



AP[®] Research Academic Paper

Sample Student Responses and Scoring Commentary

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AP® Research Academic Paper 2023 Scoring Guidelines

The Response...				
Score of 1 Report on Existing Knowledge	Score of 2 Report on Existing Knowledge with Simplistic Use of a Research Method	Score of 3 Ineffectual Argument for a New Understanding	Score of 4 Well-Supported, Articulate Argument Conveying a New Understanding	Score of 5 Rich Analysis of a New Understanding Addressing a Gap in the Research Base
Presents an overly broad topic of inquiry.	Presents a topic of inquiry with narrowing scope or focus, that is NOT carried through either in the method or in the overall line of reasoning.	Carries the focus or scope of a topic of inquiry through the method AND overall line of reasoning, even though the focus or scope might still be narrowing.	Focuses a topic of inquiry with clear and narrow parameters, which are addressed through the method and the conclusion.	Focuses a topic of inquiry with clear and narrow parameters, which are addressed through the method and the conclusion.
Situates a topic of inquiry within a single perspective derived from scholarly works OR through a variety of perspectives derived from mostly non-scholarly works.	Situates a topic of inquiry within a single perspective derived from scholarly works OR through a variety of perspectives derived from mostly non-scholarly works.	Situates a topic of inquiry within relevant scholarly works of varying perspectives, although connections to some works may be unclear.	Explicitly connects a topic of inquiry to relevant scholarly works of varying perspectives AND logically explains how the topic of inquiry addresses a gap.	Explicitly connects a topic of inquiry to relevant scholarly works of varying perspectives AND logically explains how the topic of inquiry addresses a gap.
Describes a search and report process.	Describes a nonreplicable research method OR provides an oversimplified description of a method, with questionable alignment to the purpose of the inquiry.	Describes a reasonably replicable research method, with questionable alignment to the purpose of the inquiry.	Logically defends the alignment of a detailed, replicable research method to the purpose of the inquiry.	Logically defends the alignment of a detailed, replicable research method to the purpose of the inquiry.
Summarizes or reports existing knowledge in the field of understanding pertaining to the topic of inquiry.	Summarizes or reports existing knowledge in the field of understanding pertaining to the topic of inquiry.	Conveys a new understanding or conclusion, with an underdeveloped line of reasoning OR insufficient evidence.	Supports a new understanding or conclusion through a logically organized line of reasoning AND sufficient evidence. The limitations and/or implications, if present, of the new understanding or conclusion are oversimplified.	Justifies a new understanding or conclusion through a logical progression of inquiry choices, sufficient evidence, explanation of the limitations of the conclusion, and an explanation of the implications to the community of practice.
Generally communicates the student's ideas, although errors in grammar, discipline-specific style, and organization distract or confuse the reader.	Generally communicates the student's ideas, although errors in grammar, discipline-specific style, and organization distract or confuse the reader.	Competently communicates the student's ideas, although there may be some errors in grammar, discipline-specific style, and organization.	Competently communicates the student's ideas, although there may be some errors in grammar, discipline-specific style, and organization.	Enhances the communication of the student's ideas through organization, use of design elements, conventions of grammar, style, mechanics, and word precision, with few to no errors.
Cites AND/OR attributes sources (in bibliography/ works cited and/or in-text), with multiple errors and/or an inconsistent use of a discipline-specific style.	Cites AND/OR attributes sources (in bibliography/ works cited and/or in-text), with multiple errors and/or an inconsistent use of a discipline-specific style.	Cites AND attributes sources, using a discipline-specific style (in both bibliography/works cited AND in-text), with few errors or inconsistencies.	Cites AND attributes sources, with a consistent use of an appropriate discipline-specific style (in both bibliography/works cited AND in-text), with few to no errors.	Cites AND attributes sources, with a consistent use of an appropriate discipline-specific style (in both bibliography/works cited AND in-text), with few to no errors.

Academic Paper

Overview

This performance task was intended to assess students' ability to conduct scholarly and responsible research and articulate an evidence-based argument that clearly communicates the conclusion, solution, or answer to their stated research question. More specifically, this performance task was intended to assess students' ability to:

- Generate a focused research question that is situated within or connected to a larger scholarly context or community;
- Explore relationships between and among multiple works representing multiple perspectives within the scholarly literature related to the topic of inquiry;
- Articulate what approach, method, or process they have chosen to use to address their research question, why they have chosen that approach to answering their question, and how they employed it;
- Develop and present their own argument, conclusion, or new understanding while acknowledging its limitations and discussing implications;
- Support their conclusion through the compilation, use, and synthesis of relevant and significant evidence generated by their research;
- Use organizational and design elements to effectively convey the paper's message;
- Consistently and accurately cite, attribute, and integrate the knowledge and work of others, while distinguishing between the student's voice and that of others;
- Generate a paper in which word choice and syntax enhance communication by adhering to established conventions of grammar, usage, and mechanics.

Adolescent Multilingualism:

**To What Extent Does Word Processing Speed and Reading Comprehension Vary with Natural
and Tutored Acquisition Types of Multilingualism Among Adolescents at School X?**

April 27th, 2023

Word Count: 4877

Introduction

Multilingualism is the regular use of more than one language in everyday life (Franceschini, 2011). While similar to bilingualism, the regular use of two languages in everyday life, multilingualism expands beyond assumptions on the proficiency and acquisition of those languages. Multilingualism is ever increasing, as evidenced by languages like English, which is the world's most widely used language (Poggensee, 2016). With 1.5 billion speakers (Poggensee, 2016), English is increasingly used in such a globalized world to provide social and employment opportunities (Chua, 2022).

Even in English speaking countries, including the UK and US, there are increasing numbers of multilingual children. One in five American students belong to a household where English is not spoken (Baines & Wickam, 2018), and the same percentage of UK primary school students have a mother tongue other than English (Ward, 2015). In 2022, *The Guardian* reported on the astounding 4.2 million people in the UK speaking other languages than English at home, interviewing families about their use of language in everyday life (Morgan, 2022) and in 2014, they reported that 56% of Europeans are able to converse in more than one language (Nardelli, 2014).

With proven cognitive benefits, from reduced risk of Alzheimer's to increased creative thinking (Diamond, 2010), as well as the opportunities multilingualism affords (Chua, 2022), it's no wonder that it's becoming increasingly prevalent. Furthermore, globalization has helped break down political barriers that once encouraged unilingualism within a nation, encouraging both multiculturalism and multilingualism (Bianco, 2014). Countries like Switzerland, which has four official languages nationally, are being used increasingly as examples of how multilingualism can be utilized as a strength (Hogan-Brun, 2020).

Considering the many benefits multilingualism provides as well as its increasing prevalence, especially among children, it would be fitting to adjust education systems to accomodate, a variety of languages (Baines & Wickham, 2018). This research study will examine how word processing and reading comprehension varies between types of multilingual language competencies and types of multilingual acquisition among multilingual adolescents who speak English and German and attend School X, an international school in Swtizerland.

Literature Review

A review of related literature on multilingualism and psycholinguistics is necessary to understand why this paper focuses on the relationship between ‘natural’ or ‘tutored’ acquisition types of multilingualism. Moreover, it is further necessary to understand why this paper focuses on multilingual adolescents, as well as measures of word processing speed and reading comprehension. While multilingualism is hardly a new concept, having gained prominence in the 1960s and 1970s in the U.S., bilingual education became increasingly politicized, influencing popular opinion (Cohen, 1984). This was from a combination of factors, as President Reagan’s administration disapproved of bilingual education and struggled to deal with the demands of the Latino community, who pressed increasingly for equal rights like that of the Black community and saw bilingual education as an avenue to more resources and to better preserve their language and culture (Cohen, 1984). This contributed to critical views of bilingualism, and therefore multilingualism, at the time. However, research on positive effects of bilingualism began to emerge following the reduction of bilingual education’s politicalization. Over 40 years ago, Diaz (1983) commented on updated research of the time, explaining that bilingualism may produce positive effects on cognitive and linguistic abilities of children (Diaz, 1983), which have since been expanded on. Adescope et al. (2010) concentrated on cognitive correlates of multilingualism, focusing specifically on bilingualism, finding strong correlation with several benefits, including increased ability to control attention, working memory, awareness of linguistic forms and meaning, and enhanced skills related to creative thinking and abstract and symbolic reasoning (Adescope et al., 2010). Therefore, it is not surprising that multilingualism is ever increasing. It is pertinent to note that while this paper focuses on multilingualism, the regular use of more than one language in everyday life (Franceschini, 2011), this also includes bilingualism, despite the assumptions underlying the term ‘bilingual’. These assumptions include that bilingualism is exclusively the use of only two languages, at the same competencies, which were both learned with family and community to fluency (Stavans & Hoffman, 2015). Thus, research on bilingualism also applies to multilingualism, though not necessarily to the

same extent and circumstances, and this paper will focus on multilingualism with consideration for bilingualism.

Multilingualism can be achieved by growing up with multiple languages or through second language acquisition (SLA). However, it is an unfortunate assumption of most research on bilingualism that the first language, denoted L1, and the second language, denoted L2, are assumed to be not only acquired from family or community in infancy and early childhood, but also equal in capability (Stavans & Hoffman, 2015). Aronin and Hufeisen (2009) clarify that any research on multilingualism should have research methods acknowledging this multidimensionality, as language and its effects vary between settings, learning experiences, and practical uses (Aronin & Hufeisen, 2009). Stavans and Hoffman (2015) proposed a typology of multilinguals to approach the variety of methods in which people become multilingual, from ‘natural’ to ‘tutored’ learning, and their competencies between their different languages, in reading, writing, speaking, and listening (Stavans & Hoffman, 2015). However, when referring to the variety of multilingualism, it should be considered that current research fails to examine adolescent multilingualism, focusing exclusively on adults or children. Of these types exclusively referring to children, as they also distinguish based on age, they include the type of children with two home languages and a different wider community language as well as the type of children in a bilingual community with a different home language (Stavans & Hoffman, 2015). This may be especially relevant at School X, in Switzerland, where the language of instruction is different from the national languages and as a result many of the students at School X may fall under one of these types. As Diaz highlights, there is a significant gap in research on nonbalanced bilinguals, which is a term for multilinguals speaking two languages at different competency levels (Diaz, 1983). This gap was addressed in some aspects by Dornic (1981), who executed a study finding that the use of the nondominant language, L2, has a higher mental cost for equal performance between L1 and L2 (Dornic, 1981). This was exacerbated in cases of a high information load or environmental stress such as loud noise or fatigue, revealing a “hidden” imbalance in bilinguals, whose language proficiencies may seem equally in normal conditions (Dornic, 1981).

Language comprehension, meaning the reader's understanding of the material, and word processing, meaning the way and speed in which the material is interpreted, have been studied extensively outside of multilingualism. In contemporary theories, where reading is considered a complex cognitive process and reading comprehension is considered the result of the reader's integration of textual information with their preexisting knowledge (Koda, 1996). As Letson (1958) noted, the relationship between reading speed and comprehension is highly debated because of how research methods differ based on the exact value measured, but that in regards to measuring comprehension and reading speed, reading material absent of abstract, profound, or complex ideas is better, so as not to interrupt reading rate or measure critical thinking instead (Letson, 1958). In regards to language processing and comprehension within multilingualism, Luna and Peracchio (2001) advanced the notion of how multilingualism affects advertisements, observing how messages and conceptual processing differed with the use of L2 versus L1 advertisement messaging. Their research found that because conceptual processing is less likely for L2 than L1, L2 messages result in inferior memory and recommends the use of visual aids maintaining picture-text congruity to moderate these effects (Luna & Peracchio, 2001). This type of accommodation for multilingualism is highly relevant, considering pervading multilingualism, both globally and within the U.S., where a fifth of the population, at 60 million people, spoke a non-English language in 2010 (Rumbaut & Massey, 2013). Baines and Wickham (2018) pointed out that in the U.S., more than 1 in 5 students live in a household where English is not spoken and they proposed a variety of accommodations to teaching in American public schools, including language consciousness, where instructions are written down, delivered clearly, and free of idioms, as well as helping students engage with material by walking through their approach to an assignment (Baines & Wickam, 2018). However, there is a gap in research examining more multilingual nations, such as Switzerland, or international schools, which foster diversity of nationalities and languages.

The researcher will therefore further contribute to the literature on adolescent multilingualism of various competencies by analyzing the extent to which word processing speed and reading comprehension varies with 'natural' or 'tutored' acquisition types of languages and with balanced or

nonbalanced bilinugalism. This research will be conducted on multilingual adolescents speaking English and German while attending School X, an international school in Swtizerland.

