex 1: writing. Part 2). Students are asked to write a postcard to their friend Sam, with whom they have just spent a few days, telling him how the trip back home was, what they enjoyed the most from their time together and inviting him to visit them. The length of words can be between 35 and 45 words.

The third activity (Annex 1: writing. Part 3). The students must choose one of the two topics. These topics were: answering a friend's letter you have received in which he or she asks you for help writing about a special day people celebrate in your country, and/or writing a story in the past tense starting with "Jo looked at the map and decided to go left." The length of words must be around 100. The examinees had an hour to complete the three activities, and they could get up to five points for each one. Therefore, the maximum score they could get in this writing category was a total of 15 points. Next, the criteria used to assess the writing activities have been listed in Table 2.

Table 2

Assessment criteria used to grade the writing activities

Assessment criteria (each activity)	
Criteria	Mark
Relevant content	5 points maximum
Communicative	5 points maximum
Organization and use of linking words	5 points maximum
Language: correct use of vocabulary and grammar	5 points maximum
The total mark for each of the writing activities adds up to 20 points. These 20 points are reduced to their equivalent to a maximum of 5 points for each writing activity.	

It could be argued that this Cambridge Assessment test does not show the writing skill knowledge level of either bilingual or non-bilingual school students, either because they have not been trained to complete it or because the test has not been designed according to the CLIL methodology. Nevertheless, this statement is not applicable in either of the students' groups because all the learners are required to improve their writing skill through writing activi-

ties in Compulsory Secondary Education as is stated in their foreign language learning study programme, no matter whether they attend bilingual or non-bilingual schools. This means that all the students should be trained for this type of writing test.

Results

Once the 201 tests with each of their three writing activities (see Annex I) were finished and checked according the assessment criteria mentioned above, the English language writing skills results for the bilingual and non-bilingual school students in Castilla-La Mancha were determined. The number of writing activities that meet the established criteria and, at the same time, the average mark of students who exceed these criteria in bilingual and non-bilingual schools are detailed in Table 3.

Table 3

Writing activity assessment criteria results

	WRITING ACTIVITY RESULTS			
Type of school / Writing criteria	Relevant contents	Communicative	Organization and use of linking words	Language: Vocabulary and grammar
BILINGUAL 1 23 students	9	10	5	6
BILINGUAL 2 23 students	22	22	15	12
BILINGUAL 3 17 students	4	5	3	2
BILINGUAL 4 10 students	6	7	2	2
AVERAGE	56.16%	60.27%	34.24%	30.13%
NON-BILINGUAL 1 41 students	6	12	5	5
NON-BILINGUAL 2 28 students	6	8	4	4
NON-BILINGUAL 3 37 students	5	6	4	4
NON-BILINGUAL 4 22 students	16	19	7	7
AVERAGE	25.78%	35.15%	15.62%	15.62%

Looking at Table 3 carefully, it is clear that there was a higher number of writing activities done by students who come from bilingual schools. These English language writing activities showed more relevant content, higher communicative achievement, better organization, more correct usage of linking words and more varied and accurate vocabulary and English grammar. This can be seen, for example, in the bilingual students' use of the passive voice and conditional sentences. Accordingly, 56.16% of bilingual school students were able to create English language writing activities with relevant content versus 25.78% among non-bilingual school students. As far as communicative achievement is concerned, it is evident that the results obtained are high among both bilingual and non-bilingual students. However, the results are higher in the bilingual school students' activities (60.27% bilingual school students versus 35.15% non-bilingual school students). With reference to organization and the use of linking words and language, that is, English vocabulary and grammar criteria, the results obtained are low in both types of schools. Notwithstanding, the bilingual school students English language writing activities were better organized and had a greater command of English vocabulary and grammar than those done by non-bilingual school students. The most remarkable difference, according to the criteria related to organization and use of English, was that a very low number of non-bilingual school students used linking words correctly. Moreover, most non-bilingual school students' organization was poor, as a substantial number of them (73%) wrote only a few sentences without any connections. The different results can be seen in Figure 2, which also helps confirm that the bilingual school students' writing activity levels in Castilla-La Mancha surpass those of non-bilingual school students' levels from the same region in all the assessed criteria.

