

# Linking study – an empirical comparison of Alpha Levels and the proficiency levels of the Common European Framework of Reference for Languages

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## Abstract

This article presents the concept and the main results of the Linking Study. The Linking Study<sup>1</sup> was conducted from 2012 to 2015 at the University of Hamburg and funded by the *Bundesministerium für Bildung und Forschung* ‘Federal Ministry of Education and Research’. It aims to provide an empirical comparison of the German Alpha Levels with the proficiency levels of the Common European Framework of Reference for Languages (CEFR) (*Gemeinsamen Europäischen Referenzrahmens für Sprachen (GER)*). The question of how the Alpha Levels compare to the CEFR proficiency levels had already been raised during the design phase of the leo. – Level One Study, which is based on the Alpha Levels. This is relevant to how the Alpha Levels are compared and communicated within Europe. In addition, it represents an important contribution to the discussion regarding the suitable minimum level of literacy and adult basic education. This article contains a theoretical introduction to competence models with a hierarchy of levels and the international controversy surrounding the minimum level of literacy. In addition, it discusses the methodology and core findings of the Linking Study. It concludes by summing up the practical consequences and implications for education policy.

## 1 Introduction

According to the leo. – Level One Study (Grotlüschen/Riekmann 2011) functional illiteracy affects 14.5 per cent of working-age population (18 - 64 years of age) in Germany. This figure translates to 7.5 million functionally illiterate people. Conducting further literacy research is therefore even more imperative. In particular, it is necessary to examine how results can be compared on an international-scale and to analyse the underlying theoretical assumptions. During the design phase of the leo. – Level One Study (referred to below as the leo. Study), political and academic stakeholders repeatedly asked how the Alpha Levels compare to other competency models. It was important to compare the Alpha Levels not just to the German *Nationales Bildungspanel* ‘National Educational Panel Study’ (NEPS) and the *Deutscher Qualifikationsrahmen* ‘German Qualifications Framework’ (DQR), but above all to compare the Alpha Levels with the Common European Framework of Reference for Languages (CEFR) proficiency levels. This is relevant to how the Alpha Levels are compared and communicated within Europe, so that all EU countries can understand the Alpha Levels that underpin the leo. Study and interpret them for their own purposes. In addition, it makes an important contribution to the discussion regarding the suitable minimum level of literacy and adult basic education. To date no consensus has been reached regarding what is considered a suitable minimum level of literacy/adult basic education and what is worth funding as part of a national strategy for example. Reading and writing skills are currently assessed using Alpha Levels. The aim is to reach the 7.5 million adults who, according to the leo. Study, are functionally illiterate. This is why education policy focuses on Alpha Levels 1-3. As literacy

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<sup>1</sup> The Linking Study is funded by the *Bundesministerium für Bildung und Forschung* ‘Federal Ministry of Education and Research’ under the funding code W136702. Sole responsibility for content lies with the author of the publication.

promotion expands to more comprehensive adult basic education, the question of a suitable minimum level of literacy is important. However, this does not only apply to reading and writing, but also to other fundamental skills, such as a basic command of German and a first foreign language (see Grotlüschen et al. 2014, p. 58).

The Linking Study provides empirical data concerning the comparison of Alpha Levels and CEFR proficiency levels. Both the Alpha Levels and the CEFR represent empirically tested competence models. These models also determine the suitable minimum level of reading and writing competence and command of German. This article presents the concept and the main results of the Linking Study. The article begins with a theoretical introduction to hierarchical graduated literacy models and the international controversy surrounding a suitable minimum level of literacy. It also contains an introduction to the Linking Study's methodology, followed by a presentation of its core findings. It concludes by summing up the practical consequences and implications for education policy.

## **2. A hierarchical construction of literacy**

The international adult literacy competence studies of the 1990s brought about a change in attitude to literacy. Literacy had previously been seen as a dichotomous construct – people were considered either (functionally) literate or (functionally) illiterate (see UNESCO 2007, p. 529). However, literacy came to be viewed as a hierarchically increasing continuum that can be divided into different levels that are based on one another. The *International Adult Literacy Survey* (IALS) is an early example of this. It was conducted between 1994 and 1998 in conjunction with the OECD and Statistics Canada in more than 20 countries. It defined literacy as “the use of printed information and written information to cope in society, to achieve one’s goals, and to develop one’s knowledge and potential.” (OECD 1995, p. 16). Literacy was defined in five levels for the separate sub categories of prose literacy, document literacy and quantitative literacy. This also included higher literacy skills. Compared to earlier dichotomous definitions, this approach allowed far greater differentiation into different levels of literacy (see Grotlüschen 2011, p. 17, 19). The German Alpha Levels and CEFR proficiency levels are also based on competence models with a hierarchy of levels, which can be used to illustrate literacy skills in the population.