Methodology

Hypothesis

The researcher hypothesized that multilinguals with the ‘natural’ language acquisition type would exhibit faster processing and lower comprehension than those with the ‘tutored’ language acquisition type, who would have slower processing and higher comprehension. Additionally, the researcher hypothesized that this hypothesis regarding reading processing and comprehension of tutored and natural languages within multilinguals would remain true, regardless of which language was more developed, though natural learning and a more developed mother tongue would occur more commonly. The expectation was that with natural learning, the multilingual learner would acquire a fluency and innate instinct for the language, rather than developing reading strategies through which to gain competency in comprehension, as opposed to a tutored multilingual learner (Block, 1986). Thus, the natural acquisition of a language would lead to faster processing with the natural instinct for the language and the tutored acquisition would lead to better reading strategies and therefore more depth of comprehension.

Sampling

This study employs a quantitative approach to examine this relationship through a quasi-experimental method, drawing on the self-paced reading methods discussed in Leah Roberts’ research on relevant psycholinguistic techniques in second language acquisition research (Roberts, 2012) so as to be able to assess reading processing. Self-paced reading is when input is presented in segments (phrase by phrase, word by word, etc.) so that participants read at their own pace, hitting a button to bring up each next segment. This allows the researcher to measure that processing speed by measuring time in between button-pushes with appropriate experimental software and has been found especially useful in assessing L2 processing, for example (Roberts, 2012). By presenting the

participant with a passage and passage-related questions with this segmented input, the researcher is able to measure both reading processing and comprehension with self-paced reading.

This researcher focused specifically on adolescents, defined as individuals between the ages of 10 and 19 (World Health Organization, 2019), to address a gap in psycholinguistic research focusing on bilingualism and multilingualism. This method is quasi-experimental, as the researcher does not control the independent variable, but instead makes comparisons between naturally occurring treatment groups, measuring outcome variables in relation to the independent variable.

This researcher utilized volunteer and convenience sampling to draw from multilingual adolescents speaking German and English at School X, which is located in a German-speaking region and instructs in English. Convenience sampling is a type of nonrandom sampling where the subjects are easily accessible to the researcher, whether based on geographical nearness, time availability, or willingness to participate (Etikan et al, 2016). Volunteer sampling when participants self-select themselves for participation, though these have the drawbacks of sampling biases, systematic errors, and participant interest may influence their results, all of which may not be representative of the population (Alvi, 2016).

This researcher focused on grade levels 9-12, which are typically ages 14 to 18, so as to reduce the variability that a larger range of age would introduce. This researcher also focussed only on intermediate to advanced German and English speakers, people who have competency in reading the language at the CEFR levels B1, B2, C1, and C2. Based on preliminary data collected by School X in confidential system records, the population of students meeting this criteria collectively was 143 students, 81 who listed English as their first language with German as a second language and 62 who listed German as their first language with English as a second language. Considering the small population size for this research's population of interest, the sample size of participants was similarly small at n=6 for balanced bilinguals, n=12 for nonbalanced bilinguals more advanced in English, and n=3 for nonbalanced bilinguals more advanced in German. Defining unbalanced bilinguals based on Diaz' definition that unbalanced bilinguals are multilinguals speaking two languages at different competency levels, the researcher categorized participants accordingly. Similarly, the researcher categorized participants by language acquisition type, finding the sample size at n=13 for natural

acquisition type for both German and English, $n=1$ for tutored acquisition type for both German and English, and $n=6$ for different acquisition types between German and English.

The researcher advertised primarily through School X's German teachers in German classes of an intermediate to advanced level, as well as some English classes (which are separated by grade level and content instead of competency). A Google Forms survey distributed to those classes made use of volunteer sampling, enabling survey respondents to volunteer to participate in the study and to provide information on them and their English and German acquisition (Appendix 3). This method of collecting data on the language levels, acquisition types, and language order of acquisition of the participants allows for the multidimensionality necessary when considering multilingualism and its range in learning experiences and practical uses (Aronin & Hufeisen, 2009). In order to ensure standardized language levels, the survey asked participants to take a two to five minute assessment online for CEFR reading levels (Language Level, n.d.). Consenting survey respondents were then contacted to participate in the research trials. Robert's study of second-language acquisition research methods informed the trial set up (Roberts, 2012) All trials were conducted in a quiet classroom, with the same visual timer, laptop, software, and set up to ensure all participants were under standardized testing conditions to minimize distractions, interruptions, and ability to communicate with others.

Trial Procedure

Once the volunteers were brought to the quiet classroom, they were asked to complete a consent form (Appendix 2). Then, they were instructed how to use the software using the "Trial Run" Experiment as outlined in Appendix 4, based on Roberts' self-paced reading research method (Roberts, 2012). The 'Experiments', the name for the file which runs the software on the laptop as programmed, were programmed by the researcher using E-Prime 3.0 software, as seen in Robert's research (Roberts, 2012), under a temporary license with instructions from E-Prime 3.0's Getting Started Guide (INFO: E-Prime for Beginners [30574], 2023) to correspond with each language and level (English and German CEFR levels B1, B2, C1, and C2). The corresponding language level is a control variable, promoting the research's content validity by preventing measurements of processing speed and comprehension from measuring overall language competency instead. The material used in

the Experiments ensured the passage language levels would match the participants' language levels, as they were sourced from sample exams from TELC and Goethe, institutions providing standardized language exams at the CEFR levels designed to demonstrate language acquisition and competency, for each language level (Appendices 5, 6, 7, 8, 9, 10, and 11) TELC and Goethe also provide time frames for each reading task which were similarly utilized in this study to help create standardized testing conditions for each trial (Goethe-Institut, n.d.; telc - telc Deutsch B2, n.d.; telc - telc Deutsch C1, n.d.; telc - telc English B2, n.d.; telc - telc English C1, n.d.; telc - telc English C2, n.d.; telc - Zertifikat Deutsch / telc Deutsch B1, n.d.). These materials avoid overly abstract concepts or those requiring much critical thinking, as those have been found to alter content validity of studies assessing reading comprehension, measuring skills such as critical thinking or abstract thinking (Letson, 1958).

For research trials with participants, the researcher opened up the corresponding, pre-programmed, 'Experiment' to each participant's English CEFR level (ie. the researcher would open the "EN B2" Experiment for a participant with English CEFR level B2, where EN represents English) as provided by the survey. Participants were then instructed to independently use the software as they had for the "Trial Run" Experiment as the researcher set up the visual timer according to the corresponding allotted time for each level's reading task (B1: 15 minutes, B2: 15 minutes, C1: 15 minutes, C2: 10 minutes). Each trial involved the participant reading the instructions, the use of self-paced reading throughout the passage, and filling out their answers to questions based on the passage when provided with the corresponding text for reference by the researcher when prompted by the Experiment. Once the English language trial was completed, the researcher repeated the same method with German for the German trials.

Method of Analysis

After trials were completed, each individual's responses were scored as outlined by the scoring guide for each reading task (Goethe-Institut, n.d.; telc - telc Deutsch B2, n.d.; telc - telc Deutsch C1, n.d.; telc - telc English B2, n.d.; telc - telc English C1, n.d.; telc - telc English C2, n.d.; telc - Zertifikat Deutsch / telc Deutsch B1, n.d.) to measure the comprehension of each participant for each trial and compiled into Table 1 (Appendix 12). As measured by E-Prime 3.0 software as the time

between presses of the button, the ‘response times’ (in milliseconds) for each sentence of the passage were averaged for each individual trial, then compiled into Table 1 (Appendix 12). The researcher conducted an analysis of the data with four 2-sample t-tests in order to compare the word processing speed and reading comprehension, the first two between nonbalanced bilinguals and balanced bilinguals and the second two between the language acquisition types of natural and tutored.

Results

Trial results comparing word processing speeds and comprehension scores for participants are compiled into the tables below:

Table 1

Trial results for participant word processing speeds and comprehension scores in German and English

Participant	English Mean Word Processing Speed (msec)	English Comprehension Scores (%)	German Mean Word Processing Speed (msec)	German Comprehension Scores (%)
1	7809.372	0.333	4205.553	0.444
2	6314.174	0.500	5644.647	0.556
3	7973.435	0.600	9708.882	0.333
4	6841.148	0.600	5168.541	0.111
5	4772.391	0.667	6774.189	0.800
6	4114.535	0.333	2747.865	0.400
7	4626.130	0.600	2846.597	0.500
8	3242.435	0.200	4296.519	0.800
9	6180.860	1.000	7060.108	0.800
10	5147.186	0.833	3738.582	0.000
11	6401.957	0.400	6024.141	0.667
12	10685.260	0.500	9152.506	0.800

13	6333.391	1.000	5895.703	1.000
14	5908.465	0.333	5260.514	0.400
15	6834.759	1.000	6993.635	0.556
16	6392.744	0.333	3867.456	1.000
17	5366.000	0.600	6509.324	0.800
18	4789.870	0.200	8536.892	0.400
19	5771.261	0.600	4244.259	0.667
20	4189.478	0.400	5675.806	0.500

Note. Comprehension Scores (%) shows the Raw Comprehension Score as a percentage (eg. 5/5 is 100%, shown as 1.000).

In order to compare the processing speed and comprehension between nonbalanced bilinguals and balanced bilinguals, the participants' results must be considered based on whether their English and German language acquisition is balanced or nonbalanced. Tables depicting this are given below:

Table 2

Trial results for balanced bilingual participant's word processing speeds and comprehension scores

Participant	Language: German or English	Mean Word Processing Speed (msec)	Comprehension Scores (%)
2	English	6314.174	0.500
2	German	5644.647	0.556
3	English	7973.435	0.600
3	German	9708.882	0.333
10	English	5147.186	0.833
10	German	3738.582	0.000
11	English	6401.957	0.400

11	German	6024.141	0.667
19	English	5771.261	0.600
19	German	4244.259	0.667

Note. Comprehension Scores (%) shows the Raw Comprehension Score as a percentage (eg. 5/5 is 100%, shown as 1.000).

Table 3

Trial results for nonbalanced bilingual participant's word processing speeds and comprehension scores

Participant	Language: German or English	Mean Word Processing Speed (msec)	Comprehension Scores (%)
1	English	7809.372	0.333
1	German	4205.553	0.444
4	English	6841.148	0.600
4	German	5168.541	0.111
5	English	4772.391	0.667
5	German	6774.189	0.800
6	English	4114.535	0.333
6	German	2747.865	0.400
7	English	4626.13	0.600
7	German	2846.597	0.500
8	English	3242.435	0.200
8	German	4296.519	0.800
9	English	6180.86	1.000
9	German	7060.108	0.800
12	English	10685.26	0.500

12	German	9152.506	0.800
13	English	6333.391	1.000
13	German	5895.703	1.000
14	English	5908.465	0.333
14	German	5260.514	0.400
15	English	6834.759	1.000
15	German	6993.635	0.556
16	English	6392.744	0.333
16	German	3867.456	1.000
17	English	5366	0.600
17	German	6509.324	0.800
18	English	4789.87	0.200
18	German	8536.892	0.400
20	English	4189.478	0.400
20	German	5675.806	0.500

Note. Comprehension Scores (%) shows the Raw Comprehension Score as a percentage (eg. 5/5 is 100%, shown as 1.000).

In order to compare the processing speed and comprehension between nonbalanced bilinguals and balanced bilinguals, two hypothesis tests with a 2-sample t-test must be conducted with the participants' results, one for word processing speed and the other for reading comprehension. This is done Figures 1 and 2.

Figure 1

2-Sample T-Test comparing balanced and nonbalanced bilinguals word processing speed trial results

Hypotheses:

$$H_0: \bar{x}_{\text{Balanced}} = \bar{x}_{\text{Nonbalanced}}$$

$$H_A: \bar{x}_{\text{Balanced}} \neq \bar{x}_{\text{Nonbalanced}}$$

Mechanics:

$$\alpha = 0.05$$

$$\bar{x}_{\text{Balanced}} = 0.6096.8524$$

$$s_{\text{Balanced}} = 1729.477502$$

$$n_{\text{Balanced}} = 10$$

$$\bar{x}_{\text{Nonbalanced}} = 5769.2682$$

$$s_{\text{Nonbalanced}} = 1828.183571$$

$$n_{\text{Nonbalanced}} = 30$$

$$t = \frac{\bar{x}_{\text{Balanced}} - \bar{x}_{\text{Nonbalanced}}}{\sqrt{\frac{s_{\text{Balanced}}^2}{n_{\text{Balanced}}} + \frac{s_{\text{Nonbalanced}}^2}{n_{\text{Nonbalanced}}}}}$$

$$t = \frac{0.6096.8524 - 5769.2682}{\sqrt{\frac{1729.477502^2}{10} + \frac{1828.183571^2}{30}}}$$

$$t = 21.42001236$$

$$df = (\text{smaller sample size} - 1)$$

$$df = (10 - 1) = 9$$

$$P(|t| \geq -0.3632119927) = 2 * tcdf(\text{lower bound}, \text{upper bound}, df)$$

$$P(|t| \geq -0.3632119927) = 2 * tcdf(-9999, 21.42001236, 9)$$

$$P(|t| \geq -0.3632119927) = 2 * 0.9999999975 = 1.999999995$$

For Figure 1, The Null Hypothesis is that there is no significant difference between the mean word processing speed of the two groups, balanced bilinguals and nonbalanced bilinguals, in the population. The Alternative Hypothesis is that there is a significant difference between the mean word processing speed of the two groups, balanced bilinguals and nonbalanced bilinguals, in the population.