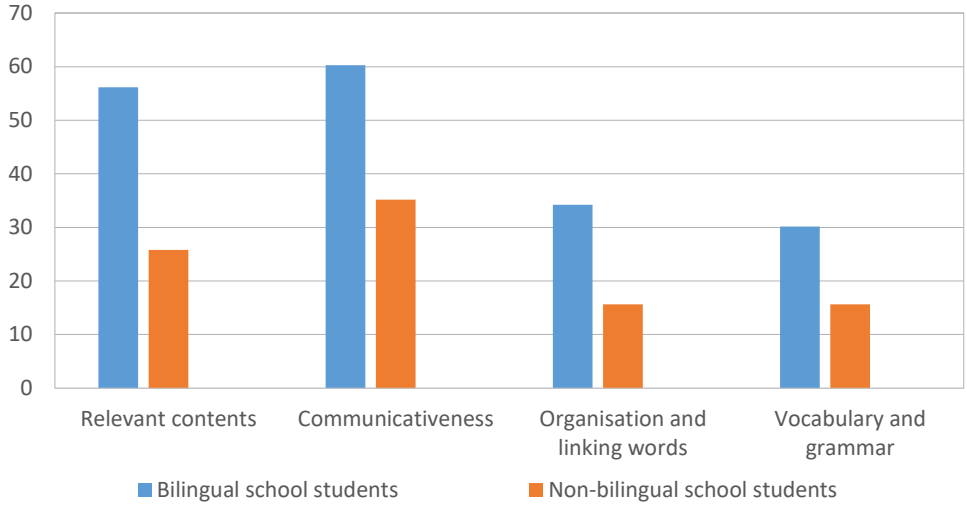


Figure 2. Bilingual and non-bilingual school students' writing activity comparison.

Once the results were assessed and bearing in mind the assessment criteria used, we were able to ascertain the final mark of the English language writing activity each of the assessed schools obtained. Students in a bilingual school got an average mark of 51.7 points out of 100 points, whereas non-bilingual school students' average mark was 37.4 points out of 100, as can be seen in Table 4. Even though the bilingual school students' mark is not very high (51.7 out of 100 points), it can be seen that the difference between them is 14.3 points. This information is very important since it implies a substantial difference between bilingual and non-bilingual school students. This is explained later.

Table 4
Writing activities final marks

TYPE OF SCHOOL	WRITING SKILL
BILINGUAL 1	47.5
BILINGUAL 2	74.5
BILINGUAL 3	36.2
BILINGUAL 4	48.6
TOTAL	**51.7**
NON-BILINGUAL 1	35.3
NON-BILINGUAL 2	24.4
NON-BILINGUAL 3	24.3
NON-BILINGUAL 4	65.9
TOTAL	**37.4**

As the results obtained by the bilingual school students were not very high (51.7 points out of 100 points), we decided to make a comparison of the average marks and the median (the value representing the central position of an organized list of data). To do so, we need to calculate the standard deviation (SD) which is shown in Table 5. As we can see, both results are similar (2.73011 and 2.77870), which indicates that the results are equally distributed among the average marks.

After analysing average and medians, and with the goal of checking whether our study obtained data are significant or not, we went on to study the results the students achieved through the SPSS statistical test in order to compare all the average marks of all groups, bilingual or otherwise. The tool used to carry out this study was the independent sample T-Student with the average marks which the bilingual and non-bilingual school students achieved in their English

Table 5

Average, medians and standard deviation table (*N* is the number of bilingual and non-bilingual school students)

TYPE OF SCHOOL		WRITING
BILINGUAL	**Average**	**5.3741**
	N	73
	SD	2.73011
	Median	5.5000
NON-BILINGUAL	**Average**	**3.5266**
	N	128
	SD	2.77870
	Median	3.2500

writing skills activities. Table 6 shows that the comparison of the average marks obtained reveals that bilingual school students get results 1.8 points higher than the average marks achieved by the non-bilingual school students, whose $p = 0.05$. The significance, or level of certainty we show in our statement, is provided by the *p*-value. In fact, this figure reveals the difference between 1 and the *p*-value. As this test was done with a *p*-value of 0.05, the results we obtained show that the certainty we state for the average comparison is that of 0.95 or 95%.[1]

Table 6

Independent simple T-test of the average marks obtained by the bilingual and non-bilingual school students

T-test of the average marks		Leven's test for the equality of variances		Test T for the equality of average						
		F	**Sig.**	**t**	**gl**	**Sig (bilateral)**	**Average difference**	**Difference standard error**	**99% confidence interval**	
									Lower	**Higher**
Writing	Similar variances have been accepted	.274	.601	4.562	199	.000	1.84755	.40498	.79429	2.90080
	Similar variances have not been accepted			4.584	152.106	.000	1.84755	.40302	.79626	2.89884

[1] Bear in mind that it can never be 100% true as that would be a universal truth, which does not exist in probability.

Thus, it can be said that the difference found between the English language writing skill of bilingual and non-bilingual school students comes to 1.8 out of 10 points, which is equal to 18%.

These results support the fact that the difference between English language writing skills of bilingual and non-bilingual school students in the Community of Castilla-La Mancha are statistically significant. Nonetheless, we consider that the bilingual school students' mark is low (51.7 out of 100 points) if we bear in mind the considerably high number of hours they are exposed to English language through English and content subjects included in the CLIL methodology. In addition to this, the mark is also low if we compare it to the results obtained by students in other Autonomous Communities different from Castilla-La Mancha.