Competence models with a hierarchy of levels are criticised in particular by the socioculturally-driven New Literacy Studies. New Literacy Studies understand literacy as a social practice embedded in values, attitudes and bodies of knowledge within the sociocultural context. They distance themselves in particular from traditional approaches that reduce literacy unilaterally to a cognitive competence model and thereby from the position that literacy can be universally and culturally understood by these approaches (see Barton 1994; Hamilton/Barton 2000). New Literacy Studies theorists argue that there is no *one single* form of literacy, but a plurality of literacies, that are determined by their respective sociocultural context (see Street 1992). Against this background, literacy models with a hierarchy of levels cannot avoid appearing incomplete and limited, as they select certain literacies and simultaneously neglect others (see Hamilton/Barton 2000, p. 380). Brian Street, Mary Hamilton and David Barton in particular, examine the relationship between literacy and social power structures in their work. Literacy as a social practice has deep links to social interests. That is why besides cognitive skills, social and historical aspects also have a bearing on what is visible and considered important as literacy (see Street 1992; Barton/Hamilton 2000, p. 8). In particular, powerful social institutions, such as the education system or the state, establish dominant views of literacy and marginalise other types of literacy in the process. In his hierarchical model of society, Bourdieu also refers to the connection between literacy and social power. He describes the different interests of social groups that demarcate themselves using language and literacy from others, in order to secure their own privileges (see Bourdieu

1984). Therefore, promoting particular “legitimate” forms of literacy reflects the existing social hierarchy (see Grotlüschen 2011, p. 29ff.).

When applying competence models with a hierarchy of levels, it is important that all normative assumptions within the model are based on particular interests and decisions. The issues of which competencies and contents are to be included in a competence model, in which hierarchy and what is considered a suitable minimum level of literacy are therefore not automatic. Instead, they are a result of social negotiation and interpretation processes. And as they are social constructs, they can also be altered. However, this requires revealing and questioning the underlying interests and power structures.

### **3. Controversy surrounding a suitable minimum level of adult basic education**

The question what should be considered suitable minimum levels of reading and writing skills is linked in particular to the basic education concept. Even though there have, as of yet, been only a few attempts to produce a generally accepted concept of basic education and “no uniform understanding of basic education exists” (Tröster 2000, p. 17), as a rule the concept refers to the “minimal requirements for knowledge, competencies and personal and social skills required for people to navigate their way and participate in society” (Döbert 1999). In addition to the question of which issues, beyond reading and writing, should be assigned to basic education and whether they can be arranged in a hierarchy, Anke Grotlüschen in particular, stresses the controversy surrounding a suitable minimum level (see Grotlüschen et al. 2014, pp. 54ff.). In an international context, questions of a suitable minimum level of adult literacy are answered by referring to Level One. This is based on the International Adult Literacy Survey (IALS) survey and its underlying competence model. In Germany however, the discussion regarding a minimum level of literacy is based mainly on the Leo Study and the Common European Framework of Reference (CEFR). This shows how defining a suitable minimum level is also always subject to political-normative interests.

#### **3.1 IALS and Level One**

The aim of the IALS was to provide a profile and compare the basic literacy skills of adults on an international scale. Using a competence model with five broad literacy levels, the IALS provides a differentiated insight into how literacy skills are spread over various countries. The results show that a figure varying between the countries of 25 to 75 per cent of the working-age population has insufficient literacy skills and is therefore considered a risk group (see OECD/Statistics Canada 2000, p. xiii). The IALS Level 3 is used as the reference criterion for this. While Level 1 and Level 2 stand for (too) low literacy, Level 3 is seen by the OECD and Statistics Canada as a suitable minimum level.