The t-statistic was found to be 21.42001236 and the p-value, the probability of getting the absolute value of a t-value of 21.42001236, was found to be 1.995.

Figure 2

2-Sample T-Test comparing balanced and nonbalanced bilinguals reading comprehension trial results

Hypotheses:

$$H_0: \bar{x}_{\text{Balanced}} = \bar{x}_{\text{Nonbalanced}}$$

$$H_A: \bar{x}_{\text{Balanced}} \neq \bar{x}_{\text{Nonbalanced}}$$

Mechanics:

$$\alpha = 0.05$$

$$\bar{x}_{\text{Balanced}} = 0.516$$

$$s_{\text{Balanced}} = 0.2297610138$$

$$n_{\text{Balanced}} = 10$$

$$\bar{x}_{\text{Nonbalanced}} = 0.580$$

$$s_{\text{Nonbalanced}} = 0.2660382655$$

$$n_{\text{Nonbalanced}} = 30$$

$$t = \frac{\bar{x}_{\text{Balanced}} - \bar{x}_{\text{Nonbalanced}}}{\sqrt{\frac{s_{\text{Balanced}}^2}{n_{\text{Balanced}}} + \frac{s_{\text{Nonbalanced}}^2}{n_{\text{Nonbalanced}}}}}$$

$$t = \frac{0.516 - 0.580}{\sqrt{\frac{0.2297610138^2}{10} + \frac{0.2660382655^2}{30}}}$$

$$t = -0.3632119927$$

$$df = (\text{smaller sample size} - 1)$$

$$df = (10 - 1) = 9$$

$$P(|t| \geq -0.3632119927) = 2 * tcdf(\text{lower bound}, \text{upper bound}, df)$$

$$P(|t| \geq -0.3632119927) = 2 * tcdf(-9999, -0.3632119927, 9)$$

$$P(|t| \geq -0.3632119927) = 2 * 0.3624155539 = 0.7248311078$$

For Figure 2, the Null Hypothesis is that there is no significant difference between the mean reading comprehension of the two groups, balanced bilinguals and nonbalanced bilinguals, in the

population. The Alternative Hypothesis is that there is a significant difference between the mean reading comprehension of the two groups, balanced bilinguals and nonbalanced bilinguals, in the population. The t-statistic is found to be -0.3632119927 and the p-value, the probability of getting the absolute value of a t-value of -0.3632119927, is found to be 0.725.

In order to compare the processing speed and comprehension between tutored and natural language acquisition types, the participants' results must be considered based on their language acquisition type. Tables depicting this are given below:

Table 4

Trial results for natural language acquisition trials' word processing speeds and comprehension scores

Participant	Language: German or English	Mean Word Processing Speed (msec)	Comprehension Scores (%)
1	German	4205.553	0.444
2	English	6314.174	0.500
2	German	5644.647	0.556
3	English	7973.435	0.600
3	German	9708.882	0.333
4	German	5168.541	0.111
5	English	4772.391	0.667
6	English	4114.535	0.333
6	German	2747.865	0.400
7	English	4626.13	0.600
9	English	6180.86	1.000
9	German	7060.108	0.800
10	English	5147.186	0.833

10	German	3738.582	0.000
11	English	6401.957	0.400
11	German	6024.141	0.667
12	English	10685.26	0.500
13	English	6333.391	1.000
14	English	5908.465	0.333
14	German	5260.514	0.400
15	English	6834.759	1.000
15	German	6993.635	0.556
16	English	6392.744	0.333
16	German	3867.456	1.000
17	English	5366	0.600
17	German	6509.324	0.800
18	English	4789.87	0.200
18	German	8536.892	0.400
19	English	5771.261	0.600
19	German	4244.259	0.667
20	English	4189.478	0.400

Note. Comprehension Scores (%) shows the Raw Comprehension Score as a percentage (eg. 5/5 is 100%, shown as 1.000).

Table 5

Trial results for tutored language acquisition trials' word processing speeds and comprehension scores

Participant	Language: German or English	Mean Word Processing Speed (msec)	Comprehension Scores (%)
1	English	7809.372	0.333
4	English	6841.148	0.600
5	German	6774.189	0.800
7	German	2846.597	0.500
8	English	3242.435	0.200
8	German	4296.519	0.800
12	German	9152.506	0.800
13	German	5895.703	1.000
20	German	5675.806	0.500

Note. Comprehension Scores (%) shows the Raw Comprehension Score as a percentage (eg. 5/5 is 100%, shown as 1.000).

In order to compare the processing speed and comprehension between tutored and natural language acquisition types, two hypothesis tests with a 2-sample t-test must be conducted with the trial results, one for word processing speed and the other for reading comprehension. This is shown in Figures 3 and 4.

Figure 3

2-Sample T-Test comparing natural and tutored language acquisition types word processing speed trial results

Hypotheses:

$$H_0: \bar{x}_{\text{Natural}} = \bar{x}_{\text{Tutored}}$$

$$H_A: \bar{x}_{\text{Natural}} \neq \bar{x}_{\text{Tutored}}$$

Mechanics:

$$\alpha = 0.05$$

$$\bar{x}_{\text{Natural}} = 5837.141667$$

$$s_{\text{Natural}} = 2087.051044$$

$$n_{\text{Natural}} = 9$$

$$\bar{x}_{\text{Tutored}} = 5855.235323$$

$$s_{\text{Tutored}} = 1730.139949$$

$$n_{\text{Tutored}} = 31$$

$$t = \frac{\bar{x}_{\text{Natural}} - \bar{x}_{\text{Tutored}}}{\sqrt{\frac{s_{\text{Natural}}^2}{n_{\text{Natural}}} + \frac{s_{\text{Tutored}}^2}{n_{\text{Tutored}}}}}$$

$$t = \frac{5837.141667 - 5855.235323}{\sqrt{\frac{2087.051044^2}{9} + \frac{1730.139949^2}{31}}}$$

$$t = -1.06672439$$

$$df = (\text{smaller sample size} - 1)$$

$$df = (9 - 1) = 8$$

$$P(|t| \geq -0.3632119927) = 2 * tcdf(\text{lower bound}, \text{upper bound}, df)$$

$$P(|t| \geq -0.3632119927) = 2 * tcdf(-9999, -1.06672439, 8)$$

$$P(|t| \geq -0.3632119927) = 2 * 0.1586135959 = 0.3172271918$$

For Figure 3, the Null Hypothesis is that there is no significant difference between the mean word processing speed of the two groups, natural language acquisition and tutored language acquisition types, in the population. The Alternative Hypothesis is that there is a significant difference

between the mean word processing speed of the two groups, natural language acquisition and tutored language acquisition types, in the population. The t-statistic is found to be -1.06672439 and the p-value, the probability of getting the absolute value of a t-value of -1.06672439, is found to be 0.317.

Figure 4

2-Sample T-Test comparing natural and tutored language acquisition types reading comprehension trial results

Hypotheses:

$$H_0: \bar{x}_{\text{Natural}} = \bar{x}_{\text{Tutored}}$$

$$H_A: \bar{x}_{\text{Natural}} \neq \bar{x}_{\text{Tutored}}$$

Mechanics:

$$\alpha = 0.05$$

$$\bar{x}_{\text{Natural}} = 0.615$$

$$s_{\text{Natural}} = 0.2571808222$$

$$n_{\text{Natural}} = 9$$

$$\bar{x}_{\text{Tutored}} = 0.549$$

$$s_{\text{Tutored}} = 0.2582122569$$

$$n_{\text{Tutored}} = 31$$

$$t = \frac{\bar{x}_{\text{Natural}} - \bar{x}_{\text{Tutored}}}{\sqrt{\frac{s_{\text{Natural}}^2}{n_{\text{Natural}}} + \frac{s_{\text{Tutored}}^2}{n_{\text{Tutored}}}}}$$

$$t = \frac{0.615 - 0.549}{\sqrt{\frac{0.2571808222^2}{9} + \frac{0.2582122569^2}{31}}}$$

$$t = 0.3401878706$$

$$df = (\text{smaller sample size} - 1)$$

$$df = (9 - 1) = 8$$

$$P(|t| \geq -0.3632119927) = 2 * tcdf(\text{lower bound}, \text{upper bound}, df)$$

$$P(|t| \geq -0.3632119927) = 2 * tcdf(-9999, 0.3401878706, 8)$$

$$P(|t| \geq -0.3632119927) = 2 * 0.6287624514 = 1.257524903$$

For Figure 4, the Null Hypothesis is that there is no significant difference between the mean reading comprehension of the two groups, natural language acquisition and tutored language acquisition types, in the population. The Alternative Hypothesis is that there is a significant difference between the mean reading comprehension of the two groups, natural language acquisition and tutored language acquisition types, in the population. The t-statistic is found to be 0.3401878706 and the p-value, the probability of getting the absolute value of a t-value of 0.3401878706, is found to be 1.258.

Analysis

The researcher will interpret and comment on the p-value for each hypothesis test and 2-sample t-test so that the results may be understood within the context of word processing speed and reading comprehension's relationship with language acquisition type and balanced or nonbalanced bilingualism.

Processing speed and comprehension between balanced and nonbalanced bilinguals:

As seen in Figure 1, a 2-sample t-test was conducted comparing balanced and nonbalanced bilinguals word processing speed trial results. The t-statistic was found to be 21.42001236 and the p-value, the probability of getting the absolute value of a t-value of 21.42001236, was found to be 1.995. Because the $p\text{-value} = 1.995 > \alpha = 0.05$, the researcher failed to reject the null hypothesis. Therefore, we do not have evidence to suggest the alternative hypothesis, that there is a significant difference between the mean word processing speed of the two groups, balanced bilinguals and nonbalanced bilinguals, in the population. However, the sample size is still especially small ($n_{\text{Balanced}}=10$, $n_{\text{Nonbalanced}}=30$) and the results of each participant's English and German trials are related, though not dependent.

As seen in Figure 2, a 2-sample t-test was conducted comparing balanced and nonbalanced bilinguals reading comprehension trial results. The t-statistic is found to be -0.3632119927 and the p-value, the probability of getting the absolute value of a t-value of -0.3632119927, is found to be 0.725. Because the $p\text{-value} = 0.725 > \alpha = 0.05$, the researcher failed to reject the null hypothesis.

Therefore, we do not have evidence to suggest the alternative hypothesis, that there is a significant difference between the mean reading comprehension of the two groups, balanced bilinguals and nonbalanced bilinguals, in the population. However, the sample size is still especially small ($n_{\text{Balanced}}=10$, $n_{\text{Nonbalanced}}=30$) and the results of each participant's English and German trials are related, though not dependent.

Processing speed and comprehension between tutored and natural language acquisition types:

As seen in Figure 3, a 2-sample t-test was conducted comparing natural and tutored language acquisition types word processing speed trial results. The t-statistic is found to be -1.06672439 and the p-value, the probability of getting the absolute value of a t-value of -1.06672439, is found to be 0.317. Because the $p\text{-value} = 0.317 < \alpha = 0.05$, the researcher rejected the null hypothesis. Therefore, we have evidence to suggest the alternative hypothesis, that there is a significant difference between the mean word processing speed of the two groups, natural and tutored language acquisition types, in the population. However, the sample size is still especially small ($n_{\text{Natural}}=9$, $n_{\text{Tutored}}=31$) and the results of each participant's English and German trials are related, though not dependent.

As seen in Figure 4, a 2-sample t-test was conducted comparing natural and tutored language acquisition types word processing speed trial results. The t-statistic is found to be 0.3401878706 and the p-value, the probability of getting the absolute value of a t-value of 0.3401878706, is found to be 1.258. Because the $p\text{-value} = 1.258 > \alpha = 0.05$, the researcher failed to reject the null hypothesis. Therefore, we do not have evidence to suggest the alternative hypothesis, that there is a significant difference between the mean reading comprehension of the two groups, natural and tutored language acquisition types, in the population. However, the sample size is still especially small ($n_{\text{Natural}}=9$, $n_{\text{Tutored}}=31$) and the results of each participant's English and German trials are related, though not dependent.

Discussion

Results of this study suggest that there is not a significant difference of the mean word processing speed and mean reading comprehension between balanced bilinguals and nonbalanced

bilinguals. Additionally, results suggest that there is a significant difference of the mean word processing speed between natural and tutored language acquisition types, but not a significant difference of reading comprehension. The difference of the mean word processing speed is small between natural and tutored language acquisition types. These results indicate that having the same or different competencies between languages acquired, as with balanced and nonbalanced bilinguals, has no significant impact on word processing speed and reading comprehension. This is similarly true for reading comprehension between natural and tutored language acquisition types, rejecting the hypothesis that the reading comprehension strategies and attention that tutored language acquisition types apply to reading (Block, 1986) would result in better reading comprehension. However, results indicate that the language acquisition type has a significant impact on word processing speed. This difference may be similar to the difference in processing speeds between bilinguals and monolinguals, where bilinguals have slower word recognition (Morini & Newman, 2020). This slower word recognition may be due to constant monitoring and switching between two languages on a regular basis as well as split lexical information (Morini & Newman, 2020). This results in bilinguals developing different strategies to help achieve proficiency which present themselves in differences in linguistic measures (Morini & Newman, 2020). If this is the case, it could be that the language acquisition type, natural or tutored, causes differences, in the language use and development of different strategies, in order to become adequately proficient, as seen in the lack of significant impact on reading comprehension that is revealed by other measures, such as word processing speed.