Comparison of the Results Obtained in the Autonomous Community of Castilla-La Mancha to Other Spanish and European Regions

Once the English language writing skill results in Castilla-La Mancha were analysed, we then compared them to similar studies carried out in other regions of Spain and other Europen countries.

On the one hand, with reference to studies carried out in Spain, San Isidro (2009) accomplished a study in Galicia similar to ours in which he focused on secondary school students. San Isidro found a difference between bilingual and non-bilingual school students who achieved a writing skill level of 21.3%. This difference is similar to the one we found in our research. Jiménez Catalán & Ojeda Alba (2008) tested the English language vocabulary production of 86 6th grade primary education students belonging to CLIL and non-CLIL state-financed private schools in Logroño, La Rioja. The students from bilingual schools achieved an average mark of 4.54 out of eight points, compared with those from non-bilingual schools with an average mark of 3.63 out of eight points. Once again and consistent with our findings, the bilingual school students got higher marks than non-bilingual school students. In terms of morphosyntax, research by Villareal et al. (2009) must be taken into consideration. This study also confirms the results of the CLIL students' marks in relation to non-CLIL students' marks as far as tense and agreement are concerned, but not in all the assessed morphological signs.

On the other hand, there are some analyses such as that by Lorenzo et al. (2009) in Andalucía who studied 1320 primary and secondary education students, 754 of whom attended bilingual programme schools and 448, non-bilingual

programme schools. These studies highlight the positive impact on the level of competence for both the bilingual school students' command of their mother tongue and the foreign language. In fact, the mark they got in the foreign language test was an average 24% higher than the non-bilingual school group's mark (Travé, 2013, p. 382). However, in terms of English language writing skills, this study is surprising because bilingual school students from Andalucía had a lower command in written skills, especially those attending primary schools. Additionally, we consider that these results are consistent with Whittaker's (2010) findings in the Autonomous Community of Madrid. This study confirmed that bilingual school students' writing can improve, but over time. In the same way, a number of studies that verify that English language writing skills are not developed in a meaningful way in CLIL contexts have led researchers, such as Dalton-Puffer (2011, p. 187), to hypothesize about the existence of a general writing competence which depends more on students' maturity than on the type of education institution in which students learn a foreign language. We can state that the 4th grade CSE bilingual students' writing skills have not improved a great deal in Castilla-La Mancha (even though they already have a certain cognitive maturity), because they scored only 51.7 out of 100 points on the assessment we made based on the Cambridge model.

País Vasco is another Spanish autonomous community that has been the focus of a number of research studies on bilingual and non-bilingual students' different English language levels. Lasagabaster (2008) and Ruiz de Zarobe (2010), for example, carried out a few studies whose results demonstrated that bilingual school students get higher marks in productive skill tasks such as writing. This is in contrast to Dalton-Puffer's theory, which states that a CLIL methodology enhances receptive skill tasks.

Navés & Victori's studies (2010) in Cataluña demonstrate that the language level of students who learn through a CLIL methodology in their 8th grade exceed the language level of students who do not learn through such methodology in a higher grade (9th grade), including in writing skills (Sylvén, 2013, p. 301).

At the European level, it is important to mention Loranc-Paszylk's research (2009) in Poland. The level of competence among students studying the subject of European Integration History in the International Relations degree was analysed through CLIL methodology, as the course was done in English. Academic writing and reading were studied within integrated learning contexts for two semesters. The sample included 17 CLIL students and 35 students who learnt through their mother tongue, Polish. Once again, the benefits of integrating the foreign language and content in a determined subject were made clear after the English language writing skill test, which matches the results of our investigation.

Similarly, a report by Nikula (2005) in Finland showed that CLIL students exceed non-CLIL students' foreign language command. Despite the fact that the

study does not break the communicative skills down, the former student group felt more confident than the latter when using the foreign language concerned. In Germany, Klippel (2003) and Zydatiss (2007) also asserted that, linguistically speaking, CLIL methodology is highly beneficial. However, a couple of studies do not share these findings and have not found this type of methodology so advantageous. In fact, Christiane Dalton-Puffer's studies in Austria (2007) demonstrated poorer results in writing skill level. Similarly, in Sweden, Sylvén (2004) concluded that what is really important in the foreign language learning process is the amount of exposure to that language outside the school context instead of learning through a CLIL methodology. Furthermore, Lim Falk (2008) supported this study and purported that students' interaction in CLIL lessons is more limited than in non-CLIL lessons (Sylvén, 2013, pp. 301–320).