“Level 3 is considered a suitable minimum for coping with the demands of everyday life and work in a complex, advanced society. It denotes roughly the skill level required for successful secondary school completion and college entry. Like higher levels, it requires the ability to integrate several sources of information and solve more complex problems”. (OECD/Statistics Canada 2000, p. xi)

The percentage of the population with literacy skills below this minimum Level 3 is considered a risk group and became the focus of public attention. However, subsequent discussion of the IALS in some countries shows that Level 3, the IALS official minimum level, is not recognised and implemented everywhere. Reports published by established literacy researchers from various countries for the “Fall Institute 2011” seminar organised by the Centre for Literacy in Montreal, Canada, revealed the suitable minimum level was applied

differently. As a result, international comparison of the results is more difficult. Certain countries, including Norway and the United Kingdom, chose to lower the minimum level to IALS Level 2 and therefore focus on the section of the population with literacy skills at IALS Level One.

In *Norway*, the minimum level was lowered to IALS Level 2 due to the relatively large number of people with literacy skills lower than Level 3 in IALS and also in the follow-up study – the Adult Literacy and Lifeskills (ALL) Survey. According to Gabrielsen, it proved very difficult to gain acceptance for both Level 1 and Level 2 to be regarded as indicators for risk groups, in accordance with OECD guidelines (see Gabrielsen 2011, p. 3). As a result, people with Level 1 skills in at least one of the three literacy domains, were defined as the revised risk group. Consequently, the amount of people with low literacy dropped from 33 per cent to 13 per cent (IALS) and from 40 per cent to 15 per cent (ALL) – figures that are much easier to communicate publicly and particularly when it comes to education policy (loc. cit., p. 4).

In the *United Kingdom*, the minimum level was also lowered to IALS Level 2. The risk group was subsequently defined as the percentage of the population with Level 1 skills in all three literacy domains according to IALS (approx. 22 % - 23 %), which is an even narrower definition than in Norway (see Brooks 2011, p. 2). This decision also had consequences for the Skills for Life strategy, initiated in 2001. For standardisation purposes, the national curricula for literacy and numeracy were attuned to the boundaries of the IALS levels. As a result, the British level boundaries were increased, so that they exactly matched the boundaries of the IALS levels (loc. cit., p. 3).

IALS Level One is the lowest competence level within the five levels of literacy in the IALS competence model. People with Level One skills are, for example, not able to understand direct information from packaging, such the correct doses of medicine for a child (see OECD/Statistics Canada 2000, p. xiii). If Level One is used as the reference for insufficient literacy skills, then in 14 out of 20 countries at least 15 per cent of the population are considered a risk group (see OECD/Statistics Canada 2000, p. xiii).

The IALS reports on various countries show that the question of a minimum level of literacy is answered very differently in each of the countries. The reasons given are often politically motivated ones, which in turn are related to financial issues (see Euringer/Heinemann 2014a). It is also particularly interesting that the 2013 published results of the Programme for the International Assessment of Adult Competencies (PIAAC) does not specify a minimum level (see Sticht 2013).

### **3.2 leo. Study and Alpha Levels**

Unlike other countries, the results of the IALS were not followed by an immediate reaction in terms of educational policy in Germany. Germany took part in the first round of the IALS. However, the results – 14.4 per cent of the population at IALS Level 1 in the prose literacy domain (see OECD/Statistics Canada 2000, p. 136) – were not an issue addressed in terms of educational policy or in the public arena. It probably took the “PISA shock” to create a strong public interest in the basic skills of adults (see Preisser 2004, p. 25; Grotlüschen/Linde 2007, p. 51).

The leo. Study (Grotlüschen/Riekman 2011) commissioned by the *Bundesministerium für Bildung und Forschung* ‘Federal Ministry of Education and Research proved an important milestone in 2011. It aimed to provide reliable data about the extent of functional illiteracy in Germany. A previous project, *lea.-Literalitätsentwicklung von Arbeitskräften* (lea.-Development of literacy in working people), paved the way for the leo. Study. Alpha Levels were developed during lea. and then developed and empirically tested during leo. The Alpha Levels are a competence model subdivided into six levels based on 78 ‘can do’ descriptors referring to the IALS Level One (see Heinemann 2011, p. 90f.). The lower three competence

levels in particular – Alpha Level 1-3 – have been the focus of considerable public attention. They represent functional illiteracy and are therefore reference criteria for insufficient reading and writing skills. People at Alpha Level 3 can read and write single sentences, but are unable to read and write even basic texts. This means that they lack the requirements to participate in certain social processes (see Grotlüschen/Riekmann 2011, p. 2).