It is worth noting, however, that there may be a variety of factors affecting the research conducted. While acknowledging the multidimensional nature of multilingualism, classification of balanced and nonbalanced bilinguals as well as natural and tutored language acquisition types may be limiting and fail to encapsulate the full competencies and experience of participants. Additionally, while participants understand intermediate to advanced German and English, many likely engage with more languages. This paper did not assess data based on the number of languages a participant spoke, nor the order in which they acquired each language, and is therefore unable to examine the effect of those differences. The methods employed in this paper may also affect the results, as there was some variation in the type of reading task sourced from the TELC and Goethe exams, the software on which

trials were conducted was unintuitive, and many of the participants had interactions with the researcher prior to the trials as they all attend School X. All of these factors may have impacted the way the participants were able to engage during the trials. Moreover, drawing the sample from School X, as an international school in a German-speaking portion of Switzerland, may further influence this research. As an international school instructed in English, participants may be more likely to speak stronger English. In addition, the German spoken locally is Swiss-German, which is only a spoken language and not taught in schools, unlike High German, which is the language taught in schools and written in exams such as TELC and Goethe. This may affect the relationship participants have with German and they may have different competencies in High German as a result.

Should these results be reflective of many multilinguals, its implications for the field may be significant. Firstly, this would address, in some part, the gap in research on adolescent multilingualism, where further research into the differences in language acquisition in adolescence may establish differences and similarities with infant and adult language acquisition. Additionally, it would address the gap in nonbalanced bilingual research, establishing that being multilingual with multiple languages at different levels would have no significant impact on reading comprehension or word processing speed. More significantly, the results indicate that the language acquisition type causes differences, on a larger scale, in the language use. As well as addressing a gap in research about language acquisition types in multilingualism, this may impact language acquisition outside of the field, for example in any language learning setting (such as language classes, programs, and resources). Further research investigating language acquisition types in multilingualism is necessary to clarify their impact, as well as further research investigating across all age groups in order to address the gap in research involving adolescent language acquisition and multilingualism. Considering increasing multilingualism, especially in such an increasingly globalized world, these conclusions could have global effects as well as advancing our understanding of language acquisition and use.

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Appendices

Appendix 1: Institutional Review Board Form

Institutional Review Board Application for Approval of AP Research Project

Name	[REDACTED]
Research Question	In terms of second language acquisition (among adolescents) and non-balanced bilingualism (from infancy), to what extent does word processing and comprehension (on a screen) vary with L1 German or L1 English, among adolescents from the grade levels 10 through 12th speaking German and English (at School X)?
Give a brief overview of your research. Include data collection and data analysis methods.	My research will involve assessing adolescents between grade levels 10 and 12 at School X in Zurich on their language skills in German and English. This would be through a short online language skills assessment, reading a passage, and answering questions in a comprehension quiz on the passage. This would happen for each language once for each participant. I will then analyze the quantitative data from my research for presentation in my final research paper.

	Yes	No
Does this research involve the collection of data that identifies individuals? (e.g. surveys that request names, interviews that include a student number)	X	
Will data identifiable by individuals be shared with anyone? (e.g. published articles, conference presentations, funding applications).		X
Are participants being offered incentives to take part in the research? (e.g. money, extra credit) If so please list them here:		X
Is participation in the research voluntary for the individuals?	X	
Will participants be fully informed of any benefits or risks? Please state how this will be done: There are no real benefits or risks to the experiment beyond the practice, use, and assessment of their language skills.	X	
Will participants be videotaped during the research?		X
Will participants have their voices recorded during the research?		X

Will participants' privacy and personal information be protected? If so, please state how: The research paper will not personally identify participants.	X	
Will participants be debriefed following the completion of the research?	X	
Will participants, prior to their involvement, indicate informed consent to participate by completing and signing a written form?	X	

Appendix 2: Consent Form**Consent Form**

Please read this consent document carefully for participation in the study.

Purpose of the Study: The purpose of this study is to learn about the influence of different types of language learning on reading comprehension and speed.

What You Will be Asked to Do:

You will be asked to complete two reading tasks, one in English and one in German. For each language you will be asked to read passages and completing comprehension questions based on your previously indicated language level.

Time Required: 20 - 30 minutes

Confidentiality: All responses are completely anonymous; no emails or names will be recorded. To protect confidentiality, the final paper will not contain information that will personally identify you. Should specific responses be employed you will be referred to as Individual (1-50).

Voluntary participation: Your participation in this study is completely voluntary. There is neither a reward nor penalty for choosing not to participate.

Agreement: If you wish to participate in this exercise, please write your name and sign the form below. A signature will indicate your agreement to participate and agreement not to share the content of the experiment in any way.

Participant's Name: _____

Signature: _____ Date _____

Appendix 3: Survey**German and English Levels Survey**

Please fill out the following questions to the best of your ability.

The aim of this survey is to collect data on German and English language levels and learning types among School X students and obtain participants for further research. The data will be kept confidential and if you choose to participate in further research, your name and email will be used to reach out to you.

* Required

1. Email *

2. Full Name *

3. What grade are you in? *

Mark only one option.

- ☐ Grade 9
- ☐ Grade 10
- ☐ Grade 11
- ☐ Grade 12

4. Please select your German class status: *

Mark only one option.

- ☐ I am in a German class
- ☐ I am not taking German

5. How many languages do you speak? *

(for people learning languages, include languages from B1 CEFR level up)

Mark only one option.

- ☐ 1
- ☐ 2
- ☐ 3

- ☐ 4
- ☐ 5
- ☐ Other: _____

6. Of the languages you speak, which is **English**? *

Mark only one option.

- ☐ First, it is my mothertongue
- ☐ First, it is my mothertongue along with another language
- ☐ Second
- ☐ Third or later
- ☐ Other: _____

7. Of the languages you speak, which is **German**? *

Mark only one option.

- ☐ First, it is my mothertongue
- ☐ First, it is my mothertongue along with another language
- ☐ Second
- ☐ Third or later
- ☐ Other: _____

8. How did you learn **English**? *

Please choose the option that most accurately describes your experience.

Mark only one option.

- ☐ During infancy (0 to 6 years old), from family and/or community
- ☐ During adolescence (10 to 15 years old), from my family and/or community
- ☐ During adolescence (10 to 15 years old), through structured lessons or classes
- ☐ During adolescence (10 to 15 years old), from lessons and my community
- ☐ Other: _____

9. How did you learn **German**? *

Please choose the option that most accurately describes your experience.

Mark only one option.

- ☐ During infancy (0 to 6 years old), from family and/or community
- ☐ During adolescence (10 to 15 years old), from my family and/or community
- ☐ During adolescence (10 to 15 years old), through structured lessons or classes

- ☐ During adolescence (10 to 15 years old), from lessons and my community
- ☐ Other: _____

10. Please complete the short (about 2 min) quiz for English here: <https://languagelevel.com/>
What is your CEFR (Common European Framework Reference) **English** level?

Mark only one option.

- ☐ A1
- ☐ A2
- ☐ B1
- ☐ B2
- ☐ C1
- ☐ C2

11. Please complete the short (about 2 min) quiz for English here: <https://languagelevel.com/>

What is your CEFR (Common European Framework Reference) **German** level?

Mark only one option.

- ☐ A1
- ☐ A2
- ☐ B1
- ☐ B2
- ☐ C1
- ☐ C2

12. Would you be willing to participate in my research? *

During your German class, you would read one passage in German and English each and answer some questions about them.

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

Appendix 4: 'Trial Run' Experiment Procedure

Trial Run:

Screen 1:

You will be shown instructions for a reading task in (Language here: German or English) at the CEFR level (will be shown) Please read the passage and complete the questions that follow.

The passage will appear in segments until it is complete. Then you can review the whole passage as you complete the answers.

You have a total of 10 minutes to complete the task.

To continue, hit the space bar.

At this point, the researcher would read the information on the screen out loud, making note to the participant that these instructions will show the language and level at which they are tested, and the time for that reading task. Then, the researcher would show the participant how the visual timer would display the time allotted, using 10 minutes as an example. Then, they would instruct the participant to hit the spacebar to continue.

Screen 2:

Reading task instructions (language and level here):

Task instructions will be here.

The passage will appear in segments until it is complete. You will be provided with the whole passage for reference as you complete the answers.

Read each sentence for understanding, then hit the space bar to move on to the next sentence.

It is especially important that you only move on after you have read for understanding, instead of skimming and moving on.

To continue, hit the space bar.

At this point, the researcher would read the new information on the screen out loud, making note to the participant that the 'task instructions' will be specific for that reading task. Then, they would instruct the participant to hit the spacebar to continue.

Screen 3:

Sequence 0-5

At this point, the researcher would instruct the participant to hit the spacebar to continue, after which each line would appear until filled out (see Slide 8). The researcher would explain that some of the reading tasks ask you to match article titles to paragraphs or to answer questions with specific paragraphs or to order the paragraphs, and that the rows in these screens would be those questions or article titles or order.

Screen 8:

Sequence 0-5

Sequence:

(0)

(1)

(2)

(3)

(4)

(5)

To continue, hit the space bar.

At this point, the researcher would instruct the participant to hit the spacebar to continue.

Screen 9:

Passage will show up here.

At this point, the researcher would instruct the participant to hit the spacebar to continue, after which each line would appear until filled out (see Slide 10), explaining that the passage would show up sentence by sentence as they continue.

Screen 10:

Passage will show up here.

As you continue to hit the space button, more of the passage will show up, sentence by sentence.

Continue on to the next part.

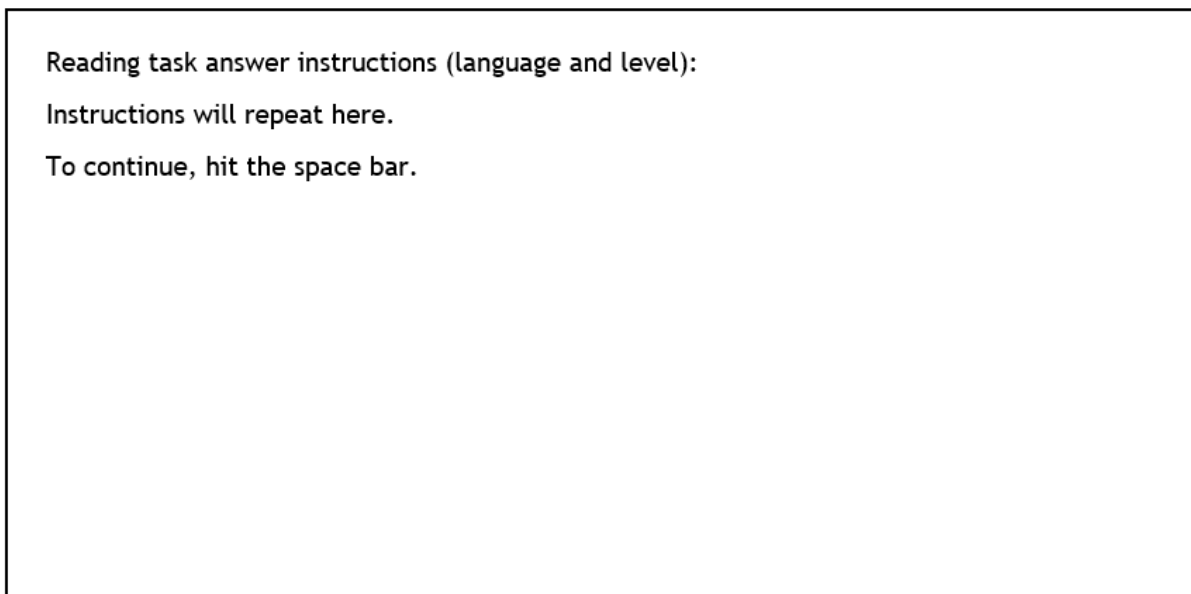
At this point, the researcher would instruct the participant to hit the spacebar to continue.

Screen 11:



At this point, the researcher would instruct the participant to hit the spacebar to continue.

Screen 12:



At this point, the researcher would instruct the participant to hit the spacebar to continue. The researcher would explain that because the passages often cannot fit on one screen, they will be split up into parts and before each next part the instructions will repeat, and they should just keep hitting the spacebar to continue.

Screen 13:

The next passage will show up here.

At this point, the researcher would instruct the participant to hit the spacebar to continue, after which each line would appear until filled out (see Slide 14). The researcher would explain that this is how the passage would continue.