Conclusion

The aim of this study was to examine whether CSE 4th grade students attending bilingual programmes in state schools in Castilla-La Mancha obtained better results in English language writing skills than students attending non-bilingual schools. Moreover, we also wanted to make a comparison between these results and those of students from other Spanish, and even European, regions in similar studies. As a result, following analysis of the data and comparisons made between the regions of Galicia (S. Isidro, 2009), La Rioja (Jiménez Catalán & Ojeda Alba, 2008), Andalucía (Lorenzo et al. 2009), Madrid (Whittaker, 2010), País Vasco (Lasagabaster & Ruiz de Zarobe, 2010), Cataluña (Navés & Victori, 2010), Poland (Loranc-Paszylk, 2008), and Finland (Nikula, 2005), it can be said that students who attend bilingual schools achieve better results in writing skills activities than those who do not.

Statistically, even though the bilingual school students' results in Castilla-La Mancha are not very high—57.1 out of 100 points—they are 18% higher than the non-bilingual school students' results. The reasons why these results are different are various. First of all, students in secondary education attend bilingual programme schools voluntarily (Bruton, 2011). Normally, they get higher marks than their counterparts in English language activities (Grisaleña, Campo, & Alonso, 2009), which is clearly an advantage. Secondly, it must be kept in mind that this study was carried out among students in their last grade of secondary education. Thus, we cannot forget that, as Dalton-Puffer (2011, p. 187) explains, writing skill competence is acquired on a long-term basis and is more dependent on the learner's maturity than on the type of foreign language instruction received. Next, there is no doubt about the fact that CLIL

methodology (Mehisto, Marsh, & Frigols, 2008; Coyle, Hood, & Marsh, 2010; Marsh, 2013) and the frequent exposure to English language help students improve their communicative competence in this language. Therefore, according to this information, the bilingual school students' grades are higher than the non-bilingual school students' grades.

To conclude, even though we have made clear that the English language writing skill levels of bilingual school students are indeed higher than those of non-bilingual school students', it is necessary to highlight the need for improvements in the implementation of bilingual education programmes in Castilla-La Mancha (Nieto Moreno de Diezmas & Ruiz Cordero, 2018). It should be the case that students who attend this type of foreign language programme get better results, given that they have been studying English language through a CLIL methodology for over eight years, thus, their exposure to the English language has been three times higher than that of their counterparts in non-bilingual school programmes (Moya Guijarro & Ruiz Cordero, 2017).

While it is recognized that in spite of the fact that the development of bilingual programmes is not an easy task (Goodman, 2007), Castilla-La Mancha must now reconsider how bilingual programmes in schools can be improved in order to maximize their efficacy.

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Annex 1

WRITING TEST

- **Writing Part 1**

1. Last year, Niko was shown how to play basketball by his older brother.
   Niko's older brother.……..him how to play basketball last year.
2. Niko joined a basketball team three years ago.
   Niko has been in a basketball team ……3 years.
3. Niko practises at a stadium quite near his house.
   Niko's house is not very.……..from the stadium where he practises.

- **Writing Part 2**

You have just returned from a week's holiday staying at the home of your British friend, Sam.
Write a card to your friend. In your card, you should:
– tell Sam about the journey back to your home
– say what you enjoyed more about your stay
– ask Sam to visit you
Write **35–45 words** on your answer sheet.

- **Writing Part 3**

Write an answer to **one** of the questions in this part.
Write your answer in about 100 words on your answer sheet.
– **Question 7:**
This is a part of a letter you receive from an English friend.

For my homework project I have to write about a special day that people celebrate in your country. Which special day should I write about? What information should I include?

Now write a letter to your friend.
Write your **letter** on your answer sheet.
– **Question 8:**
Your English teacher has asked you to write a story.
Your story must begin with this sentence:

Jo looked at a map and decided to go left.

Write your **story** on your answer sheet.

María Begoña Ruiz Cordero

Bewertung der Schreibfertigkeit im Englischen bei den Lernenden der zweisprachigen und nicht zweisprachigen Schulen in der Region Kastilien-La Mancha, Spanien Eine Vergleichsstudie

Zusammenfassung

Fremdsprachenlernen und CLIL-Methoden (Content and Language Integrated Learning) sind derzeit in Spanien sehr beliebt. Viele Familien interessieren sich für diese Art der Bildung, weil sie von ihrer Wirksamkeit und Effizienz überzeugt sind. Vor diesem Hintergrund ist zu überprüfen, ob das Lernen, das auf der gleichzeitigen Vermittlung von Inhalten im Bereich der unterrichteten Fächer und der Elemente einer Fremdsprache beruht, das Niveau der Fremdsprachenkenntnisse von denjenigen erhöht, die daran teilnehmen. Ziel dieser Studie ist es, das unterschiedliche Niveau der Schreibfertigkeit im Englischen bei den Schülern der vierten Klasse der Oberschule zu analysieren, die das sowohl zweisprachige als auch nicht zweisprachige Pflichtprogramm für die Oberschulen in der Region Kastilien-La Mancha (Spanien) realisieren. Die Forschungsergebnisse lassen feststellen, ob zweisprachige Programme den Lernenden helfen, ihre Fertigkeit des Schreibens (der Textkomposition) im Englischen zu entwickeln, sowie die Ergebnisse, die durch zweisprachige Schulen aus der Region Kastilien-La Mancha erzielt wurden, mit denen anderer Schulen in Spanien oder anderen europäischen Gebieten zu vergleichen.