The *Nationale Strategie für Alphabetisierung und Grundbildung Erwachsener* ‘National Strategy for Adult Literacy and Basic Education’ (BMBF/KMK 2012) initiated by the Federal and regional authorities in Germany in 2011 also talks of a suitable minimum level of literacy. The national strategy aims to reduce the number of functionally illiterate adults and help to enable “all adults to acquire a minimum level of reading and writing skills (literacy) and sufficient basic education” (BMBF/KMK 2012, p. 1). Regarding reading and writing, the focus is primarily on Alpha Levels 1-3. The aim is to support the 7.5 million functionally illiterate adults, ergo Alpha Levels 1-3. This not only applies to reading and writing, but also to other areas of basic education, such as basic command of German, a first foreign language and other competencies in the basic dimensions of cultural and social participation (loc. cit., p. 1).

However, it has not yet been finally resolved what is considered a suitable minimum level of reading and writing skills and what other aspects of basic education might apply. Only the German Immigration Act specifies a minimum level for command of the German language. This is based on the Common European Framework of Reference for Languages (CEFR).

### **3.3 Common European Framework of Reference for Languages (CEFR)**

The Common European Framework of Reference for Languages (CEFR) is one of the most influential competence models for learning languages. Not only is it widely accepted across Europe, it has also significantly influenced the organisation of language courses offered by training providers, especially with regard to planning courses, contents and examinations, for example for standard foreign language courses, such as English or French. In Germany, integration courses targeted at immigrants with insufficient knowledge of German are also structured according to the CEFR (see Euringer/Heinemann 2014b, p. 195f.). The CEFR is based on six hierarchical competence levels (A1, A2, B1, B2, C1, C2), which differentiate command of German from basic use to spontaneous, fluent use. Language competencies are divided into comprehension (listening), reading and writing competence and oral proficiency. Reference levels A1-A2 describe elementary language use, B1-B2 independent language use and C1-C2 proficient language use (see Council of Europe 2001, p. 24).

Regarding the determination of a suitable minimum level of literacy, the German Immigration Act uses CEFR Level B1 as the prerequisite for German citizenship according to the *Deutschtest für Zuwanderer* ‘German Test for Immigrants’. This test has been developed by telc GmbH and the Goethe-Institut, commissioned by the Federal Ministry of the Interior and is tailored to the communicative needs of migrants. CEFR Level B1 is based on the following competencies:

“Can understand the main points of clear standard input on familiar matters regularly encountered at work, school, during leisure periods, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics, which are familiar, or of personal interest. Can describe experiences and events, dreams, hopes and ambitions and briefly give reasons and explanations for opinions and plans.” (Council of Europe 2001, p. 24).

However, how the CEFR reference levels, Alpha Levels and IALS competence model compare to one another remains open. As do their respective minimum levels. The leo. Study provides only initial indications to suggest equivalence between Alpha Level 4, CEFR B1 and

IALS Level One (see Grotlüschen/Riekmann/Buddeberg 2012, p. 64f.). The Linking Study contains a comprehensive empirical comparison of the Alpha Levels and the CEFR.

## **4. Linking study: Design**

The Linking Study aims to link the Alpha Levels to the CEFR proficiency levels. As such, it focuses on how the levels of both competence models can be placed in relationship to one another and how the minimum level recognised in educational policy as CEFR Level B1 relates to the Alpha Levels. As both the Alpha Levels and CEFR proficiency levels represent hierarchical competence models, which can be empirically tested for increasing difficulties using Item Response Theory (IRT), it is appropriate to use an empirical linking method based on IRT scaling. The following section looks at the empirical procedure of IRT linking and the survey and evaluation of the data.

### **4.1 Linking based on Item Response Theory**

IRT shows probabilistic test theory, which can be used to develop and analyse tests. The basic approach of IRT is based on the probability of a correct response to a test item. The Rasch model, the most straightforward IRT model, assumes that the probability of a specified response depends on two variables; namely a person's ability and the difficulty of the test item (see Embretson/Reise 2000, p. 45f.). Both parameters are shown on a joint scale, so that the following comments apply: If a person's ability exceeds the difficulty of the item, then there is a strong possibility that the person will respond correctly. If the difficulty of the item exceeds the person's ability, there is a strong possibility that the person will not respond correctly. The more difficult an item is, the more difficult and the less likely it is that the person with a particular level of competence will respond correctly to this item (see Embretson/Reise 2000, p. 49). Based on these assumptions, the Rasch model is suitable not only for estimating a person's ability, but also to determine the difficulty of a test item. Both parameters are assessed together in iterative approaches and placed on the same scale. When linking two competence models using IRT this provides a distinct advantage. Estimating and comparing the difficulties of items from different competence models are conducted on the same scale. This makes it possible to assess item difficulties in both competence models in comparison to one another.

