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Messung interkultureller Kompetenz – Entwicklung einer deutschsprachigen Kurzskala

Measuring intercultural competence – development of a German short scale

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Abstract (English)

As a consequence of globalization and internationalization, intercultural competence is becoming increasingly important in many parts of everyday life (e.g., Thomas 2009). In order to provide a comprehensive but short and reliable scale measuring intercultural competences in German language, two studies were conducted. In the first study on 125 individuals, factor analyses resulted in a four-factor structure with intercultural knowledge (cognitive), intercultural behavioural flexibility (behavioural) as well as respect for cultural differences and intercultural openness (affective/attitudinal) as important dimensions. In the second study on 240 individuals, cultural self-reflexivity was included as an additional yet often neglected aspect of intercultural competence. Overall, results of the second study replicated the findings of the first study. Taken together, the short scale presented in these studies may be a first step towards a new time-saving instrument of measuring intercultural competence in different areas.

Keywords: measurement of intercultural competence, cultural self-reflexivity, intercultural self-disclosure

Abstract (Deutsch)

Als Konsequenz der Globalisierung und Internationalisierung gewinnt interkulturelle Kompetenz im alltäglichen Leben zunehmend an Bedeutung (z.B. Thomas 2009). Mit dem Ziel, eine umfassende sowie zugleich kurze und zuverlässige Skala zur Messung interkultureller Kompetenz in deutscher Sprache zu entwickeln, wurden zwei Studien durchgeführt. In der ersten Studie mit 125 Teilnehmenden ergaben Faktorenanalysen eine Vier-Faktoren Struktur mit den Faktoren interkulturelles Wissen (kognitiv), interkulturelle Verhaltensflexibilität (verhaltensbezogen) sowie Respekt für kulturelle Unterschiede und interkulturelle Offenheit (affektive/einstellungsbezogen). In der zweiten Studie mit 241 Teilnehmenden wurde kulturelle Selbstreflexion als zusätzlicher Aspekt von interkultureller Kompetenz miteinbezogen. Insgesamt bestätigten die Ergebnisse der zweiten Studie die Resultate der ersten Studie. Die hier vorgestellte kurze Skala zur Erfassung interkultureller Kompetenz kann einen ersten Schritt zu einem neuen und zeitsparenden Messinstrument in verschiedenen Bereichen darstellen.

Stichworte: Messung interkultureller Kompetenz, kulturelle Selbstreflexion, kulturelle Selbstöffnung

1. Introduction

As a consequence of globalization and internationalization, intercultural competence is becoming increasingly important in business (e.g., Johnson / Lenartowicz / Apud 2006, Stehr 2011), in education (e.g., universities: Schumann 2007) as well as in many other parts of everyday life (e.g., Thomas 2009). For example, the frequent implementation of diverse work teams and the integration of migrants underline the importance of intercultural competences in different work settings (Ahrends / Nowitzki 1997). Moreover, the growing number of expatriates necessitates that organizations actively foster their employees' intercultural competences (e.g., Black / Gregersen / Mendenhall 1992, Graf / Harland 2005).

Considering the educational context, intercultural competences are a topic of great importance not only in teaching, but also in research, self-administration, and university marketing (Weidemann / Straub / Nothnagel 2010). In addition, intercultural competences play an important role in teacher education and various other educational settings (Cushner / Mahon 2009). Finally, the importance of intercultural competences also increases in private life, for example, as a consequence of the rising number of intercultural relations and marriages (e.g., Crippen / Brew 2007) or as a result of a self-perception as an immigration society (e.g., Nazarkiewicz 2016).

Due to these developments, intercultural encounters are indispensable. During such encounters, intercultural competences are particularly important. Often, intercultural competence is defined as consisting of relevant attitudes (such as respect and openness), knowledge and comprehension (such as self-awareness and knowledge of specific cultures), and positive internal and external outcomes (such as adaptability, flexibility and empathy; Deardorff 2006). In addition, many authors agree

on the fact that these competences can be taught and trained (e.g., Thomas 2009). As a consequence, there are specifically designed trainings for different target groups aiming to increase intercultural sensitization and awareness to build up intercultural competences (Hiller / Vogler-Lipp 2010). Commonly, the objective of these trainings is to gain an increased awareness for cultural influences on cognitive, behavioural, and affective/attitudinal levels. At the same time, new sets of behaviour are to be learned, such as general behaviour to interact in new environments and cultures, as well as behaviour designed to interact in a specific culture (Ehnert 2004). Overall, the effectiveness of such trainings, including changes in attitudes and behaviours, has to be evaluated by adequate instruments in order to strengthen research on the evaluation of intercultural trainings (e.g., Morris / Robie 2001). Therefore, the current paper presents the development of a German short scale for measuring intercultural competences.