Schlüsselwörter: zweisprachiger Unterricht, Effizienz, Schreibfertigkeit, obligatorische Schulbildung in der Oberschule

Reviews

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Wojciech Malec, *Developing Web-based Language Tests*. Lublin: Wydawnictwo KUL, 2018, ISBN 978-83-8061-641-7, 439 pages

The book by Wojciech Malec entitled *Developing Web-based Language Tests* makes a positive impression at first glance because it is well over four hundred pages. Secondly, and more importantly, its topic—foreign language testing, which constitutes a difficult area for teachers inexperienced and experienced alike—suggests that it could be a very valuable resource. Additionally, his presentation of the technological advancements which complement a thorough theoretical background to the subject covers in the greatest details the process of FL test construction, its administration and analysis of the final product. Particular attention is paid to FL tests' reliability, a complex construct which is explained here in a reader-friendly manner.

The volume consists of two main parts organised into eight chapters, a bibliography consisting of 544 entries, three appendices, and the subject index. The book starts with an *Introduction*, which presents the theme, defines the constructs basic for the topic of language testing, and elaborates on the structure of the volume. The presentation is coherent, logical, and comprehensive in detail. The first part of the book Principles of Assessment (pp. 25–199) constitutes the theoretical background to foreign language testing, whereas the second part Web-based Testing (pp. 201–377) presents the practical aspects of testing, the major part of which is a detailed demonstration of the online programme WebClass, designed by the author. This part shows what role modern computer technologies can play in testing language achievement. The book closes with Conclusions (pp. 379–383). Such a structure gives evidence of what the main objectives of this publication are. Half of the book is a thorough overview of testing as an essential aspect of FL teaching, which is interpreted on the basis

of a very extensive literature in the field. The other half places emphasis on the deployment of information and communication technologies (ICT) in FL assessment. Below there are more detailed comments on the contents of the book and their assessment.

Chapter 1 Test Development (pp. 27–64) is devoted to a detailed description of the FL test construction process, which is based on the very broad selection of sources the Author refers to, making use of older ones such as works by Bachman, Palmer (1996), Niemierko (1999), and more recent publications, just to mention Carr (2011), Lane, Raymon, and Haladyn (2016) among many others. The Author emphasizes here the cyclical nature of constructing a test referring to each of the stages in detail but paying special attention to the first stage (the first component). This stage embraces the design of the test in terms of its context and objectives of assessment, requirements, form and its basis in the profile of the prospective testees. It also comments on the structure and content of the test, as well as on the scale of assessment for each test task.

In Chapter 2 Test Evaluation (pp. 65–124), the Reader will find a presentation of different models of test evaluation such as a model of usefulness by Bachman and Palmer (1996) or the argumentative validation model of Kane (1992–2013). The Author compares both models demonstrating their similarities and differences and taking a critical perspective on both. The Author discusses in a lot of detail the qualities of a good language test, referring among other things to its practicality, authenticity, and validity. However, it is test reliability as the major quality that is rightly assumed by the Author to require the most thorough discussion. Here, the reader will find two different methods of test reliability evaluation, the classical and the generalizablity theory. It is the latter one that the Author discusses by means of a presentation of one-facet crossed designs, focusing on relative and absolute errors, coefficients and test length, Phi lambda, standard error of measurement and GT-1 calculator. The chapter also offers a comment on the evaluation of decision consistency (threshold loss agreement, square-error loss agreement) and additionally, the validation procedures of classroom-based tests.

He emphasizes that the analysis of test results in the generalizability theory is a complex process, although there are programmes which can assist testers and facilitate this process. It is worth mentioning at this point is that the Author created his own programme, independent of the WebClass presented later in the book, which is available for FL teachers for use in analysing their test results.

Charter 3 Test Items (pp. 125–166) demonstrates the process of test item construction, the actions and decisions the teacher has to make in the process of preparing the first version of a test as well as the final one. It is a logical, coherently presented and complete set of test formats. It discusses the selected-response items (multiple choice, binary choice, multiple response, multiple-

choice cloze, matching, etc.) as well as limited-production items (gap-filling, cloze and C-test, gapped sentences, transformation, sentence writing, error correction, etc.). It is not only a first-class description but also a critical assessment of individual test formats. This part of the book proposes useful guidelines for teachers but it is also a necessary introduction to the test formats used in Part II of the book—in the practical discussion of the WebClass platform designed for FL test construction.

Chapter 4 Item Analysis (pp. 167–199) is an extensive comment on how to assess the correctness of test items by means of selected statistical procedures in two types of assessment: norm-referenced testing and criterion-referenced testing. The procedures refer to such parameters as item facility, discrimination, and distractor evaluation. The Author presents a critical view of these procedures, which leads him to his own ideas on how to modify them.