There are different methods of linking competence models using IRT. Kang and Petersen (2009, p. 4f.) compare three particular linking methods using IRT: "concurrent calibration", "separate calibration with linking" and "fixed item parameter calibration (FIPC)". In "concurrent calibration" the item parameters of two competence models are estimated simultaneously in one single calibration step and placed on the same scale. The second method "separate calibration with linking" estimates the item parameters of both models in separate calibration procedures. In a second stage using linear transformation, the difficult items of one model are placed on the scale of the other model. The third linking method "fixed item parameter calibration (FIPC)" also estimates the item parameters separately. In order to place both competence models on the same scale, instead of linear transformation, the items of one model are fixed as anchor items and all other items along the resulting reference scale are estimated.

To link the Alpha Levels with the CEFR proficiency levels, the third method "fixed item parameter calibration" is most suitable as it makes it possible to fix all items on the Alpha Level scale. In addition, this can be performed conveniently using ConQuest generalized item-response-modelling software. All the test items from both competence models to be linked are first estimated in an approach on the same scale (*scaling*). In order to allow an assertion about which Alpha Level reading and writing competences are required in order to respond successfully to Level B1 tasks and to the CEFR, all difficult items are transferred

onto the standardised scale of the German leo. Study (*standardising*). During this process, all items relating to the Alpha Levels are fixed as anchor items at their difficulty level known from the leo. Study and all other items are estimated again (see Figure 1). This establishes a relationship between all test items according to their level of difficulty, but now on the joint leo. scale.

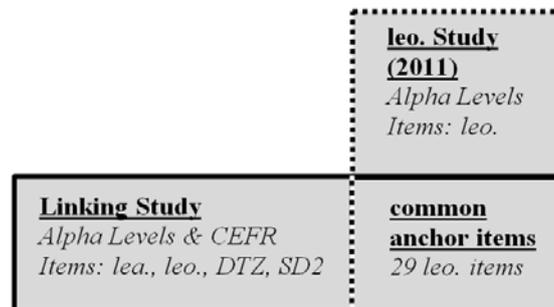


Figure 1: Design of linking Alpha Levels to the CEFR using fixed anchor items

#### 4.2 Collecting and evaluating the data

In order to link the Alpha Levels with the CEFR levels using the fixed item parameter calibration (FIPC) method, establishing test data containing a representative selection of items from both competence models is a must. The test items have to be completed by the same people in order to place these on a joint scale and to enable evaluation of easier and more difficult items in relation to one another. For this purpose, a test booklet with 13 reading and writing tasks was prepared which contained 85 items from the following competence models/instruments:

- 58 items relating to Alpha Levels (Alpha Level 1 to >4); including 29 items from the leo. Study and 29 items from the lea. diagnosis
- 27 items relating to CEFR (A1-B1); including 22 items from the *Deutschtest für Zuwanderer Zuwanderer* (DTZ) ‘German Test for Immigrants’ and 5 items from Start Deutsch 2

The level of difficulty of the items is distributed along the levels of both competence models as follows:

Table 1: Number of items per competence stage and model

	Alpha Levels					CEFR Levels				
Level	$\alpha 1$	$\alpha 2$	$\alpha 3$	$\alpha 4$	$>\alpha 4$	A1-	A2	A2/B1	B1	n/s <sup>2</sup>
Number Items	5	13	16	17	7	4	10	2	5	6

The majority of the items are scaled dichotomously (1/0) according to the Rasch model. Only four items from the DTZ show polytomous scaling (0-5) according to the Partial Credit Model. However, by using the item thresholds, they can be used equivalent to the item difficulties of the other items for linking (see Embretson/Reise 2000, p. 96, 105f.; Moosbrugger 2012, p. 265f.).

<sup>2</sup> There are a further six items, which have not yet been tested. Therefore no empirical level of difficulty is available. Theoretically, they should be placed at level A2/B1.

The test data was *captured* in Hamburg from July to September 2012 and February to March 2013. A total of 441 people took part in the tests. Under the banner of “Test the test”, participants completed the test booklets in a face-to-face setting with an interviewer in approximately one hour. The sample of test participants is not representative. It contains a disproportionate number of people with low qualifications and insecure jobs. A large proportion of the people are also taking part in literacy or integration courses in Hamburg. Otherwise they were employed by organisations in Hamburg in what are known in Germany as “one-euro jobs”, i.e. they are involved in a workfare programme where they receive a form of unemployment benefit and a small extra amount on top as an incentive. The sample also contains people who come from migrant families or are migrants themselves as long as they speak sufficiently good German to understand the exercises in the test. When compiling the sample group, the focus was on Level One, so that the very easy test items would still present difficulties. If an item is or is not completed successfully by everyone in the sample, it is virtually impossible to calculate a consistent level of difficulty, i.e. the item cannot be used for linking purposes.