While existing scales often apply a large number of items and are rather time-consuming in training or educational settings, the short scale presented here aims at offering a parsimonious set of items that serves as an economic instrument applicable to various intercultural settings. At the same time, the scale addresses important aspects of intercultural competences comprehensively. Based on current findings and discussions in the literature on intercultural encounters and competences, it includes both affective/attitudinal as well as behavioural components. Moreover, the cognitive concept of cultural knowledge is included in the scale. Finally, we want to show that the integration of cultural self-reflexivity has the potential to fruitfully inspire the discussion about relevant aspects of intercultural competence.

The present paper contributes to the existing literature and practice in three important ways. First, it contributes to the clarification of intercultural compe-

tence by empirically deriving relevant sub-facets of the construct. Second, by providing an instrument that can serve as part of an evaluation tool, it redounds to research on the effectiveness of intercultural trainings. Finally, the presented German short scale of intercultural competences offers new ways for individuals and practitioners to measure intercultural competences in various settings. In the following, we first give a short overview of current discussions on intercultural competences. Afterwards, we describe the assessment of intercultural competences and present existing scales that serve as a basis for the development of the German short scale. This is followed by the empirical analyses of the survey data.

2. A definition of Intercultural Competence

As one of the first authors, the American social psychologist Gardner defined the concept of intercultural competence in 1962. He publicized the concept of “universal communicators”, describing individuals provided with special skills for intercultural communication. Those Individuals, by his definition, are characterized by integrity, special telepathic or intuitive skills, stability and extraversion (Gardner 1962). In recent times, Stehr (2011) defined the term “intercultural” as a result of an interaction with members of different cultures compared to one’s own culture, including different concepts of perception, thinking, feeling, and behaving. Broadly speaking, intercultural competence thus includes the ability to interact with members of different cultures in an effective, appropriate and successful way (Deardorff 2006). However, specific definitions of intercultural competence and its core elements differ enormously (Chiu et al. 2013). Notably, there is little consensus about important conceptual questions, namely about the antecedents, core elements or consequences associated with intercultural competence. Regarding

core elements, scholars additionally differ in whether they mainly focus on attitudes or on cognitive-behavioral effectiveness (Fritz / Möllenberg 1999). To mention some important definitions of intercultural competence, Gudykunst and Hammer (1983), for example, understand intercultural competence as positive attitudes towards foreign cultures. In contrast, Ruben’s (1976) research focuses on behavioral strategies useful when interacting with individuals from different cultures. In current times, Ang et al. (2007) built on this behavioral approach and developed the cognitive concept of cultural intelligence defined as “an individual’s capability to function and manage effectively in culturally diverse settings“ (p. 336). Following the authors’ argumentation, cultural intelligence consists of meta-cognitive cultural intelligence, cognitive cultural intelligence, motivational cultural intelligence, and behavioral cultural intelligence. In another attempt to combine the attitudinal and the behavioral perspectives, Chen and Starosta (2002) speak of intercultural awareness (cognitive), intercultural adroitness (behavioral), and intercultural sensitivity (affective) as core elements of intercultural competence. Their work is based on Bennett’s (1986) developmental model of intercultural sensitivity, which describes the development from ethnocentric to ethno-relative perspectives in intercultural encounters. In a similar vein, in his developmental model of intercultural competences, Barmeyer (2005) distinguishes between affective components of intercultural competences (such as empathy, tolerance or ethno-relativism), cognitive aspects of intercultural competences (like knowledge about different cultures or cultural value dimensions), and behavioral aspects.

Given this proliferation of intercultural competence models, Deardorff (2006) used an integrative approach for building a consensus among different scholars and for identifying core elements of intercultural competence.