It is another example of how a thorough knowledge of testing issues, critical thinking and a creative approach can lead to new solutions. We have the best example of the above in the practical Part II of the book, presenting a new programme for test construction and its evaluation.

The practical part starts with Chapter 5 Technology in Language Testing (pp. 203–248) and it is a perfect example of the Author's belief in the power of modern technologies, which—when used appropriately, in the educational contexts and specifically in foreign language instruction—will not only facilitate but also improve this process, making it both valid and reliable. In this context of FL testing, the programme described here offers teachers not only help in test construction but also in the evaluation of its reliability at different stages—at the beginning but also at the final stage of the analysis of test results. The platform offers many possibilities, such as class enrolment, peer correction, adding and editing documents, performance report for a given group, feedback options or the possibility of archiving the test for later use (which is not without value for the teacher), among many others. Malec discusses the strengths of the platform but he is also aware of its limitation. It is important to emphasize that WebClass was created on the basis of scholarly theories and findings presented in the first part of the book, thus it testifies to certain scholarly standards. This chapter also presents the platform and its functioning, itemising its four modules—administration, communication, materials, assessment. Additionally, a commentary is offered on teaching and testing with WebClass. In other words, the chapter is a detailed discussion of what the platform has on offer for FL teachers. The following chapters, that is, Chapter 6 Test Design and Production on WebClass (pp. 249–304), Chapter 7 Test Use and Evaluation on WebClass (pp. 305–350) and Chapter 8 Administration Mode (pp. 351–378) continue in terms of technicalities an extremely detailed presentation of the platform, which I will not comment on here as they are purely technical instructions on operating the software/online platform.

Chapter 8 Administration Mode Effects (pp. 351–378) is the only empirical section in the book, which reports on the study comparing the results of two equivalent language tests administered in different forms, that is, a traditional paper-based test (*PBT*) and web-based test (*WBT*). The Author carried out extensive analysis of both tests and their results, measuring, for example, their reliability or item facility. He also looks in this study at single test results in relation to individual learner differences such as, for instance, learners' experience in computer work and its impact on the test results. The analysis demonstrates the comparability of the results in each of the measured aspects—for this reason, the Author recommends the use of both forms of testing.

In Conclusions (pp. 379–384), the Author goes back to the different aspects of FL testing discussed earlier in the theoretical part to emphasize that each of the principles of testing are implemented in his programme. This offers some assurance of its academic validity. Despite the fact that the Author is an ardent promoter of IC technologies in FL testing, he also sees the value in traditional paper-based testing. Although the platform was designed with FL teachers in mind, it can equally well be implemented in other areas of measurements, where analysis of reliability is at issue.

To recapitulate, what I find most interesting and valuable in the book is the fact that it is a text which is really well-read in the literature of language testing, both in relation to the background texts presenting traditional views and especially those which relate to IC technology. Both were used in creating an innovative and extremely useful platform for language testing. Thus, the pragmatic value of the book is well worth noting. It presents not only a useful tool for FL teachers and discusses the platform's merits, but also gives detailed and user-friendly instruction on how to use it. Additionally, teachers will find here an extensive presentation of statistical measures that can be used to assess FL test reliability and ways of analysing results. Having sensitized FL teachers (the prospective readers of this book) to the issues in test construction, analysis and assessment, the Author shares with them his knowledge on test construction at its various different stages. He might also have commented on the most commonly committed errors by teachers in test construction, which is often the weakest dimension of FL teachers' professional competence. As to the practical part of the book, the Author presented only one short empirical study to demonstrate the value of WebClass. Maybe another such examples could be a study of how the Author himself uses the platform in his own daily didactic practice and a discussion of its advantages as measured by selected research tools (also disadvantages and problems). Such examples would constitute a good way of promoting this useful tool. The book concludes with a short subject index. It is a pity that the Author did not also include an authors' index. As to the formal side of the book, although it is written in good academic English, the topic is

not presented hermetically and prospective readers will enjoy its reader-friendly form of expression and also the tidiness of the publication.

All in all, I can fully recommend this book by Wojciech Malec to all FL teachers as well as to researchers on e-learning approaches to foreign language instruction. It is a good example of how knowledge, didactic practice, and passion can result in something as creative and useful as the WebClass platform. I hope that this review may contribute to its success.