Screen 14:

The next passage will show up here.
As you continue, so will it.

At this point, the researcher would instruct the participant to hit the spacebar to continue.

Screen 15:

To continue, hit the space bar.

At this point, the researcher would instruct the participant to hit the spacebar to continue.

Screen 16:

Reading task answer instructions (language and level):
Answer instructions here. Mark your answers.
You will now be provided with a full copy of the text for reference.
Select a, b, c, d, or e for each question.
To continue, hit the space bar.

At this point, the researcher would explain to the participant that this is where they will be provided with a full copy of the text to reference as they fill out their answers. Then, the researcher will instruct the participant to hit the spacebar to continue.

Screen 17:

Aufgaben 1-5

Sequence 0: Paragraph z

a

b

c

d

e

z

At this point, the researcher will explain to the participant that this is an example question, to which the answer is shown to be “z” and that to put in the answer, the participant should select the matching “z” on the keyboard of the laptop. The experimenter will click the “z” button. The screen will move on to the next question after the “z” button is clicked.

Screen 18:

Aufgaben 1-5

Sequence 1: Paragraph __?

a

b

c

d

e

z

At this point, the researcher will explain to the participant that this is an example question, to which they would have to decide the answer from “a”, “b”, “c”, “d”, or “e” and that in order to answer, the participant should select the matching letter on the keyboard of the laptop. The researcher will click one of those buttons. The screen will move on to the next question after the “a”, “b”, “c”, “d”, or “e” buttons are clicked.

Screen 19:

Aufgaben 1-5

Sequence 2: Paragraph __?

a b c d e

z

The screenshot shows a rectangular frame containing the text 'Aufgaben 1-5' at the top center. Below it is 'Sequence 2: Paragraph __?'. At the bottom, there are six gray rectangular buttons with black borders, labeled 'a', 'b', 'c', 'd', 'e' in a horizontal row, and a button labeled 'z' centered below the 'c' button.

At this point, the researcher will instruct the participant to continue putting in different answers until the screen has moved through “Sequence 2:..”, “Sequence 3:..”, “Sequence 4:..”, and “Sequence 5:..”. The screen will move on to the next screen after the “a”, “b”, “c”, “d”, or “e” buttons are clicked. The researcher will explain that the participant will be unable to return to a previous question after they have selected their answer.

Screen 23:

Thank you for your participation.

The screenshot shows a rectangular frame containing the text 'Thank you for your participation.' centered in the middle.

At this point, the researcher will ask the participant if they have any further questions before they move onto the actual passages. The researcher will answer questions to the best of their ability.

Appendix 5: Reading Task English CEFR Level B2

English B2 reading task instructions:

First read the ten headlines a-j. Then read the five texts 1-5 and decide which text goes best with each headline.

Mark your answers

Headlines a-j:

- (a) Accident fatal for 19-year-old
- (b) Dangerous pets banned under new legislation
- (c) Important decision? Head for bed!
- (d) Life on earth at risk
- (e) New regulations on problematic pets
- (f) Research shows mice fear sleep
- (g) Snake leaves home
- (h) Unknown bee disease identified
- (i) Unusual message for local authorities
- (j) Years of silence finally end

Texts 1-5:

1.

A man who has been in a coma for 19 years - after a car crash woke up and started talking to his mother, who was sitting at his bedside.

Terry Wallis began his return to consciousness slowly with just a few nouns, but gradually a flood of phrases came pouring out.

'He started out with 'mum', and then it was 'milk' and 'tree', said the director of the Arkansas rehabilitation centre where Wallis was being cared for.

Terry, now 39, was driving home 19 years ago when his car left the road and plunged into a stream.

He was found the next day under a bridge and was in a coma.

Terry's daughter Amber, who was born shortly before the crash, is thrilled to now be able to build up a relationship with her father.

According to Terry's father, his son talks almost non-stop now.

'It's so peculiar, it's going to take some getting used to!'

2.

In an attempt to combat the rise in ownership of dangerous animals, the government has announced plans to introduce an addition to the law stating that all dogs must now be fitted with a microchip.

Voluntary 'chipping' of animals is already a common practice and involves a small electronic device being implanted under the animal's skin.

Each chip has a unique number that can be read by a scanner.

Vets, the police or an animal welfare organisation can quickly and easily trace the animal's owner.

There are an estimated eight million dogs in Britain, and four breeds are currently banned under the Dangerous Dogs Act (1991).

Critics of the plan say that it will do nothing to tackle problems with these banned breeds, since people who already own such dogs are likely to ignore the new legislation as they fear to lose their animals.

However, owners who can prove that their dogs are not dangerous will be given a Certificate of Exemption.

3.

Faced with a tough problem, the traditional advice is to 'sleep on it'.

And, according to new research, 'sleeping on it' may be exactly the right thing to do: a good night's sleep really does help the brain get to grips with information and to act on it the following day.

Researchers at the University of Pennsylvania studied how well mice absorbed or 'consolidated' new information and remembered it the next day.

Scientists gave two groups of mice a small electric shock when they were put in a specific place to generate fear of that particular location.

One group of mice was then allowed to sleep, while the other group was kept awake.

Twenty four hours later, the two groups were tested to see if they 'froze' when put in this same area.

Those who slept were four times more likely to show fear than those kept awake.

Researchers concluded that sleeping during the five hours after learning was crucial for 'memory consolidation'.

4.

After flourishing for millions of years, the last sixty years has seen a huge decline in the country's bee population.

Some species have already disappeared completely from the British countryside and others are now considered endangered.

Experts believe that the reduction in bee numbers is due to changing weather patterns, the increased use of insecticides in farming and gardening, and the loss of habitat as our cities expand.

Albert Einstein, the physicist, said that if all bees became extinct, human society would follow within a few years.

This statement was based on the fact that in our interconnected ecosystem, the production of food is almost entirely dependent on these useful workers, and yet many of us take the work they do for granted.

While collecting nectar for themselves, bees transfer pollen from one plant to another, ensuring that, for example, fruit grows.

Currently, bee keepers, scientists and conservation organisations are working hard to save our bee population.

5.

A woman deliberately left her four-metre long python behind when moving home, and explained this to the council as she was dropping off the keys.

The unnamed tenant of a council flat near Birmingham said to the council worker on duty, 'I'm catching a train to Norfolk and I'm not coming back.

I've just fed my Burmese python and I'm leaving her in the flat.'

Housing officers quickly rang the Royal Society for the Prevention of Cruelty to Animals (RSPCA), which sent two inspectors to collect the 25-kilo snake, which they found curled up in the living room.

The snake is now being cared for at a reptile centre in Birmingham while the RSPCA tries to trace its former owner.

A spokesman for the district council said, 'Our housing department has heard some strange things from our tenants over the years, but this has to be the strangest.'

Appendix 6: Reading Task English CEFR Level C1

English C1 reading task instructions:

Read the following text. In which part of the text a-e can you find the information 1-6?

There is only one correct answer for each item. Each part of the text may contain more than one of the pieces of information.

Mark your answers for items 1-6.

Questions 1-6:

In which part of the text...

- (1) claims that shoppers must take some blame due to their habits?
- (2) explains that blame does not belong to one stakeholder or stage in food production?
- (3) is critical of the actions of some supermarkets?
- (4) mentions how the appearance of the food affects what happens to it?
- (5) states that people need to understand the enormity of the problem to change things?
- (6) suggests what impact reducing waste would have on a certain group of people?

Parts of the Text a-e:

The Problem of Food Waste

a.

With World Food Day approaching, it's the perfect time to reflect on the global problem of food waste, a problem far greater than many people realise.

Latest statistics reveal that over a third of all food produced across the globe is wasted.

Many people point a critical finger at our confusing food labelling systems with each retailer having their own scheme of expiry dates.

However, the truth is that food waste occurs at all stages of the supply chain, from initial agricultural production, through processing, transportation, retailing and finally down to household consumption.

Numerous studies have been carried out in an attempt to solve the issue and these revealed that in low-income countries, the majority of loss happens at the early stages, specifically during production.

Conversely, in developed countries, it's the consumers that create the most waste.

In fact, this is estimated to work out at about 100 kilograms of food per person each year, a total amount of over US\$1 trillion.

A shocking fact when one considers how many people are suffering from food shortages or how a large number of those working in agriculture are barely managing to survive.

b.

An analysis of the causes of food loss and waste in low-income countries has shown the following main problem areas: financial, managerial and technical limitations in harvesting techniques, problems that arise when trying to store and cool produce in difficult climatic conditions, and later, issues with the transportation and packaging of these foods.

A combination of heat and humidity and insufficient cooling systems makes food inedible and brings problems with pests and micro-organisms.

The system of selling and marketing the goods can also lead to good products going unsold, and then being discarded.

These losses affect many smallholder farmers who are already living on the edge of poverty.

For these people, a reduction in food loss would have an immediate economic effect on their lives and offer them some security.

c.

In developed countries, there are not just problems in the supply chain that lead to waste. Issues also arise because of the way food looks; when vegetables are considered imperfect due to their size, colour or shape, they are rejected by shops.

Yet, it is consumer behaviour which is often the biggest cause.

In our kitchens, large amounts of waste come from food left to wilt and go off.

This may result from insufficient planning, overshopping, and being careless - because there is no scarcity of food, there is a general lack of appreciation for the value of food.

On top of this, there is a tendency to avoid eating "old food".

When items pass their sell-by, best before or use-by dates, people are unsure whether they're still safe to consume or not, and the food just gets thrown away.

d.

Retail stores are also responsible for throwing away huge quantities of food.

Store workers follow internal protocol and, for the sake of convenience, discard produce at specified dates with no attention to the actual condition of the items.

The vast majority of this food is still edible at the time of disposal.

If better training was given, staff could be empowered to make judgements on what is still fresh, and perhaps offer these items to customers at a reduced rate.

Stores have different rules for dealing with excess food caused by over-ordering.

A small number work with local charitable organisations to ensure that the excess food is distributed to those in need.

Soup-kitchens and homeless shelters are usually very appreciative of the unwanted products.

There are other supermarket chains, however, which, for no valid reason, do all they can to prevent homeless people accessing this produce, even going so far as to ensure that staff take the discarded food away from the shop's premises.

Another problem stems from the contractual arrangements various retailers have with their suppliers.

The terms of these agreements give retailers the legal right to cancel suppliers' contracts if the agreed quantities of food are not delivered.

This is a tough situation for those who rely on these orders to stay in business.

To ensure they meet their obligations and therefore keep these profitable deals, they're forced to produce surplus food.

e.

Stopping this waste is not only about the economic advantage of saving food, there are many other important significances.

Food waste contributes to methane production, a greenhouse gas that fuels climate change.

Furthermore, fossil fuels are used to grow and transport food, and when food is thrown away, it means this has all been in vain.

Tackling food waste in industrialised countries begins by raising awareness of the size of the problem and thus changing the mindset among all stakeholders at all levels.

That means the farming and food industries, retailers and, of course, consumers.

There is a need to find good and beneficial use for safe food that is presently thrown away.

Appendix 7: Reading Task English CEFR Level C2

English C2 reading task instructions:

The text below has been jumbled. Decide on the most appropriate order. Mark your answers.

Sequence 0-5:

Sequence	Paragraph
(0)	z
(1)	—
(2)	—
(3)	—
(4)	—
(5)	—

Paragraph z-e:

z.

“Intelligence” derives from the Latin verb *intelligere*, meaning to pick out or discern. A form of this verb, *intellectus*, became the preferred technical term in medieval times for abstract thought and reasoning, and was strongly linked to the metaphysical and cosmological theories of teleological scholasticism, including theories of the immortality of the soul.

a.

Within this discipline, various approaches to understanding human intelligence have been adopted.

The psychometric approach, which provides the theoretical underpinnings of intelligence quotient tests, is the most researched.

However, there are psychometric tests that are not intended to measure intelligence itself but some closely related construct, such as scholastic aptitude.

There is widespread acceptance, but this form of assessment remains controversial.

b.

They study various measures of problem solving, as well as mathematical and language abilities.

One challenge in this area is to define intelligence so that it means the same thing across species.

A further challenge is to integrate the concept of artificial intelligence, which has added a new facet to the definition of intelligence.

c.

Whilst humans have hitherto been the primary focus of intelligence researchers, scientists have also attempted to investigate animal intelligence.

These researchers are interested both in studying mental ability in a particular animal population, and comparing abilities between different breeds.

d.

This older interpretation was rejected by the early modern philosophers, all of whom favored the word “understanding”.

The term “intelligence” was therefore uncommon in English language philosophy, although it later became central in the field of psychology.

e.

Nor is this the only divergence of opinion.

Although they may not dispute the stability of IQ test scores or the fact that they predict certain forms of achievement rather effectively, some critics of IQ argue that basing a concept of intelligence on IQ test scores alone is to ignore many important aspects of mental ability.