Specifically, she used the DELFI method and invited several experts to share their perspectives on intercultural competence in order to find a base for mutual agreement. Despite differences in many specific aspects, the experts agreed in the definition of intercultural competence they agreed on was “the ability to communicate effectively and appropriately in intercultural situations based on one’s intercultural knowledge, skills, and attitudes” (Deardorff 2006: 247-248). Moreover, Deardorff (2006) developed a pyramid model of intercultural competence consisting of requisite attitudes (e.g., respect, openness, curiosity, and discovery), knowledge, comprehension, and skills (e.g., cultural self-awareness, knowledge of culture, culture-specific information, socio-linguistic awareness), desired internal outcomes (e.g., adaptability, flexibility, ethno-relative view, and empathy), and desired external outcomes (e.g., behaving and communicating effectively and appropriately). As a minimal agreement between different scholars, it is thus assumed that intercultural competence is composed by cognitive, affective/attitudinal, and behavioral dimensions (Deardorff 2006).

Based on these considerations, we apply a broad conceptualization of intercultural competence in the present studies. More specifically, we take cognitive, affective/attitudinal, and behavioral aspects of intercultural competence into account.

3. Measuring Intercultural Competences

As we outlined above, the measurement of intercultural competence plays an important role, especially in the context of training or teaching evaluation, personnel selection, or personnel development. In their review on instruments measuring intercultural competence, Matsumoto and Hwang (2013) present ten different instruments suitable for the assessment of intercultural competence. Other authors mention

even more different instruments (Leung / Ang / Tan 2014). However, several scholars question the assessment of intercultural competence in general (e.g., Bolten 2007). As these scholars argue, intercultural competences are characterized by the dynamic interplay of specific competences such as methodological competence, social competence, self-competence, and professional competence in an intercultural context (Bolten 2007). Following this line of thought, the measurement of intercultural competence is only suitable in a dynamic intercultural setting. For this reason, Bolten (2007) proposes dynamic methods to measure intercultural competence such as an intercultural assessment center. In a similar vein, Harrs and Liebich (2015) present an instrument measuring several aspects of intercultural competence in the context of an assessment center.

Nevertheless, we believe that in addition to dynamic assessment instruments, a short survey can serve several purposes. In reference to Matsumoto and Hwang (2013), the benefit of scales measuring intercultural competence is twofold. First, they contribute to the clarification of the construct by improving our knowledge of relevant aspects of intercultural competence. Second, such instruments help practitioners in designing effective training programs. Especially in the area of training evaluation and personnel development, a short scale is able to provide a quick overview on the competence level of the participants. For example, as Krämer (2009) points out, the application of a short survey measuring intercultural competence can serve as a self-assessment and as a sensitization of participants before starting an intercultural training. In addition, when applied for a second time after an intercultural training course, this instrument has the potential to evaluate both the self-assessment and the potential effect of the training.

Consequently, our aim in the present studies is the development of a compre-

hensive, but short scale of intercultural competence. As a starting point of our analyses, we chose well-established scales covering a broad range of central aspects of intercultural competence – namely cognitive, affective/attitudinal, and behavioral aspects.

4. Study 1

In the first study, we built on existing scales measuring intercultural competences to establish an item pool suitable for a comprehensive assessment of intercultural competences in German language. The existing scales were factor analyzed and reduced based on empirical criteria.

4.1. Methods Study 1

As a basis for the assessment of intercultural competence, the items of the following scales served as an item pool. First, the “Cultural Intelligence Scale” (CQS; Ang et al. 2007) was used, which is composed of 20 items. Second, the „Intercultural Effectiveness Scale“ (IES; Portalla / Chen 2010) consisting of 20 items was applied. Third, the „Intercultural Sensitivity Scale“ (ISS; Chen / Starosta 2000) was used in the German validated version (Fritz / Möllenberg 1999). Initially, this scale consisted of 22 items, of which we omitted the item “I believe that my culture is better than other cultures.”, because we expected response bias in terms of a floor effect. Taken together, the item pool consisted of 61 items. We chose a simple 4-point response scale ranging from strongly disagree to strongly agree (1 = *Strongly disagree*; 2 = *Disagree*; 3 = *Agree*; 4 = *Strongly agree*).

4.1.1. Participants

A German convenience sample was obtained via web link through a survey. In total, 254 persons agreed to participate, and of those, 125 (49.2%) completed the questionnaire with less than 10% missing values (cf. Hair, 2006). The

sample included 82 (65.6%) women and 43 (34.4%) men, with a mean age of 24.58 (SD=2.89). Concerning status groups, 103 (82.4%) persons were students, five (4.0%) were apprentices, and 17 (13.6%) employees. Of the participants, 41 (32.8%) had already participated in an intercultural training, whereas 83 (66.4%) did not. Around a quarter of the participants indicated to have no international experience (e.g., working or studying abroad; n=31; 24.8%), whereas international experiences of the others ranged from one to three months (n=26; 20.8%) to more than 24 months (n=11; 8.8%).