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Lia Litosseliti (ed.), *Research Methods in Linguistics* (2nd ed.). London: Bloomsbury Academic, 2018

The book entitled *Research Methods in Linguistics*, edited by Lia Litosseliti, addresses the issue of research methodology that needs to be worked out before any empirical research is initiated. In the introductory chapter by Lia Litosseliti (p. 1) we can read that "linguistics is a multidisciplinary and interdisciplinary field of study characterized by a diversity of theoretical, epistemological, and methodological approaches applied in different subfields (e.g., semantics, phonology, language acquisition), branches (e.g., experimental linguistics, psycholinguistics, sociolinguistics, applied linguistics) and related fields (e.g., education, psychology, anthropology, philosophy, mathematics, sociology). […] As a heterogenous field, it has been in a continuous process of reformulation and bridge-building." This diversity is reflected in the way the book is organized and structured as "it encourages readers to take a wider view of key approaches along the quantitative-qualitative continuum" (Litosseliti, 2018, p. 2). Apart from providing a thorough and comprehensive overview of research methods available in the field of linguistics (e.g., such as quantitative methods, interviews, case study research), the volume also critically examines the affordances and limitations of quantitative versus qualitative paradigms. In addition, it presents the value of the holistic and mixed methods research, and the need to push the boundaries of methodologies to incorporate cross-disciplinary perspectives (Litosseliti, 2018, p. 2), which makes this volume an essential contribution to the field of research methodology and a valuable resource for researchers, especially novice ones.

The content organization of *Research Methods in Linguistics* is very clear and logical. It seems that the reader is gradually introduced to particular research designs. The volume starts from an introductory chapter entitled

Introducing Research Methods in Linguistics, which is followed by twelve thematic chapters, structured into three parts: Part One—Issues (four chapters), Part Two—Quantitative Perspectives (three chapters), and Part Three—Qualitative Perspectives (five chapters).

Part One—Issues provides readers with background knowledge necessary to conduct research. It examines steps that need to be followed as well as issues that must be taken into consideration while preparing one's own research design such as setting appropriate research questions or choosing the best research scenario. This part consists of four chapters: Research Questions in Linguistics (chap. 1), Quantitative, Qualitative, Mixed or Holistic Research? Combining Methods in Linguistic Research (chap. 2), Ethics in Linguistic Research (chap. 3) and Transcription in Linguistics (chap. 4). Interestingly, part one of the volume also covers ethical values and guidelines that have to be observed in the process of research planning, administration, and dissemination of research results. Ethical conduct of linguistic research, researcher/participant roles, confidentiality, privacy, ownership, access or dissemination constitute some of the themes raised and presented in this chapter. Chapter 4, in turn, tackles the issue of transcription and examines principles as well as challenges linguists face while attempting to represent recorded talk in a textual written form. Special attention is paid to conversation analysis and its approach to social interaction.

Part Two deals with quantitative type of data and it includes the following chapters: Quantitative Methods: Concepts, Frameworks and Issues (chap. 5), Organizing and Processing Your Data: the Nuts and Bolts of Quantitative Analyses (chap. 6), and Corpus Methods in Linguistics (chap. 7). Chapter 5, which opens the second part the volume, presents a distinction between quantitative and qualitative methods. It also discusses the characteristics of quantitative research and comments upon hypothesis formation and features of a good quantitative research design (i.e., quantifiability, reliability, and validity). Chapter 6 concentrates on the process of analysing quantitative data. The value of Chapter 6 lies in the fact that it examines two common statistical tests used in linguistics, chi-square and t-test. Finally, Chapter 7 analyzes corpus methods and characterizes corpus linguistic techniques (e.g., comparisons of word frequencies, a keyword analysis, examinations of collocates, and concordances).

Part Three of *Research Methods in Linguistics* focuses on the qualitative methods and it comprises five chapters: Critical Perspectives on Using Interviews and Focus Groups (chap. 8), Discourse-Analytic Approaches to Text and Talk (chap.9), Linguistic Ethnography (chap. 10), Multimodality: A Guide for Linguists (chap. 11), and Case Study Research in Applied Linguistics (chap. 12). Chapter 8 comments upon the use of interviews and focus groups within social science and linguistic research. It addresses benefits and drawbacks of implementing those research methods for collecting data. Interestingly, interviews and focus groups are treated as collaborative or interactional events

in which the interviewer or moderator plays an important, participative role (Edley & Litosseliti, 2018, p. 195). However, one may be disappointed by the fact that the authors do not refer to the previous sources concerning interviews such as Brown (2001). Chapter 9 explores the ways in which discourse-analytic approaches reveal the "meaningfulness" of text and talk. The chapter also examines five diverse approaches to discourse analysis: conversation analysis (CA), interactional sociolinguistic analysis (ISA), discourse analysis (DA), critical discourse analysis, and feminist poststructuralist discourse analysis (FPDA). The next chapter (chap. 10) focuses on linguistic ethnography and its contribution to the study of language and social life. The authors of this chapter discuss three key issues in linguistic ethnography such as the interdisciplinarity of linguistic ethnography, data collection and its potential to provide nuanced understandings of talk in context and topic-related studies (Copland & Creese, 2018, p. 274). Chapter 11 provides a rationale for a multimodal perspective on meaning, communication, and discourse. This chapter revolves around the issues of multimodality, that is, different modes that people use beyond speech and writing. Characteristics of social semiotics as a field of study is supported with an example of a social semiotic analysis by exploring online text making on Facebook. This gives readers some insights into steps of multimodal inquiry (Bezemer & Jewitt, 2018, p. 281). The final chapter of the volume (chap. 12) is devoted to case study research in Applied Linguistics. The Author comments upon benefits and drawbacks of case study research designs and provides examples of qualitative case study research in language learning. Additional topics examined in Chapter 12 concern thematic analysis, longitudinal research, generalizability and ethical issues in case study research.