The linking was performed using ConQuest analysis software after the test data had been prepared in SPSS. Establishing quality statistical values is important for the quality of the linking. The Rasch homogeneity of the items was tested using mean squares (MNSQ) that were as close to 1 as possible. All items with MNSQs over 1.33 were removed from the linking process (see Grotlüschen/Riekmann/Buddeberg 2012, p. 63). In addition, only items with a certain level of stability were used as fixed anchor items. For this purpose, a graphic model test was performed for the 29 leo. items, where the item difficulties from the common scale were correlated with the item difficulties to be fixed from the leo. study. Items that departed too greatly from the regression lines were not fixed during the linking process. Instead they were estimated along with the other items. Nine of the overall total of 85 items were removed due to their different MNSQs, presumably due to their extreme difficulty (see Kelava/Moosbrugger 2012, p. 83). Some 21 of the 29 leo. items were fixed as anchor items.

## **5. The core findings**

The core findings from linking the Alpha Levels and the CEFR levels can be summarised as two main aspects. They show that it is possible to compare first and second language competence models at a satisfactory statistical level. In addition, they make it clear how the Alpha Levels compare to the CEFR proficiency levels – in particular at Level B1. These core findings are both analysed in more detail here.

### *Comparability of Alpha Levels and the CEFR*

In order to empirically link two competence models using IRT and place them on a joint scale, both competence models must measure the same construct (see Moosbrugger 2012, p. 229). This raises the question to what extent this applies to the Alpha Levels and the CEFR – as the Alpha Levels measure reading and writing competences of adults whose first or second language is German. The CEFR on the other hand explicitly applies to German as a foreign language or second language, although reading and writing play are a part of this. It is important to stress at this juncture that *no* equivalence of *learning processes* is assumed. Differences in the acquisition of reading and writing competence for people whose first language is German and people with German as a second language/ foreign language are widely recognised. However, they do not have an impact on linking the competence models. Both competence models contain items that place particular demands on the reading and writing competencies of adults. The assumption that these competencies apply to everyday use in written language should therefore apply similarly to both groups. This is regardless of whether the groups acquired these competencies with their first language, their second

language or a foreign language. In fact, equivalence applies more to the *reading and writing requirements* of both competence models.

The statistical parameters regarding the quality of linking for both competence models allow us to conclude that there is satisfactory linking of both competence models. From a total of 85 items, 76 items – 55 Alpha-Level items and 21 CEFR items – were placed on the joint scale. A graphic model test to check item homogeneity confirmed the assumption with a high correlation of  $R^2=0.9$ .

### Comparing the Alpha Levels to the CEFR levels

This comparison of both competence models reveals how the two competence models relate to one another. Figure 2 shows the relative positioning of the items of both competence models on the joint scale. The hierarchically structured layers represent the joint scale, which runs from Alpha Level 1 to Alpha Level >4. The box plots within these layers depict the difficulty of the CEFR items and show the position of the CEFR levels in relation to the Alpha Levels – separately for reading and writing competency.

