

German reading competence of DaF teaching degree students – a C-test-based analysis

Language assessment plays an important role in promoting the language competence of students studying to become German as a foreign language (DaF) teachers. The C-test is a measurement method for assessing linguistic competences. It is a reliable and economical instrument for measuring language competence and can therefore be used not only as a placement test but also as a diagnostic or support tool (Baur/Goggin/Wrede-Jackes 2013, p. 13). The C-test also correlates with the sub-competences reading comprehension, listening comprehension, writing and speaking (Zimmermann 2019, pp. 108 f.). The aim of this paper is to examine the extent to which the C-test can map the German reading competence of DaF teaching degree students in Turkey. The focus is on examining the C-test results at the reading process levels as well as on the other reading test formats.

While reading, various processes take place that are recorded in different ways (e. g. Richter/Christmann 2002; Rosebrock/Nix 2012). Based on the interactionist reading process model of van Dijk/Kintsch (1983), the sub-processes of reading are, according to Richter/Christmann (2002), divided into low hierarchy and high hierarchy processes. The lower hierarchy sub-processes include word identification and local coherence formation. The high hierarchy sub-processes include global coherence, prior knowledge and working memory (ibid., p. 29). With regard to the reading process, cognitive processing steps can be differentiated at the word, sentence and text levels. These are realised more successfully by stronger readers compared to weaker readers. The sub-processes on the word and sentence levels can be assigned to the lower hierarchy sub-processes, while the [?] sub-processes pertain to the text level (Lenhard 2013, pp. 14 f.). Word level processes, which belong to the lower level sub-processes, include word recognition and the understanding of word meanings (ibid.). The sentence level, which is the mid-level of the reading process, involves establishing local coherence through semantic and syntactic links between word sequences. At the text level, which is referred to as the highest level of processing, the individual sentences are linked to form extensive units of meaning in order to establish global text coherence (ibid.). This study aims to record the different process levels in students' reading comprehension by using the C-tests in German. The following hypotheses are formulated:

Hypothesis 1: Students who perform well/poorly on the C-test in German will solve items that are at a higher/lower level of the reading process.

To test this hypothesis, the items of the C-test in German are allocated to the word, sentence and text levels (cf. Heppinar 2022, section 3.2). This allocation should enable an investigation into the question of whether and how the German reading process levels differ between the DaF teaching degree students at Marmara University. According to the reading model of Richter/Christmann (2002) and based on the research findings of Mashkovskaya (2014) and Reitbauer (2000), there are differences at the process levels between the higher and lower performing students. The greater difference is expected at the sentence and text levels, as the weaker students will not be able to reconstruct gaps at these levels due to a lack of reading strategies.

Various empirical studies have confirmed that there are correlations between the C-test and other reading comprehension test formats (Arras/Eckes/Grotjahn 2002; Eckes/Grotjahn 2006; Mashkovskaya 2014). The state of current research shows that the correlation of C-tests and other reading test formats has been studied in relation to foreign language, native language and second language. The present study is the first to focus on re-migrated students with a migration history. In this study, it was decided to correlate the German C-test with the reading comprehension part of the TestDaF (cf. Heppinar 2022, section 3.1.2). Based on the state of research and the findings, the following hypothesis is postulated

Hypothesis 2: There are correlations between students' performance on the C-test in German and the reading comprehension section of the TestDaF.

The two hypotheses were tested in the winter semester 2019/2020 in the Faculty of German Language and Didactics at Marmara University with a sample size of 133 students. The C-test in German and the TestDaF reading comprehension examination were used to collect the data. The data were then analysed in a solution grid. The statistical evaluation of the collected data was performed using the statistical program SPSS 22.0 for Windows. The T-test and the one-factor ANOVA test were used to test the differences in means between two independent, metrically scaled samples. To illustrate the correlation between two metric characteristics, Pearson's r correlation coefficient was used (Gehring/Weins 2009, p. 165) (cf. Heppinar 2022, section 3.2).

The results show that there are high correlations between the German C-test and the TestDaF test format, thus confirming hypothesis 2 (cf. Heppinar 2022, section 4). This result is consistent with other studies that have found correlations between the C-test and other test formats (e. g. Arras/Eckes/Grotjahn 2002; Eckes/Grotjahn 2006; Mashkovskaya 2014; Scholten-Akoun/Baur 2012). This finding suggests that the two test instruments measure certain aspects of reading competence in a similar way.

Furthermore, the aim is to check whether students who perform well/poorly on the C-test in German solve items that are at a higher/lower level of the reading process. The statistical analysis of the results highlights that students who perform well achieve significantly better results on the word, sentence and text levels in the German C-test compared to students who perform poorly (cf. Heppinar 2022, section 4). This confirms hypothesis 1. Mashkovskaya (2014) was also able to demonstrate significant differences between high-performing and low-performing students at the process levels (cf. Mashkovskaya 2014, pp. 169 f.).