4.1.2. Analyses and results

The items were factor analyzed using the principle axes factor analysis and an oblique rotation (PROMAX). The oblique rotation was used as a consequence of correlations found between the IES and ISS scale (Chen / Starosta 2000, Portalla / Chen 2010). Using the eigenvalue criterion, initially 17 factors emerged. Applying Horn’s parallel analysis (PA; Horn 1965) by means of a SPSS-macro of O’Conner (2000) and in conjunction with a scree plot, a four-factor structure resulted. Within the four-factor structure, 24 items exhibited loadings that warranted their removal. Relevant criteria were factor loadings less than .5, cross-loadings greater than .3, or factor loadings on a main factor less than two times that of other side loadings. In addition, two items with a low communality (<.3) and five items showing insufficient item selectivity (<.3) were removed. Taken together, 31 items were removed due to statistical criteria and consequently, 30 items remained. As a result of the removals, the first factor consisted of 18 and the second factor of three items. The third factor included four and the fourth factor five items.

To mitigate the relative dominance of the first factor (Bühner 2006), in a second step, two successive principal

component analyses were conducted only with the items of the first factor. During the first analysis, six items with factor loadings less than .6 were excluded. The remaining twelve items were used as a basis for the second analysis. During the second analysis, an even stricter criterion was applied so that items with smaller factor loadings than .7 were removed. This procedure resulted in six items on the first factor with factor loadings between .71 and .79. That means a total of twelve items were excluded following statistical criteria. As a positive side effect, a more concise factor in terms of item content resulted. In particular, items with potential overlap with behavioral flexibility were no longer applied.

In a third step, a confirmatory factor analysis with all four factors was calculated. Three fit indicators showed good fit (2/df ratio=1.14; cf. Tabachnick / Fidell 2007, Arbuckle 1997; RMSEA=.058; cf. Browne / Cudeck 1992 and CFI=.917; cf. Diefendorff / Silverman / Greguras 2005, Vandenberg / Charles 2000). But, due to low factor loadings (< .5), two items were removed.

For the new model, all factor loadings were higher than .5 and all three fit indicators showed good fit (2/df ratio=1.46; CFI= .926; RMSEA= .061). The remaining 16 items were factor analyzed again and the four factors accounted for 60.4% of the variance. The first factor consisted of six items explaining 30.2% variance. The second factor with four items explained 12.4%. The third and the last factor both with three items explained 10.2% and 7.5%.

Table 1 displays item wordings, factor loadings, and coefficient alphas of the first study. Although the internal consistency of one factor (behavioral flexibility) did not meet the suggested standard of .70 (Nunnally 1978), we included it in further analysis because of the exploratory nature of the scale. Table 2 shows the descriptives and correlations of the latent variables as well as the cor-

relations between the latent variables and relevant demographic data.

4.2. Discussion Study 1: Interpretation of the factors

As Table 1 reveals, a four-factor structure resulted from our analysis. The first factor was labeled “cultural openness”. This factor includes items of all three scales, wherein the scales „Intercultural Sensitivity“ (Chen / Starosta 2000) and „Intercultural Effectiveness“ (Portalla / Chen 2010) are most dominant adding both three items to the factor. This factor evaluates the openness of a person for intercultural interaction. For example, it includes items such as “I enjoy interacting with people from other cultures” or “I find it easy to get along with people from other cultures”.

A second factor including the cognitive sub-facet of intercultural competences resulted. This factor includes items such as „I know cultural values and religious beliefs of other cultures“. This factor comprises items from the “Cultural Intelligence Scale“ (Ang et al. 2007) and assesses knowledge about other cultures. As a consequence, it was labeled “cultural knowledge”.

The third factor was labeled “respect for cultural differences” including items such as “I respect the way people from other cultures behave”. It only comprises items from the „Intercultural Sensitivity Scale“(Chen / Starosta 2000) and assesses the extent to which an individual respects thoughts and behaviors of people from a different culture.

Finally, as a fourth factor, items covering behavioral aspects of intercultural competences resulted. Therefore, the third factor was labeled “behavioral flexibility”. It includes items such as “I watch carefully when I interact with people from other cultures”. This factor is mainly composed by items of the “Cultural Intelligence Scale“(Ang et al. 2007) and of the “Intercultural Sensitivity” scale (Chen / Starosta 2000).