Appendix 8: Reading Task German CEFR Level B1

German B1 reading task instructions:

Lesen Sie die Überschriften a-j und die Texte 1-5. Finden Sie für jeden Text die passende Überschrift.

Sie können jede Überschrift nur einmal benutzen.

Markieren Sie Ihre Lösungen für die Aufgaben 1-5 auf dem Antwortbogen.

Überschriften a-j:

- (a) Immer mehr deutsche Familien reisen mit der Bahn
- (b) Buchtipp: Hilfe bei Schlafproblemen
- (c) Der Computer: Liebstes Hobby von Deutschlands Frauen
- (d) Neu bei der Bahn: Spezielle Informationen und Angebote für Radfahrer
- (e) Neu am Markt: Bilige Schlaftabletten
- (f) Familien reisen billiger
- (g) Urlaub mit dem Fahrrad in Deutschland immer beliebter
- (h) Kultur im Urlaub: Interessen je nach Alter unterschiedlich
- (i) Umfrage: Wer verwendet den Computer am häufigsten?
- (j) Deutschland: Immer mehr Touristen reisen in den Westen

Texte 1-5:

1.

Wer ist der typische Computerfan?
 Das B.A.T. Freizeitforschungsinstitut Hamburg ermittelte einige Eigenschaften: Er ist männlich, jung und hat einen höheren Schulabschluss.
 Bei der Beschäftigung am heimischen Computer stehen Textverarbeitung und Spiele ganz oben, es folgen private Buchhaltung, Grafikprogramme und Tabellenkalkulation.
2.

„Bahn&Bike“ heißt ein 222-seitiger Prospekt, den die Deutsche Bahn AG in Zusammenarbeit mit der Deutschen Zentrale für Tourismus herausgebracht hat und der wichtige Informationen für jene bereitstellt, die ihren Radurlaub mit Bahnfahren verbinden wollen.
 Das Motto lautet: Hin mit der Bahn - das Rad vor Ort mieten.
 Der Prospekt enthält Angaben zur Streckenlänge und Wegbeschaffenheit, Adressen von Verleihstationen, verweist auf Sehenswürdigkeiten sowie Unterkünfte und wird durch Karten ergänzt.
 Die Broschüre kostet 5 Euro und ist im Buchhandel beziehungsweise an Fahrkartenschaltern zu beziehen.
3.

Ausführliche Informationen zum Thema „Schlafstörungen“ finden Sie im gleichnamigen Patientenratgeber von Dr. med. Fritz Hohagen.
 Sie erfahren, was den Schlaf stört und was Sie dagegen unternehmen können.
 Für 9,95 Euro erhalten Sie das Buch in Apotheken oder direkt beim Wort&Bild Verlag, 82065 Baierbrunn.
4.

Jetzt wird für Familien Reisen mit der Bahn zwischen Österreich und Deutschland noch ein gutes Stück günstiger.
 Denn ab 6. Oktober gibt es den Familien-Super-Sparpreis.
 Ein echter Traumpreis für die ganze Familie - vom Baby bis zum Großpapa - da kann man wirklich sparen.
 Der Familien-Super-Sparpreis gilt für Familien, bestehend aus ein oder zwei Erwachsenen (Eltern, auch Großeltern) und deren Kindern/Enkelkindern bis zum vollendeten 17. Lebensjahr, wobei mindestens ein Kind/Enkelkind an der Reise teilnehmen muss.
5.

Touristen zwischen 14 und 29 Jahren sowie zwischen 40 und 49 Jahren haben ein besonders großes Interesse an der Kultur des jeweiligen Reiselandes, während die Gruppe der 30- bis 39-jährigen im Urlaub „eine Kulturpause einlegt“.
 Dies geht aus der neuesten Analyse der Forschungsgemeinschaft Urlaub und Reisen e. V. hervor.
 Urlauber aus Ostdeutschland, so die Studie, zeigen wiederum mehr Kulturinteresse als Reisende aus dem Westen. Grundsätzlich gelte: Je höher das Einkommen und die Schulbildung sind, umso mehr besteht im Urlaub der Wunsch, Land und Leute kennenzulernen.

Appendix 9: Reading Task German CEFR Level B2

German B2 reading task instructions:

Lesen Sie zuerst die zehn Überschriften. Lesen Sie dann die fünf Texte und entscheiden Sie, welche Überschrift (a-j) am besten zu welchem Text (1-5) passt.

Tragen Sie Ihre Lösungen bei den Aufgaben 1-5 ein.

Überschriften a-j:

- (a) Am Strand im Dienst - mehr Sicherheit für Urlauber
- (b) Bäder, Seen und Natur - im heissischen Paradies
- (c) Freiheit und Natur - nach sechs Wochen harter Arbeit
- (d) Jugendliche arbeiten für Jugendliche
- (e) Kinderarbeit in Deutschland: Jugendliche werden zur Arbeit gezwungen
- (f) Nach harter Arbeit durch nordische Gewässer
- (g) Schaden an Kreuzfahrtschiff verhindert Welterfahrt
- (h) Urlaub an deutschen Seen immer gefährlicher
- (i) Wegen Niedrigwasser: vom Fluss auf die Straße
- (j) Zu Gast bei den Fürsten

Texte 1-5:

1.

Entdecken Sie interessante Städte und Regionen.

Im Herzen Deutschlands liegen wunderbare Landschaften, mit einem für deutsche Verhältnisse sehr milden Klima - und keine typischen „Touristenziele“.

Von der Stadt Gießen ausgehend kann man in den hessischen Kreisen Bergstraße und Waldeck-Frankenberg viele Orte entdecken, die noch ein Geheimtipp sind.

Vor allem gilt dies für den Kreis Waldeck-Frankenberg.

Wer nicht gerade in Hessen wohnt, wird kaum wissen, wo diese Region eigentlich liegt. Es ist ein herrliches Stück Deutschland ohne besonders große Städte, eine Gegend, die Natur pur bietet.

Daher wundert es nicht, dass man hier einige Kurorte findet wie Bad Arolsen oder Bad Wildungen oder den Luftkurort Edertal-Kleinern.

Apropos Edertal: Der zwölf Quadratkilometer große Edersee gehört zu den vier schönen „blauen Augen“ des Kreises.

Der Landkreis Waldeck-Frankenberg ist Hessens attraktivstes Umland.

In der Region der Berge und Seen spürt man auch heute noch einen Hauch von Fürstlichkeit: Majestätisch erhebt sich über dem Edersee das Schloss Waldeck.

Auch in Bad Arolsen, einer ehemaligen Residenzstadt, ist vieles noch vom früheren Adel geprägt.

Unbedingt besuchen sollte man darüber hinaus das über 1000 Jahre alte Korbach wie auch die Fachwerkstadt Frankenberg.

2.

Pferde waren schon immer Melanie Schilles Leidenschaft.

„Und jetzt kann ich Hobby und Beruf miteinander verbinden“, freut sich die Beamtin aus Hannover.

In diesem Jahr verstärkt sie die Strandwache an der Nordseeküste.

Ihr Arbeitsplatz ist der Strand: Mit „Magnus“, einem 11-jährigen Pferd, patrouilliert sie dort, wo die Kleinen Sandburgen bauen, Urlauber bei einem Buch entspannen oder sich in die kühlen Fluten stürzen.

Melanie Schille und ihr Hannoveraner sind eine Attraktion in dem Ferienort.

Immer wieder wollen Gäste das Tier streicheln, von der Polizistin wissen, was sie hier macht.

„Wir sorgen für mehr Sicherheit am Strand“, erklären Melanie Schille und Rüdiger Teichmann (42).

Sie suchen im Watt nach Vermissten, klären über Gefahren auf, verhindern Diebstähle und Sachbeschädigungen.

Nachweislich gingen die Delikte zurück, seit es die Streife hoch zu Ross gibt.

Die Polizisten: „Wir sind in dem unwegsamen Gelände oft schneller am Einsatzort als die Kollegen per Fahrrad oder mit dem Auto.“

Außerdem schonen wir die Natur.

„Für sich persönlich sieht Melanie Schille noch einen großen Vorteil: „Es ist schön, mal keine Demonstration sichern zu müssen, stattdessen genieße ich die frische Luft mit fröhlichen Urlaubern.“

Nur eins vermisst die 22-Jährige, die mit Polizeipferd „Magnus“ auf einem Bauernhof Quartier bezogen hat, während ihres sechswöchigen Einsatzes: Freund Robert (23).

Er fährt als Polizist in Hannover Streife - und wartet auf sie.

3.

Ein neuer Urlaubstrend setzt sich durch: Statt faul am Strand zu liegen, wird man aktiv. Ein besonders beliebtes Ziel ist Schweden: So kann man am Ufer des Flusses Klarälven in der Provinz Värmland selbst ein Floß bauen.

Das dauert drei bis sechs Stunden, anschließend macht man darauf Urlaub.

„Das ist Abenteuerurlaub pur“, schwärmt Johan Bengtson, der mit seiner Frau und den drei Kindern zum zweiten Mal Floßferien macht.

„Sich auf dem Fluss treiben lassen und in der Wildnis leben - dieses Gefühl ist super!“ Seit zehn Jahren veranstaltet Marie Junler von der Agentur Vildmark i Värmland die Holzfloßtrips.

Wir haben die Bengtsons an ihrem ersten Urlaubstag begleitet.

Mit dabei ist auch Veranstalterin Marie Junler, die der Familie hilft, das Floß zu bauen.

Es ist ein herrlicher Sonnentag.

In einer sanften Kurve des Flusses Klarälven steht Marie bis zu den Hüften im tiefblauen Wasser.

Mit dicken grünen Seilen schnürt sie Holzstämmen zusammen und gibt Kommandos: „Einer hält den Stamm, der andere knotet - den Seemannsknoten, wie wir ihn vorhin an Land geübt haben.“

„Ohne einen Nagel werden 96 Baumstämme verzurrt - im Wasser, sonst wäre das Holz zu schwer.“

Mindestens zwei Erwachsene sind nötig, um ein Floß zu bauen, einer allein packt das nicht.

Nach drei Stunden ist es geschafft: Das Urlaubsparadies der Bengtsons - es misst übrigens 6 mal 3 Meter und wiegt 2 Tonnen - treibt am Ufer.

Noch schnell das Sonnenzelt befestigen, darunter Vorratskasten, Frischwassertank, Chemie-Klo, Küchenausstattung, Zelt, Rettungsring, Schwimmwesten und das Paddel zum Steuern und Manövrieren verstauen - und ab geht's.

4.

Von 9 bis 15 Uhr arbeitet Sebastian Keller (18) in einem Altenwohnheim in Hamburg-Altona: Er kümmert sich um die Essensausgabe, putzt die Küche und dann ist noch Zeit, um den Senioren vorzulesen oder mit ihnen Karten zu spielen.

Zur selben Zeit putzen Rebecca (12) und Christiane (13) den Eingang des Hamburger „Michels“, der wohl bekanntesten Kirche der Stadt, und Friderike (17) füttert schon frühmorgens Kühe, Schweine und Hühner auf einem Bio-Bauernhof bei Wedel.

„Endlich mal ein sinnvoller Job“, sagen die fünf übereinstimmend.

Sie stehen stellvertretend für etwa 100.000 Jugendliche, die beim „Sozialen Tag“ mitgemacht haben.

Hut ab!

Und was mindestens ebenso beeindruckend ist: Der Verein „Hamburgs Schüler helfen“ (HSH) wurde von Jugendlichen im Jahr 2004 gegründet - und seitdem findet jedes Jahr im August der „Soziale Tag“ statt.

Mit Behörden und Firmen haben Schüler aus Hamburg Verträge für einen Tag abgeschlossen.

Die Schülerinnen und Schüler verdienen dann am „Sozialen Tag“ zwischen 6 und 8 Euro pro Stunde - aber nicht für sich selbst, sondern für andere.

Denn der Verdienst wird gespendet.

Die Jugendlichen wählen selbst ein Projekt aus, an das sie die Gelder spenden wollen.

Einzige Bedingung: Es muss ein Projekt sein, von dem Jugendliche profitieren.

Im letzten Jahr zum Beispiel wurde die Gesamtsumme von 1,2 Millionen Euro an das Projekt „Frieden für alle“ gespendet.

Dessen Ziel ist es, Jugendliche in Kriegs- und Krisenregionen zu unterstützen, den Dialog unter Jugendlichen aus verschiedenen Ländern zu fördern und auch das Kennenlernen anderer Kulturen zu ermöglichen.

Für Ralf Waldner (20) vom HSH steht fest: „Wir können und werden anderen auch in Zukunft helfen, das Engagement der Schülerinnen und Schüler in Hamburg ist in den letzten Jahren schließlich immer weiter gestiegen.“

5.

Die Windjacken waren schon eingepackt, die Koffer geschlossen.

Thomas Meurer (64) und Wiebke Fuchs (62) aus Hannover freuten sich auf ihre

Flusskreuzfahrt mit der „MS Eurostar“ von Potsdam nach Prag.