Within the framework of hypothesis 1, the performance of students at the process levels was examined as a function of "age", "gender", "year of study" and "length of schooling in Germany or Austria". The measurements indicate that students' reading process performance does not differ as a function of age or gender. The statistical evaluation of the influence of the variable "year of study" on the reading process performance of the high-performing and low-performing students shows that there is only a significant difference at the word level between the first and second year of study. The students in the second year of study perform significantly better on the word level compared to students in the first year of study. Conversely, no significant differences were recorded between the years of study with regard to the students' performance at the sentence and text levels. The

statistical calculations of the correlation between students' reading process performance and "length of schooling in the country of migration" indicate that the length of schooling in the country of migration has a small to medium effect on the performance of high-performing ($n = 64$) and low-performing students ($n = 16$) with a remigration background. Furthermore, it became apparent that this correlation is higher at the sentence and text levels compared to the word level. By contrast, "length of schooling in the country of migration" exhibited no significant difference between the low-performing ($n = 16$) or normally-performing students ($n = 13$) ($r < 0.1$) (cf. Heppinar 2022, section 4). This result indicates that the high-performing students who have spent a longer period of schooling in Germany or Austria can apply hierarchically higher reading strategies compared to the low-performing students. In comparison, the low-performing ($n = 16$) and normally-performing students ($n = 13$) with a remigration background use similar reading strategies at all reading process levels.

The results of the study indicate that the DaF teaching degree students require support in their German reading competence. This study showed that the C-test is an economical and objective test instrument that can be used as a diagnostic tool for the reading comprehension of DaF teaching degree students at Turkish universities. The results also show that by categorising the C-test gaps at the word, sentence and text levels, it is possible to make statements about students' reading skills and reading strategies.

References

- Arras, Ulrike/Eckes, Thomas/Grotjahn, Rüdiger (2002): C-Tests im Rahmen des "Test Deutsch als Fremdsprache" (TestDaF): Erste Forschungsergebnisse. In: Grotjahn, Rüdiger (ed.): *Der C-Test: Theoretische Grundlagen und praktische Anwendungen*. Vol. 4. (= Fremdsprachen in Lehre und Forschung 32). Bochum: AKS, pp. 175–209.
- Baur, Rupprecht S./Goggin, Melanie/Wrede-Jackes, Jennifer (2013): *Der C-Test: Einsatzmöglichkeiten im Bereich DaZ*. Duisburg: Universität Duisburg-Essen/pro-DaZ. www.uni-due.de/imperia/md/content/prodaz/c_test_einsatzmoeglichkeiten_daz.pdf (last access: 10.11.2020).
- Eckes, Thomas/Grotjahn, Rüdiger (2006): A closer look at the construct validity of C-tests. In: *Language Testing* 23, 3. pp. 290–325.
- Heppinar, Gülay (2022): Lesekompetenz von DaF-Lehramtsstudent/-innen im Deutschen – eine Bestandsaufnahme anhand von C-Tests. In: *Deutsche Sprache* 50, pp. 150–172.
- Gehring, Uwe W./Weins, Cornelia (2009): *Grundkurs Statistik für Politologen und Soziologen*. 5., revised ed. Wiesbaden: VS.
- Lenhard, Wolfgang (2013): *Leseverständnis und Lesekompetenz. Grundlagen – Diagnostik – Förderung*. Stuttgart: Kohlhammer.
- Mashkovskaya, Anna (2014): *Der C-Test als Lesetest bei Muttersprachlern*. Diss. Duisburg: Universität Duisburg-Essen. https://duepublico2.uni-due.de/servlets/MCRFileNodeServlet/duepublico_derivate_00034531/Dissertation_2014_01_06.pdf (last access: 27.12.2020).
- Reitbauer, Margit (2000): *Effektiver lesen mit Superstrukturen: eine empirische Untersuchung anhand der Fachtextsorte Abstract*. (= Arbeiten aus Anglistik und Amerikanistik 17). Tübingen: Narr.
- Richter, Tobias/Christmann, Ursula (2002): Lesekompetenz: Prozessebenen und interindividuelle Unterschiede. In: Groeben, Norbert/Hurrelmann, Bettina (eds.): *Lesekompetenz: Bedingungen, Dimensionen, Funktionen*. Weinheim/München: Juventa, pp. 25–58.
- Rosebrock, Cornelia/Nix, Daniel (2012): *Grundlagen der Lesedidaktik und der systematischen schulischen Leseförderung*. 5., unchanged ed. Baltmannsweiler: Schneider Hohengehren.

- Scholten-Akoun, Dirk/Baur, Rupprecht S. (2012): Der C-Test als ein Instrument zur Messung der Schriftsprachkompetenzen von Lehramtsstudierenden (auch) mit Migrationshintergrund – eine Studie. In: Ahrenholz, Bernt/Knapp, Werner (eds.): Sprachstand erheben – Spracherwerb erforschen. Beiträge aus dem 6. Workshop “Kinder und Jugendliche mit Migrationshintergrund”. Stuttgart: Klett Fillibach, pp. 307–330.
- van Dijk, Teun A./Kintsch, Walter (1983): Strategies of discourse comprehension. New York: Academic Press.
- Zimmermann, Kerstin (2019): Keine Zeit für den C-Test? Eine empirische Untersuchung zum Einfluss einer Geschwindigkeitskomponente auf das Konstrukt des C-Tests. Berlin: Universitätsverlag der TU Berlin.