In contrast to existing scales, respect for cultural differences and openness resulted as two independent factors in the present study whereas other authors conceptualize them as two sub-facets of the affective dimension of intercultural competence (e.g., Chen / Starosta 2000). Deardorff (2006) concludes that respect for cultural differences and openness are a basis for other aspects of intercultural competence and are thus indispensable for the successful interaction with members from different cultures.

Taken together, the resulting factors support previous findings and cover relevant aspects of intercultural competence. In line with previous research, we found a cognitive dimension of intercultural competence (“cultural knowledge”), a behavioral dimension (“behavioral flexibility”), and two affective/attitudinal dimensions (“openness” and “respect”).

Regarding the correlations between the latent variables and relevant demographic data, weak but significant correlations resulted between the participation in an intercultural training and behavioral flexibility as well as cultural knowledge. This means that the participation in an intercultural training program is primarily associated with behavioral and cognitive aspects of intercultural competence. Moreover, international experience showed a significant but weak correlation with cultural openness. Consequently, staying abroad is primarily related to affective/attitudinal dimensions of intercultural competence. With reference to Allport’s (1958) “intergroup contact hypothesis”, this may be explained by increased contact with people from different cultural backgrounds (cf. Nesdale / Todd 2000).

Although the results of the first study present a promising step towards the comprehensive measurement of intercultural competence, limitations have to be noted. First, the results are based on a small sample which makes a replication in a larger sample necessary. Sec-

ond, on a conceptual level, additional aspects should be integrated in order to cover an even broader picture of intercultural competence.

For example, several authors underline the importance of cultural self-reflexivity as a central aspect of intercultural competence (e.g., Auernheimer 2002, Barmeyer 2005). More precisely, Auernheimer (2002) speaks of cultural self-reflexivity as one of the most important steps towards intercultural learning. In addition, Barmeyer (2005) refers to self-reflexivity as one important affective component that enables the development of cognitive or behavioral facets of intercultural competence. In reference to Auernheimer (2002), cultural self-reflexivity includes the ability to reflect on what an individual knows about one’s culture but also about what he or she does not know about culture and its implications. In a similar vein, Rohr (2002) focuses on self-reflexivity as the ability to reflect on the influence of culture in intercultural communication or in conflict situations.

Encounters between people from different cultures may result in experiences of difference because of differences in acquired knowledge bases, action routines, and expectations (von Helmholt 2016). Consequently, understanding intercultural encounters requires a reflection on how the individual contributes and experiences cultural difference (von Helmholt 2016). Besides further differences of inequality and potential power constellations (cf. Nazarkiewicz 2016), intercultural differences are only one of many possible interpretative perspectives on the interaction (cf. von Helmholt 2016). Thus, cultural self-reflexivity can be understood as a first step towards cultural reflexivity.

By referring to Holzbrecher (1997), self-reflexivity, as defined by Auernheimer (2002), might be considered as a cognitive facet of intercultural competence, whereas it is categorized as an affective component by Barmeyer (2005). Furthermore, based on Triandis (1977)

and Bolten (2007), self-reflexivity can also be interpreted as a specific aspect of cultural awareness, namely cultural self-awareness. Cultural awareness, in turn, is categorized as an affective component as well (Barmeyer, 2005). Following Barmeyer's assumption (2005) that self-reflexivity is a prerequisite for other components of intercultural competence, self-reflexivity might be assumed to be an additional important attitude in the pyramid model of intercultural competence (Deardorff 2006). Despite its importance, the concept of intercultural self-reflexivity has not yet been integrated in instruments measuring intercultural competence. In order to broaden the perspective on intercultural competence, we thus included items measuring intercultural self-reflexivity in our second study.

In addition, we also reframed the items assessing intercultural openness so that they capture both passive and active aspects of openness. According to Redding (1972) communication openness includes both message receiving and message sending behaviors (Rogers 1987). In the context of intercultural competences, the passive dimension refers to openness towards people from other cultures. This includes, for example, being prone to understand new ideas and not to defend oneself from people with another cultural background (cf. e.g., the definition of openness by Davis / Cho 2005). The dimension comprises items such as "It is easy for me to listen and observe in a foreign context" and "I am generally open when I have contact to people from other cultures". In contrast, the active dimension corresponds to self-disclosure, indicating whether one is inclined to reveal own thoughts, feelings, or past experiences to another person from another cultural background (cf. Collins / Miller 1994; Derlaga 2013). This dimension of openness includes items such as "I like answering questions from people from other cultures". Self-disclosure plays an important role in intercultural trainings (Gudykunst

/ Hammer 1983), which points to the relevance of self-disclosure in intercultural encounters.