Stattliche 2500 Euro kostete die Reise pro Person, und beide hatten lange gespart, um sich das leisten zu können.

Doch aus der Kreuzfahrt wurde eine Bustour.

Meurer berichtet, was er erlebt hat: „Wir waren am Abend auf das Schiff gegangen und hatten unsere Kabinen bezogen.

Am nächsten Morgen ging es los.

Aber schon bald machte das Schiff wieder fest und alle Gäste mussten von Bord.“

Wiebke Fuchs ergänzt: „Der Fluss hatte einfach zu wenig Wasser, da konnten wir mit dem großen Kreuzfahrtschiff nicht weiterfahren!“

Per Bus ging es nach Prag.

Beide wollen nun einen Teil des Reisepreises zurück, aber der Veranstalter Hapag-Lloyd wehrt ab: „Das war höhere Gewalt, da kann man nichts machen.“

Appendix 10: Reading Task German CEFR Level C1

German C1 reading task instructions:

Lesen Sie den folgenden Text. In welchem Textabsatz a-e finden Sie die Antworten auf die Fragen 7-12?

Es gibt jeweils nur eine richtige Lösung. Jeder Absatz kann Antworten auf mehrere Fragen enthalten. Markieren Sie Ihre Lösungen für die Aufgaben 7-12.

Fragen 1-6:

Im welchem Abschnitt...

- (1) ist die Autorin belehrend?
- (2) ist die Autorin polemisch?
- (3) übt die Autorin Selbstironie?
- (4) übt die Autorin Kritik?
- (5) zieht die Autorin Lehren für die Zukunft?
- (6) will sich die Autorin profilieren?

Textabsatz a-e:

Ein Selbstversuch als Hobbybäuerin

a.

Ich bin stolz auf mich und fühle mich richtig gut, weil ich meine ambitionierten Ziele bis jetzt immer realisieren konnte.

Damit meine ich nicht nur die beruflichen Ziele, sondern auch meine privaten, denn diese können ja bekanntlich gleichermaßen anspruchsvoll sein.

Wenn ich jetzt nach vielen Jahren Bilanz ziehe, macht mich das Ergebnis sehr zufrieden.

Bin ich vielleicht sogar eine Heldin?

Diese Frage habe ich mir nun eine Woche lang gestellt.

Nicht, weil ich unbedingt mit einer Großtat in die Geschichtsbücher eingehen wollte, sondern vor einer weiteren Herausforderung stehe.

Eine selbstaufgelegte Aufgabe, die es zu meistern gilt.

Ich muss mich bis Ende Oktober entscheiden, ob ich mein Stück Gartenland auch im nächsten Jahr wieder bestellen will.

Wenn ja, wird es für mich reserviert, sobald der Frühling kommt.

Es liegt vor den Toren Münchens, und ich habe darauf nun einen Sommer lang Gemüse angebaut.

Wenn ich Hobbybäuerin bleiben will, muss ich mich bereits jetzt als Ackerheldin für das kommende Jahr anmelden.

b.

Bin ich nun eine Heldin oder nicht? Nun kann man über meine Leibesstärke diskutieren; ich würde jedenfalls behaupten, meine geistige Stärke ist ausgeprägter.

Und besondere Tapferkeit kann ich mir auch nicht wirklich zusprechen.

Ich war höchstens eine Heldin der Arbeit, als ich auf dem Acker herumkroch.

Menschen, die mich kennen, hätten mich in meinem Outfit nicht wiedererkannt.

Ich habe gebuddelt, was das Zeug hielt, und an besonders warmen Tagen konnte ich meinen Körpergeruch selbst kaum ertragen.

Mit schwarzen Fingernägeln und zersaustem Haar fuhr ich dann nach getaner Arbeit nach Hause und war froh, dass ich zumindest dazu noch in der Lage war.

Ich hatte also die Schlacht gewonnen.

Mein Leben habe ich dabei nicht riskiert, höchstens ab und zu meine körperliche Unversehrtheit, wenn die Mücken mal wieder zubissen oder der Muskelkater schmerzte.

Immerhin stellte ich mich allwöchentlich dem Kampf gegen einen unerbittlichen Kontrahenten: das Unkraut.

So gesehen bin ich zumindest eine Ackerheldin, die den Kampf für sich entscheiden konnte.

Häufig siegte aber auch der Acker - über meine Kraft (mehr als zehn Gießkannen Wasser konnte ich bei 30 Grad einfach nicht schleppen) und vor allem über meinen inneren Schweinehund.

Wenn ich mich mal nicht aufraffte, zum Feld zu fahren, plagte mich das schlechte Gewissen.

c.

Einige Freundschaften hat es mich auch gekostet: Ein Freund redet nicht mehr mit mir, seit er zum Unkrautrupfen mitkam.

Wir gerieten über die Frage, wie weit man Salat von Radieschen fernhalten sollte, in einen lächerlichen Streit.

Eine Freundin, die sich an einem Nachmittag als Erntehelferin beteiligt hatte, wurde von einer Wespe ins Ohr gestochen und musste sich in ärztliche Behandlung begeben.

„Du und dein Acker!“, schnaubte sie später ins Telefon, „wir sehen uns wieder, wenn die Saison vorbei ist.“

Andere Freunde riefen mich immer seltener an, weil sie befürchteten, ich könnte sie um Hilfe bitten.

In dieser Zeit begann ich immer häufiger über meine Freunde nachzudenken und erkannte den Wert meiner Freundschaften.

Sie konnten nicht einmal banalen Dingen standhalten.

Nun wusste ich, wie meine sogenannten Freunde tickten.

„So ein unzuverlässiges und treuloses Pack“, dachte ich mir ganz oft.

Mit diesen Subjekten habe ich mal meine Zeit verbracht; welch eine Verschwendung.

d.

Man muss auch beim Bewältigen der Erntemengen Ideen sprießen lassen, schließlich wird vieles gleichzeitig reif.

Und man muss bestimmte Abstriche machen, wenn man nur einmal pro Woche vor Ort sein kann.

Das ist wie im wirklichen Leben: Bedenken Sie, dass wir auch im Job gleichzeitig an vielen Projekten arbeiten und uns selten den Luxus gönnen, eine Sache nach der anderen abzuarbeiten.

Das gilt natürlich auch für unser Privatleben, wo wir meist mehrere Baustellen haben und oft gar nicht wissen, wo wir anfangen sollen.

Was die Abstriche angeht, so verhält es sich nicht anders.

Man hat in der Regel immer Zeitdruck und ein begrenztes Budget.

Das ist einfach die Realität, ob es uns nun gefällt oder nicht.

Ich kann jedem, der sich in solchen Situationen überfordert fühlt, nur raten, nicht zu perfektionistisch an eine Sache heranzugehen.

Lernen Sie Kompromisse zu machen und damit zu leben.

Mieten Sie sich notfalls einen Garten, so wie ich es gemacht habe.

Ich garantiere Ihnen: Sie lernen dabei nicht nur etwas über Gemüseanbau!

e.

Die Windjacken waren schon eingepackt, die Koffer geschlossen.

Thomas Meurer (64) und Wiebke Fuchs (62) aus Hannover freuten sich auf ihre

Flusskreuzfahrt mit der „MS Eurostar“ von Potsdam nach Prag.

Stattliche 2500 Euro kostete die Reise pro Person, und beide hatten lange gespart, um sich das leisten zu können.

Doch aus der Kreuzfahrt wurde eine Bustour.

Meurer berichtet, was er erlebt hat: „Wir waren am Abend auf das Schiff gegangen und hatten unsere Kabinen bezogen.

Am nächsten Morgen ging es los.

Aber schon bald machte das Schiff wieder fest und alle Gäste mussten von Bord.“

Wiebke Fuchs ergänzt: „Der Fluss hatte einfach zu wenig Wasser, da konnten wir mit dem großen Kreuzfahrtschiff nicht weiterfahren!“

Per Bus ging es nach Prag.

Beide wollen nun einen Teil des Reisepreises zurück, aber der Veranstalter Hapag-Lloyd wehrt ab: „Das war höhere Gewalt, da kann man nichts machen.“

Appendix 11: Reading Task German CEFR Level C2

German C2 reading task instructions:

Sie interessieren sich für eine Tätigkeit bei einer internationalen Organisation.

Verschaffen Sie sich schnell einen Überblick über die vier Angebote. Zu welcher Anzeige A, B, C, D passen die Aussagen 1-8? Auf eine Anzeige können mehrere Aussagen zutreffen, aber es gibt nur eine richtige Lösung für jede Aussage. Markieren Sie die richtige Antwort.

Aussagen 0-5:

- (0) Es ist Ihre Aufgabe, sich um Partner im internationalen Hochschulbereich zu kümmern.
- (1) Ihr Dienort ist für die Dauer Ihrer Tätigkeit im Ausland angesiedelt.
- (2) Sie sind für die Fortbildung lokaler Mitarbeiter zuständig.
- (3) Diese Stelle wird auf Dauer angeboten.
- (4) Es ist Ihre Aufgabe, Finanzmittel zu beschaffen.
- (5) Die Stelle erfordert eine konfessionelle Bindung.
- (6) Die Stelle ist zunächst auf ein Jahr begrenzt.
- (7) Es ist unter anderem erforderlich, sich klar artikulieren zu können.
- (8) Ihre Vergütung wird auch von Ihrer Qualifikation abhängig gemacht.

Angebote a-d:

a.

Caritas international, die Auslandsabteilung des Deutschen Caritasverbandes e.V. mit Sitz in Freiburg, leistet als internationale Hilfsorganisation weltweit Hilfe für Menschen in Not. Für das Referat Öffentlichkeitsarbeit ist ab sofort die Stelle eines/einer Referenten/Referentin für Fundraising/Direktmarketing unbefristet zu besetzen.

Zu Ihren Aufgaben gehören: Betreuung des gesamten Bereichs der zielgruppenorientierten Spenderansprache von Caritas international durch die unterschiedlichen Instrumente des Direktmarketings - Pflege der SAP CRM-Datenbank - datenbankgestützte Zielgruppenanalysen und Entwicklung neuer Produkte zur Spendenwerbung (für unterschiedliche Spendergruppen und Spenderinteressen) - Abfassen von Texten für Mailings - Koordination mit den anderen Bereichen des Fundraising, der Presse- und Öffentlichkeitsarbeit - Zusammenarbeit mit externen Dienstleistern und Agenturen. Die Aufgabe erfordert folgende Qualifikationen und Fähigkeiten: Hochschulabschluss in den Bereichen Geistes- beziehungsweise Sozialwissenschaft oder BWL mit Erfahrungen im Sozialmarketing, möglichst Zusatzqualifikationen in einem journalistischen Arbeitsfeld beziehungsweise entsprechende Berufserfahrung - einschlägige Erfahrung im Direktmarketing - sehr gute schriftliche Ausdrucksfähigkeit sowie die Fähigkeit, komplexe Sachverhalte in einfacher Sprache darzustellen - Affinität zu Themen der internationalen humanitären Hilfe - Fremdsprachenkenntnisse in mindestens zwei Sprachen - Bereitschaft zu Auslandsreisen.

Bei gleicher Qualifikation werden Bewerber/Bewerberinnen mit Behinderung bevorzugt. Schriftliche Bewerbung mit den üblichen Unterlagen an www.caritas.de.

b.

Robert Bosch Stiftung und Goethe-Institut e.V.

Die Robert Bosch Stiftung gehört zu den großen unternehmensverbundenen Stiftungen in Deutschland, das Goethe-Institut ist das weltweit tätige Kulturinstitut der Bundesrepublik Deutschland.

Die Robert Bosch Stiftung und das Goethe-Institut e.V. vergeben ab sofort ein Stipendium für einen Robert Bosch Kulturmanager (m/w) mit Dienstort Sharjah, Vereinigte Arabische Emirate, für zunächst ein Jahr mit einmaliger Verlängerungsmöglichkeit.

Der Stipendiat/die Stipendiatin ist in Absprache mit den lokalen Partnern für den Aufbau eines Qualifizierungsprogramms für Angestellte verschiedener Arbeitsbereiche der Museen in Sharjah verantwortlich (kuratorische Arbeit, Ausstellungsdesign, Museumspädagogik, Öffentlichkeitsarbeit, Restaurierung etc.) Er/Sie wird vom Goethe-Institut Golf-Region in Abu Dhabi betreut und ist institutionell am Museumsdepartment Sharjah angebunden.

Das Aufgabengebiet umfasst im Wesentlichen:

- Analyse des Qualifikationsbedarfs bei den Museumsangestellten
- Auswahl von Expertinnen und Experten aus Deutschland und Beteiligung an der Entwicklung von Fortbildungscurricula und Trainingsmodulen
- Aufbau und Implementierung eines berufsbegleitenden, praxisorientierten Qualifizierungs-Programms in enger Absprache mit dem Museumsdepartment
- Kontaktvermittlung zwischen deutschen und emiratischen Institutionen im Museums- und Ausstellungsbereich

Voraussetzungen: Vor weniger als acht Jahren abgeschlossenes Studium der Kunstgeschichte, der Kulturwissenschaften oder eines anderen museumsrelevanten Fachgebietes.