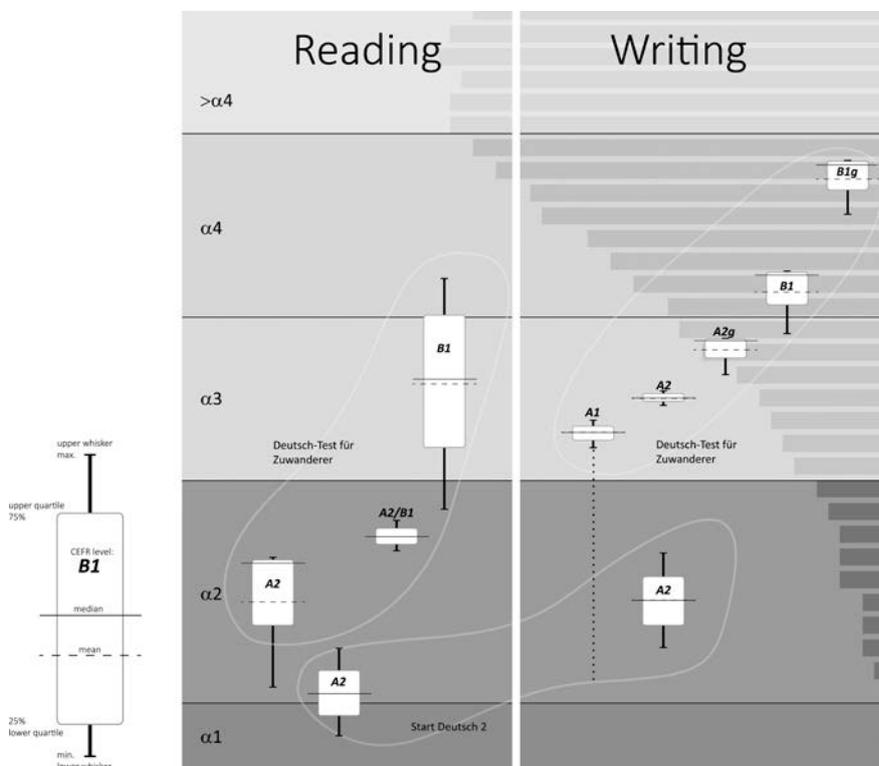


Figure 2: How the Alpha Levels relate to the CEFR levels

Regarding how the two competence models relate to one another, it is evident that the CEFR reading items are approximately half an Alpha Level easier than the CEFR writing items: CEFR A2 reading has more or less the same level of difficulty as a lower to mid Alpha Level 2, while CEFR A2 writing corresponds to approximately mid Alpha Level 2 up to mid Alpha Level 3. Similarly, CEFR B1 reading corresponds more or less to Alpha Level 3, while CEFR B1 writing corresponds to up to Alpha Level 4.

To clarify,

Table 2 contrasts the “can do” descriptors and/or competencies for writing at Alpha Level 4 and the CEFR B1 proficiency level with one another.

Table 2: Writing at Alpha Level 4 and CEFR Level B1

Writing Alpha Level 4	Writing CEFR B1
<p><i>“Can do” descriptors</i></p> <ul style="list-style-type: none"> <li>• Can use final-obstruent devoicing with adjectives</li> <li>• Can write the same consecutive letters in compound words</li> <li>• Can use differences in lengths of vowels or consonants I</li> <li>• Can write the prefix “ver” correctly</li> <li>• Can use s-sounds correctly</li> <li>• Can use abbreviations correctly</li> <li>• Can capitalise definite abstract nouns</li> <li>• Can recognise and write interfixes</li> <li>• Can write compound words together/ separately</li> <li>• Can use commas in lists</li> <li>• Can write sentences at least phonetically</li> </ul> <p><i>Task characteristics</i></p> <p>Written element: words, sentences            Symbol length: number of letters up to 19; five-syllable words max.;            Sentence length: 11 words max. (task context: text length 13 sentences max.)            Phoneme stage 4 (Reuter-Liehr): consonant cluster with stop consonants: ck, tz            Phoneme stage 5 (Reuter-Liehr): Elongation of vowels ie, ah, eh, üh, ih            Phoneme stage 6 (Reuter-Liehr): ß (ss) at the start of a syllable            Use: up to CEFR B1: Words with a high degree of abstraction            Strategy: alphabetic, orthographic and morphemic            (see Grotlüschen et al. 2010, pp. 38).</p>	<p><i>Criteria for self-assessment</i></p> <p>I can write simple connected text on topics, which are familiar or of personal interest. I can write personal letters describing experiences and impressions.            (Council of Europe 2001, p. 26)</p> <p><i>Assessment criteria DTZ</i></p> <p>I Appropriateness in terms of content/ability to complete tasks            All four points completed, cooperation from reader required. Or: Three points appropriately completed.</p> <p>II Oral communication            Can use and react to a wide range of language functions. He/she uses the most common phrases (e.g. polite phrases). Is able to connect a number of short and simple elements to form a linear, cohesive statement.</p> <p>III Correctness            Generally has a good command of grammatical structures, despite significant interference from the mother tongue. Mistakes do occur, but it is clear what the speaker wants to communicate. Spelling, punctuation and style are accurate enough for meaning to be understood.</p> <p>IV Vocabulary            Has a sufficiently broad vocabulary to be able to express opinions about most everyday issues with the help of some paraphrasing. Shows a good command of basic vocabulary, but still makes elementary mistakes when talking about more complex topics.            (see telc 2009, p. 32f.)</p>