5. Study 2

Based on the findings of the first study, we conducted a second study further refining the resulting instrument. In this study, we went beyond existing items from established scales and included additional items based on the conceptual argumentation above. Thus, compared to the first study, two major changes were applied. First, the affective/attitudinal dimension of intercultural competence was extended by cultural self-reflexivity. Second, as described above, we included additional items capturing different facets of cultural openness, namely an active component in the sense of self-disclosure.

5.1. Methods Study 2

Based on the structure of the first study, we complemented the scale with five items capturing cultural self-reflexivity. Because of the reduced length of two factors, we added one item to the factor "respect for cultural differences" and two items to the factor "behavioral flexibility". Furthermore, we also added a summary item for each factor, starting with sentence fragments like "in general" or "taken together" (cf. MacRae 1956). In addition, we changed the response format by using a more unipolar scale. This was done because an unipolar scale offers the possibility to capture differences in a more detailed way. As a result, participants expressed their level of agreement using a 5-point scale ranging from "strongly agree" to "disagree" (1 = *Strongly agree*; 2 = *Quite agree*; 3 = *Moderately agree*; 4 = *Slightly agree*; 5 = *Disagree*).

On item level, only minor changes were undertaken. For example, we slightly changed the wording to modify item difficulty. In addition, we included

examples in brackets and coded all items positively in order to facilitate the cognitive processing of the content (Lietz 2010). With regard to the factor “cultural knowledge” we reformulated the items focusing more on knowledge acquisition instead of conceptual knowledge. In addition, quite specific topics (marriage tradition & crafts) were converted into more general areas (e.g., politics, history and society as well as literature, art, music).

5.1.1. Participants

A German convenience sample was obtained via web link through a survey. In total, 345 persons agreed to participate, and of those, 240 (69.6%) completed the questionnaire with less than 10% missing values (cf. Hair, 2006). The sample included 189 (78.8%) women and 50 (20.8%) men. The mean age in the second sample was 29.80 (SD=9.43). Concerning nationality, 223 persons (92.9%) had German citizenship, 15 persons (6.3%) indicated to have an EU citizenship and 15 persons (6.3%) stated to have a non-EU citizenship. Because of dual nationality, the total number surmounts 100%. For 221 (92.1%) participants, German was their mother tongue whereas 17 (7.1%) were not native speakers. The sample consisted of five (2.1%) pupils, 116 (48.3%) students, four apprentices (1.7%) and 117 (48.8%) employees. Again, the figures did not subsume to 100% because of the possibility of belonging to several groups simultaneously. In this sample, most people indicated to have previous academic or job-related international experiences (n= 184; 76.7%), with the duration ranging from less than three month (n=44; 18.3%) to more than 24 months (n=18; 7.5%). The most often stated duration of international experiences was six to twelve months with 27.9% (n=67) indicating this timeframe. Of the participants, 49.6% (n=119) stated that they had contact with people from other cultures very often (almost daily), 20% (n=48)

frequently (at least once a week), 25% (n=60) occasionally (at least once a month), and 5% (n=12) seldom (one or two times a year). In addition, 81 persons (33.8%) had already participated in an intercultural training, whereas 158 (65.8%) did not.

5.1.2. Analyses and results

The 32 items were factor analyzed using the principle axes factor analysis and an oblique rotation (PROMAX). The oblique rotation was used as a consequence of the suspected correlation between individual components of intercultural competence (Leung et al. 2014). All criteria for factor extraction (eigenvalue criterion, Horn’s parallel analysis, scree plot), indicated a six-factor structure. Six items exhibited loadings that warranted their removal, which meant factor loading less than .5 and cross-loading greater than .3. All items performed well in terms of communality and item selectivity. As a result of the item deletion, the first factor consisted of seven items, the second and the fifth factor included five items, and the fourth and sixth factor are made up of four items. The last factor consisted only of one item. For that reason, the remaining 26 items were factor analyzed again and five factors emerged. Once again, two items had to be excluded because of low factor loadings and high cross-loadings.