Each chapter of the volume follows a certain pattern: it starts with a brief characteristics of the basic concepts, then it offers illustrative examples from recent research studies. Finally, it outlines key assumptions underlying a particular approach or method, its contribution to the field, and where appropriate, its potential for combination with other approaches or methods (Litosseliti, 2018, p. 5). A list of references and suggestions for further reading that include both printed (paper based) as well as online sources make each chapter very clear, informative, and useful especially for those who need guidance and resources for planning their own research design.

As this is the second edition of the book, its content was slightly modified when contrasted with the first edition. Some chapters have been expanded or added, for example, multimodality and new modes of communication such as digital communication have received more emphasis in this edition. The authors thoroughly characterized the multimodality and provided more extensive information on practical application of such research designs. Moreover, some new chapters have been added (e.g., the ones concerning transcription, ethics in linguistics or case study research). However, slightly disappointing is the

fact that narrative analysis present in the first edition of the book was deleted in the second one.

Undoubtedly, second edition of *Research Methods in Linguistics* is a concise and valuable position offering guidance and support especially for those who start their empirical work. Simple and straightforward questions that the authors of particular chapters address, such as How Many Research Questions (p. 21) or What Quantitative Method to Use (p. 140) together with more complex issues discussed, for example, unethical practices and consequences (p. 73) or social semiotics (p. 290), and many others help to rethink research procedures one may be familiar with. This volume definitely gives food for thought and broadens one's perspective in how research design can be planned. Furthermore, the book is well grounded in the current research, which makes it a useful resource for those who would like to refresh and extend their knowledge about the research methods available in linguistics.

The format of the book and the content organization add up to the overall clarity, accessibility, and practicality of the book. Theoretical background is supplemented with questions to think, references and additional sources both printed and available online. This promotes a variety of ways in which the volume can be used in practice (as a self-study material or a reference material for seminar-style research method course).

However, it could be argued that the theory included in this volume does not always provide a sufficient review of literature available in the field of research methodology. Widely-recognized books on research methods by Nunan (1992) or Dörnyei (2007) are presented only in the chapter discussing research questions in linguistics (chap. 1, pp. 13–34). Other sources related to research methodology (e.g., Brown, 2001; Gabryś-Barker, 2011; Brown & Rodgers, 2002) are not mentioned. The idea to narrow down a relatively vast literature to just few items may be intentional to achieve clarity and leave space for reader's inquiry and critical reflection. Yet, inexperienced (or novice) researchers may get the feeling that the theory is somewhat inadequately represented.

The volume is mostly based on English-speaking literature concerning the field of research methodology, so the potential researchers representing other cultural/educational contexts would still have to get familiar with sources published in their own contexts.

All things considered, I recommend reading *Research Methods in Linguistics*, edited by Lia Litosseliti, for a number of reasons. The volume provides a comprehensive overview of current tendencies in research methodology. Content selection offers as a wide selection of methods including multimodality, discourse analytic approaches to text and talk, ideas for mixed or holistic research. As such, it enables readers to get a broader perspective on the research designs one can implement, taking various paradigms into consideration and planning the research that reflects important trends and research issues.

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Main text: 12 Times New Roman
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1.5 spacing

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The experience of critical incidents and effective reflection upon them allows teachers to control their classroom actions more consciously and create critical events (CE's), which were described earlier as intended, planned and controlled (Woods, 1993).
Woods (1993) believes that critical events are structured and occur in well-defined staged of conceptualization . . .

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(Ballantyne & Packer, 1995)
As Ballantyne and Packer (1995) demonstrate …

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Six authors or more:
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& vs. and:
As Smithson and Stones (1999) demonstrated. . .
. . . as has been shown (Smithson & Stones, 1999) . . .

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Selected examples (for more consult APA manual):

Book, one author:
Goldberg, A. (2006). *Constructions at work*. Oxford: Oxford University Press.

Book, two authors and more:
Jarvis, S., & Pavlenko, A. (2008). *Crosslinguistic influence in language cognition.* London: Routledge.

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Flowerdew, J., Brock, M., & Hsia, S. (Eds.). (1992). *Second language teacher education.* Hong Kong: City Polytechnic of Hong Kong.

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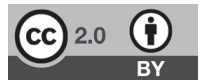

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