The results clearly reflect the hierarchical construction of both competence models. Both the items from the Alpha Levels and the CEFR items show increasing parameters of difficulty as the level or reference level rises. There are no considerable breaks or overlaps in the reference levels. Only the A2 items from the “Start Deutsch 2” (which corresponds to CEFR A2) have a different level of difficulty to the items from the DTZ, which we may conclude is due to scaling problems. While the A2 items from Start Deutsch 2 involve writing single words in an answer sheet, A1 and A2 items in the DTZ are tested by a complex writing task. It requires reading a text and then writing a letter to communicate particular information. During data capture, due to its complex nature, this DTZ task was placed at the end of the test booklet. Nine per cent of participants with predominantly low reading and writing competencies did not complete it – either they did not feel confident or they ran out of time. Compared to the items from Start Deutsch 2, the A1 and A2 items from the DTZ show a rather high empirical level of difficulty. This is presumably explained by the fact that only participants with a

reading and writing competence of at least Alpha Level 2-3 were able to solve the letter writing task at level A1. However, it should be assumed that sufficient preparation for the test tasks, as takes place in integration courses, would make the letter writing exercise at level A1 and A2 much easier to complete correctly.

It should be noted that the findings of this Linking Study do not permit any comparison of personal levels of competence or capabilities. They only provide information about the comparison of the difficulty of the tasks and requirements. This is due to the different evaluation procedures used to calculate the individual ability values: While the Alpha Levels assess people on the basis of the IRT probabilistic test theory, the CEFR competence level in Start Deutsch 2 and the DTZ is established using a point score, according to classic test theory. Stating that writing competence at Alpha Level 4 corresponds to CEFR competence level B1, would therefore not be correct. Instead, we can say that the difficulty of items at Alpha Level 4 is comparable to the difficulty of items at CEFR proficiency level B1, when both models are placed on a joint scale.

## **6. Conclusion and outlook**

The question of how the Alpha Levels compare to the CEFR proficiency levels is important to compare and communicate the Alpha Levels in Europe better. Moreover, it has significant implications for education policy. At present, the suitable minimum level for funding and encouraging literacy and adult basic education, for example within a national strategy for literacy promotion and adult basic education, is set in Germany at Alpha Levels 1-3 for reading and writing. At the same time, the German Immigration Act calls for a command of German at a minimum level of CEFR B1 as a prerequisite for German citizenship. The findings of this Linking Study show that, at least with regard to writing, Alpha Level 4 is comparable in difficulty to CEFR proficiency level B1. When it comes to reading, Alpha Level 4 is above CEFR B1. If CEFR level B1 were set as the suitable minimum as part of a national strategy for literacy promotion and adult basic education (as is the case in the German Immigration Act), then this would mean that as regards writing Alpha Level 4 would also be eligible for funding.

In particular, the results of the PIAAC survey in 2013 suggest the question of a suitable minimum level again. Because unlike the preceding IALS study, PIAAC involves no discussion of a minimum level. According to Sticht (2013), it cannot be explicitly deduced from the OECD's competence model. Simultaneously however, literacy is increasingly being more narrowly defined according to workplace requirements – which is the case in Germany too. Instead of defining a minimum level, the terms “over-skilled” and “under-skilled” are used – workplace requirements now provide the reference point for a sufficient level of literacy (OECD 2013, p. 170). The issue here is which groups in society have the right to define adult basic education? In future, should determining an appropriate level of literacy be driven by the demands of the labour market and the economy as the minimum learning requirements that the state imposes on individuals?

The earlier discussion in this article into New Literacy Studies and Bourdieu make the connection between hierarchical literacy models and social power relationships especially clear. It is accepted that literacy can be a hierarchical construct, but that these types of constructs must always be questioned as regards underlying interests and power structures. Both the Alpha Levels and the CEFR proficiency levels imply social negotiations regarding what is considered as a suitable level of literacy and what is not. In this respect, establishing minimum levels – Alpha Level 4 and CEFR B1 – should be understood as a socially negotiated, normative decision that could always have been made in a different manner. For example, by defining literacy according to respective workplace requirements, as is currently the case in PIAAC. Only when such normative decisions are transparent and open to discussion will it ultimately be possible to question and change these if necessary. The

purpose of this Linking Study is to trigger further discussions and negotiation processes regarding a suitable minimum level of literacy and adult basic education.

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