In a second step, the remaining 24 items were factor analyzed using confirmatory factor analysis. Results indicated an acceptable (2/df ratio=2.09; cf. Tabachnick / Fidell 2007, Arbuckle 1997) to good fit (CFI=.909; Diefendorff et al. 2005, Vandenberg / Lance 2000; RMSEA=.068; MacCallum / Browne / Sugawara 1996). The 24 items explained 65.7% of the variance. The first factor consisted of six items explaining 34.7%. The second and third factor both with five items explained 9.7% and 7.8%. The last two factors consisted of four items accounting for

7.2% and 6.4%.

Table 3 shows the resulting factors of the second study (item wordings, factor loadings, and coefficient alphas). Table 4 shows the descriptives of and correlations among the latent variables. Furthermore, the correlations between the latent variables and relevant demographic data are depicted.

5.2. Discussion Study 2: Interpretation of the factors

In the second study, we further refined the items measuring the four factors of intercultural competence obtained in study 1. In addition, we introduced new items measuring cultural self-reflexivity. As Table 3 shows, all items load on the respective factor and the overall model shows an acceptable to good fit to the data. Just as in study 1, the first factor, cultural openness, evaluates the openness and readiness of a person for intercultural interaction. This factor mainly comprises items that tap the aspect of intercultural self-disclosure, which confirms the relevance of self-disclosure in intercultural encounters (e.g., Gudykunst / Hammer 1983). Moreover, respect for cultural differences was replicated as another affective/attitudinal facet of intercultural competence (Factor 4). Equally to study 1, a factor capturing intercultural knowledge (Factor 2) and a factor measuring behavioral flexibility (Factor 5) were replicated. In addition, a factor measuring cultural self-reflexivity (Factor 3) was obtained in the second study. This factor includes items such as “I am aware of cultural influences on my behavior” or “I give attention to my own culture”.

As self-reflexivity is seen as a cognitive component by some researchers (e.g., Holzbrecher 1997) and as an affective component by others (e.g., Barmeyer 2005), the interrelations of the individual factors have to be taken into account. Looking at the intercorrelations of factors (see Table 4) self-reflexivity

is highly significantly and in a similar strength interrelated with all other facets of intercultural competence assessed in this study. Thus, results might be understood as a confirmation of Barmeyer’s assumption (2005) that self-reflexivity is an affective/attitudinal component of intercultural competence enabling other components of intercultural competence. Nevertheless, future research is needed that further analyzes its interplay with other dimensions of intercultural competence.

Similar to study 1, correlations were calculated for the different aspects of intercultural competence and relevant demographic data. As the results show, cultural openness, cultural knowledge, and behavioral flexibility showed weak, but highly significant correlations with international experience as well as with its duration (cf. Behrnd / Porzelt 2012), with participation in an intercultural training (cf. Zakaria 2000), and with contact with people from other cultures (cf. e.g., Nesdale / Todd 2000). Moreover, cultural self-reflexivity showed a weak, but highly significant correlation with contact with people from other cultures (cf. Nazarkiewicz 2016) and a weak, but significant correlation with participation in an intercultural training (cf. Gannon / Poon 1997 for the effects of intercultural trainings on cultural awareness). This means that the newly introduced facet of intercultural competence is primarily associated with contact to people from other cultures as well as with the participation in an intercultural training. Interestingly, respect for cultural differences showed no significant correlation with relevant demographic data.

Some important limitations of the second study have to be noted. First, the dimensions of intercultural competence obtained in the second study were not normally distributed which limits their use in research and practice. Moreover, the fit indices for the described model only show an acceptable fit to the data. Thus, future research is needed to fur-

ther refine the item structure in order to obtain a good model fit.

6. General discussion

Intercultural competences are particularly important in various settings (e.g., Stehr 2011, Schumann 2007, Cushner / Mahon 2009). Because they can be taught and trained (e.g., Thomas 2009), there is a huge amount of trainings fostering intercultural competences (Hiller / Vogler-Lipp 2010). The effectiveness of such trainings has to be evaluated by adequate instruments (e.g., Morris / Robie 2001). However, existing scales often apply a large number of items or refer to specific facets of intercultural competence. Consequently, the purpose of these studies was to develop a short, but comprehensive scale measuring intercultural competence in German language. Hence, it includes affective/attitudinal, behavioral and cognitive components.