- Mindestens 3-jährige Berufserfahrung in einschlägigem Bereich
- Sehr gute Kenntnis der deutschen Museumslandschaft
- Ausgeprägte interkulturelle Kompetenz
- Verhandlungssicheres Englisch, arabische Grundkenntnisse wünschenswert
- Auslandserfahrung (Studien- oder Arbeitsaufenthalte)

- Überdurchschnittliche Einsatzbereitschaft, Selbstständigkeit, Kreativität und Verantwortungsbewusstsein
 - Gesundheitliche Eignung
- Leistungen: Monatliches Stipendium von 3800 € (zzgl. projektbezogener Leistungen des Goethe-Instituts)
- Umzugspauschale
 - Aufwandspauschale u.a. für Versicherungen, Visakosten, Arbeits- und Aufenthaltserlaubnisse, Heimreisen
 - Kindergeldzuschlag
 - Ggf. Zuschuss zu Sprachkurskosten
 - Regelmäßige Fortbildung
 - Vernetzung mit weiteren Programmen der Goethe-Institute und der Robert Bosch Stiftung

c.

Brot für die Welt, das Spenden sammelnde Hilfswerk der evangelischen Kirche in Deutschland, fördert jährlich mehr als 1000 Projekte weltweit.

Wir suchen baldmöglichst für die Abteilung Politik und Kampagnen eine/einen Sachbearbeiter/Sachbearbeiterin (75 %) für die Regionalkoordination Afrika/Asien, zunächst befristet auf zwei Jahre.

Arbeitsschwerpunkt des Referats Menschenrechte bilden der Schutz und die Förderung der Einhaltung der Menschenrechte durch kirchliche Partner und Nichtregierungsorganisationen sowie ihrer Zielgruppen weltweit sowie der Aufbau effektiver Strukturen und Mechanismen des Menschenrechtsschutzes.

Die Sachbearbeitungsstellen sind regional definiert.

Die Aufgaben umfassen im Wesentlichen:

- Durchführen von Maßnahmen des Menschenrechtsschutzes
- Bearbeitung von Anträgen zur Unterstützung von Menschenrechtsorganisationen
- aktive Mitarbeit in kirchlichen und säkularen Menschenrechtsnetzwerken in Deutschland und anderes
- Lobbyarbeit zu den thematischen Schwerpunkten des Referates Menschenrechte

Voraussetzungen:

- abgeschlossenes Fachhochschulstudium
- einschlägige Berufserfahrung im Arbeitsbereich Menschenrechte
- Auslandserfahrung
- sehr gute Sprachkenntnisse in Deutsch, Französisch, Englisch
- Kenntnisse in Textverarbeitung
- Tropentauglichkeit und Bereitschaft zu regelmäßigen Dienstreisen>
- gute Kommunikationsfähigkeit und Bereitschaft zur Teamarbeit

Die Mitgliedschaft in der evangelischen Kirche setzen wir voraus.

Für Rückfragen stehen wir Ihnen gerne zur Verfügung.

Ihre schriftliche Bewerbung richten Sie bitte an:

Diakonisches Werk der EKD e.V. - Geschäftsbereich Personal -
Staffenbergstraße 76, 70184 Stuttgart

d.

DAAD Deutscher Akademischer Austausch Dienst ist eine gemeinsame Organisation der deutschen Hochschulen zur Förderung der internationalen wissenschaftlichen Zusammenarbeit und des weltweiten akademischen Austausches.

Mit einem Jahresbudget von circa 300 Millionen Euro fördert er rund 55000 Personen im In- und Ausland in verschiedenen Programmen und Projekten.

Dieser Aufgabe widmen sich rund 700 Mitarbeiter/Mitarbeiterinnen des DAAD in Bonn, Berlin und in 14 Auslandsbüros.

Wir suchen für diverse neu zu besetzende Positionen zum nächstmöglichen Zeitpunkt (zum Teil befristet) Referatsleiter/Referatsleiterinnen und Referenten/Referentinnen.

Dotierung: in Abhängigkeit von Tätigkeit und Berufserfahrung.

Ihre Aufgaben je nach Position: Konzeption und Durchführung von Förderprogrammen für in- und ausländische Studierende, Wissenschaftler und Hochschulen, Projektmanagement, Qualitätssicherung und Evaluierung der Förderinstrumente, Kontaktpflege zu Partnerorganisationen, Geldgebern, Hochschulen und Botschaften im In- und Ausland, Erarbeitung von Stellungnahmen zu hochschul- und kulturpolitischen Fragen.

Ihre Qualifikationen: Um die Aufgabenbereiche eines Referenten/einer Referentin wahrnehmen zu können, verfügen Sie über ein abgeschlossenes Hochschulstudium (Staatsexamen oder Master), sehr gute Kenntnisse der deutschen und internationalen Hochschullandschaft sowie verhandlungssichere Englischkenntnisse und gute EDV-Kenntnisse.

Sie zeichnen sich durch konzeptionelles und strategisches Denkvermögen aus, sind flexibel und belastbar.

Wünschenswert sind darüber hinaus Auslandserfahrung durch längere Studien- oder Arbeitsaufenthalte im Ausland sowie gute Kenntnisse einer weiteren Fremdsprache.

Wir freuen uns über Ihre aussagekräftigen Bewerbungsunterlagen, die Sie uns bitte unter Angabe Ihres Erfahrungsprofils bezüglich Ihrer bisherigen regionalen und/oder fachlichen Schwerpunkte senden.

Wir bitten um Verständnis, dass Bewerbungsunterlagen nur zurückgesandt werden, wenn ein frankierter Rückumschlag beigelegt ist.

Geschäftsstelle Bonn-Bad Godesberg

Deutscher Akademischer Austauschdienst

Kennedyallee 50, 53175 Bonn

E-Mail: postmaster@daad.de

Appendix 12: Full Data Table**Full Data Table**

Trial results and participant data for all trials completed by all participants

Participant	Language	CEFR Level	Language Acquisition Type	Balanced, Nonbalanced EN, or Nonbalanced DE	Mean Word Processing Speed (msec)	Raw Comprehension Scores	Comprehension Scores (%)
1	English	C1	Tutored	Nonbalanced DE	7809.372	2/6	0.333
1	German	C2	Natural	Nonbalanced DE	4205.553	4/9	0.444
2	English	C2	Natural	Balanced	6314.174	3/6	0.500
2	German	C2	Natural	Balanced	5644.647	5/9	0.556
3	English	C2	Natural	Balanced	7973.435	3/5	0.600
3	German	C2	Natural	Balanced	9708.882	3/9	0.333
4	English	B2	Tutored	Nonbalanced DE	6841.148	3/5	0.600
4	German	C2	Natural	Nonbalanced DE	5168.541	1/9	0.111
5	English	C2	Natural	Nonbalanced EN	4772.391	4/6	0.667
5	German	B1	Tutored	Nonbalanced EN	6774.189	4/5	0.800
6	English	C1	Natural	Nonbalanced EN	4114.535	2/6	0.333
6	German	B1	Natural	Nonbalanced EN	2747.865	2/5	0.400
7	English	C2	Natural	Nonbalanced EN	4626.130	3/5	0.600
7	German	C1	Tutored	Nonbalanced EN	2846.597	3/6	0.500
8	English	C2	Tutored	Nonbalanced EN	3242.435	1/5	0.200
8	German	B2	Tutored	Nonbalanced EN	4296.519	4/5	0.800
9	English	C1	Natural	Nonbalanced EN	6180.860	6/6	1.000
9	German	B1	Natural	Nonbalanced EN	7060.108	4/5	0.800
10	English	C1	Natural	Balanced	5147.186	5/6	0.833
10	German	C1	Natural	Balanced	3738.582	0/6	0.000

11	English	C2	Natural	Balanced	6401.957	2/5	0.400
11	German	C2	Natural	Balanced	6024.141	6/9	0.667
12	English	C2	Natural	Nonbalanced EN	10685.260	3/6	0.500
12	German	B2	Tutored	Nonbalanced EN	9152.506	4/5	0.800
13	English	C2	Natural	Nonbalanced EN	6333.391	5/5	1.000
13	German	B1	Tutored	Nonbalanced EN	5895.703	5/5	1.000
14	English	C1	Natural	Nonbalanced EN	5908.465	2/6	0.333
14	German	B1	Natural	Nonbalanced EN	5260.514	2/5	0.400
15	English	B2	Natural	Nonbalanced DE	6834.759	5/5	1.000
15	German	C2	Natural	Nonbalanced DE	6993.635	5/9	0.556
16	English	C1	Natural	Nonbalanced EN	6392.744	2/6	0.333
16	German	B2	Natural	Nonbalanced EN	3867.456	5/5	1.000
17	English	C2	Natural	Nonbalanced EN	5366.000	3/5	0.600
17	German	B1	Natural	Nonbalanced EN	6509.324	4/5	0.800
18	English	C2	Natural	Nonbalanced EN	4789.870	1/5	0.200
18	German	B1	Natural	Nonbalanced EN	8536.892	2/5	0.400
19	English	C2	Natural	Balanced	5771.261	3/5	0.600
19	German	C2	Natural	Balanced	4244.259	6/9	0.667
20	English	C2	Natural	Nonbalanced EN	4189.478	2/5	0.400
20	German	C1	Tutored	Nonbalanced EN	5675.806	3/6	0.500

Note. Nonbalanced EN means the participant was a nonbalanced bilingual with a higher competency in English. Nonbalanced DE means the participant was a nonbalanced bilingual with a higher competency in German. Raw Comprehension Score shows the number of points the participant scored correctly out of their total number of points possible to score. Comprehension Scores (%) shows the Raw Comprehension Score as a percentage (eg. 5/5 is 100%, shown as 1.000).

Academic Paper

Note: Student samples are quoted verbatim and may contain spelling and grammatical errors.

Sample: B

Score: 5

This paper earned a score of 5. The topic of inquiry is focused, narrow, and carried throughout the method and new understanding. The topic of inquiry is stated on page 1: “This research study will examine how word processing and reading comprehension varies between types of multilingual language competencies and types of multilingual acquisition among multilingual adolescents who speak English and German and attend School X, an international school in Switzerland.”

On pages 2–4, scholarly sources of varying perspectives are placed into conversation and are synthesized to identify a gap: “However, when referring to the variety of multilingualism, it should be considered that current research fails to examine adolescent multilingualism, focusing exclusively on adults or children.” The topic is then further narrowed: “This may be especially relevant at School X.” (page 3). There is an awareness of how the big R research contributes to the existing body of knowledge on page 4: “The researcher will therefore further contribute to the literature on adolescent multilingualism of various competencies.” The hypotheses are connected to a source, “The expectation was that with natural learning, the multilingual learner would acquire a fluency and innate instinct for the language (Block, 1986),” on page 5.

On pages 5–7, the paper logically defends the method alignment through scholarly works. For example, the method is based on Roberts’s work in self-paced reading methods with justification: “This allows the researcher to measure that processing speed by measuring time in between button-pushes with appropriate experimental software and has been found especially useful in assessing L2 processing” (page 5). Ethical practices for working with human participants such as informed consent are explained on page 7 and in Appendix 2. The paper circles back to the gap in discussing the sample population: “This researcher focused specifically on adolescents ... to address a gap in psycholinguistic research” (page 6). The step-by-step explanations of the research method (pages 5–8) are detailed and replicable, with further research instruments in the appendices, and statements that defend the choices through connections to sources such as Aronin & Hufeisen, Roberts, Letson.

The student arrives at a new understanding based on student-generated data: “Results of this study suggest that there is not a significant difference of the mean word processing speed and mean reading comprehension between balanced bilinguals and nonbalanced bilinguals” (page 21) and “If this is the case, it could be that the language acquisition type, natural or tutored, causes differences, in the language use and development of different strategies” (page 22). The limitations of the conclusion are robust: “It is worth noting, however, that there may be a variety of factors affecting the research conducted” (page 22–23). While the implications are overshadowed with the more extensive analysis on conclusion limitations, they are present and explained, “Should these results be reflective of many multilinguals, its implications for the field may be significant.” The paper circles back to the gap: “[T]his may impact language acquisition outside of the field, for example in any language learning setting” (page 23).

This paper did not earn a score of 4 because there is evidence of enhanced communication through organization, few grammar and citation errors, and numbered tables and figures that concisely convey information. The communication is enhanced rather than competent, and the student uses hypercritical language rather than hyperbolic language when discussing the new understanding, “could be,” “may be” (page 22–23). While there are some errors in the student’s interpretation of the p-values and it is unclear which type of t-test the student is using, there is a preponderance of evidence to suggest that this paper has met the criteria of Rows 4 and 5 of the rubric to distinguish this paper from a 4. There is rich analysis, logical defense to *justify* choices, and the student circles back to address the gap: “As well as addressing a gap in research about language acquisition types in multilingualism” (page 23).