Results of our first study revealed a four-factor structure with the four factors labeled as follows: Intercultural openness (affective/attitudinal), behavioral flexibility (behavioral), respect for other cultures (affective/attitudinal), and intercultural knowledge (cognitive). Thus, the new instrument covers a broad range by tapping the important facets of intercultural competence, namely affective/attitudinal, behavioral, and cognitive components (e.g., Chen / Starosta 2002, Deardorff 2006).

The items obtained in the second study provide a refined version measuring the four dimensions described in the first study. Especially, intercultural openness was more clearly defined as an active intercultural self-disclosure (cf. Gudykunst / Hammer 1983). The focus on self-disclosure, in turn, substantiates the dissociation between the two affective dimensions of openness and respect for cultural differences (e.g., Chen / Starosta 2000). While self-disclosure can be seen as a component of intercultural competence which is in between

the behavioral and the affective dimension, respect for cultural differences can be clearly understood as an attitudinal/affective aspect (cf. Barmeyer 2005, Deardorff 2006).

In addition to these factors, the second study incorporated cultural self-reflexivity as one important step towards intercultural learning (Auernheimer 2002). Cultural self-reflexivity might be considered as another affective/attitudinal component of intercultural competence (e.g., Barmeyer 2005). The items measuring cultural self-reflexivity showed good psychometric qualities.

Overall, the actual studies present a reliable measure for the assessment of intercultural competence that can be applied in various settings. This is important because an instrument assessing intercultural competence contributes to the clarification of the construct as well as to the evaluation and improvement of training courses in practice (Matsumoto / Hwang 2013). In addition, the new scale includes cultural self-reflexivity which was often neglected in previous research. From a practical perspective, the results suggest adding possible instruments measuring intercultural competence to the field of human resources development (e.g., Bird / Mendenhall / Stevens / Oddou 2010, Graf / Harland 2005) and the resulting scale might serve this purpose. It can be used for the evaluation of intercultural training courses as well as in personnel selection, personnel development and for the sensitization of individuals for intercultural subjects. Especially, as it comprises cognitive, affective/attitudinal, and behavioral facets of intercultural competence, it can be used to identify individual strengths and weaknesses in these specific components.

As in all research, limitations of these studies have to be noted. Specifically, the scale was exclusively in German language which reduces its appropriateness in other contexts. Building on the present findings, future research is needed exploring the qualities of the new scale in an applied setting. Furthermore, the

scale should be tested in other samples and in combination with other relevant outcome variables. Additionally, in order to cover both static and dynamic elements of intercultural competence, the scale should be combined with other methods such as critical incidents or role plays within an intercultural assessment center. Moreover, as Fink (2003) points out, intercultural competence should always be regarded in its context, also taking situational factors into account. Consequently, future research should specify relevant context factors and try to incorporate them in the assessment of intercultural competences. Moreover, the present studies were administered cross-sectional, whereas a longitudinal design would be helpful to test for applicability of the scale as a change measurement. That is, intercultural competences should be assessed over time in order to identify potential changes and learning effects. With respect to Gertsen (1990) intercultural competence can be modelled by so called structural models and by process models. Structural models divide intercultural competence in affective/attitudinal, cognitive and behavioral aspects. The present scale replicates this idea, as it consists of affective/attitudinal components (cultural openness, respect for cultural differences, and self-reflexivity), cognitive components (intercultural knowledge), and behavioral components (behavioral flexibility). However, other approaches understand intercultural competence as a process (e.g., Bolten 2007). Further research is needed clarifying the relation of structural models and process models and integrating both in a fruitful way. Another limitation is the fact that the survey results only show a subjective perspective. It does not include information about how competent the behavior of the evaluated person is perceived by his or her intercultural interaction partners. Hence, it is necessary to evaluate not only the self-perception of competence but also how this perception correlates with an external perspective. Research

investigating such correlations might add important knowledge on the relationship between self-awareness and awareness of others. In addition, self-report measures are always vulnerable to social desirable answering. Future research should thus include adequate measures to control for effects of social desirability.

Finally, as Fink (2003) underlines, behavior in intercultural situations is always dependent on individual values. For example, based on their individual value orientation, individuals might differ in their willingness to accept cultural differences or to show certain behavior. Thus, we suggest taking individual values into account in future research. Furthermore, as Bolten (2007) emphasizes, creating "the ideal" model of measuring intercultural competence appears to be hardly possible as the construct of intercultural competence itself is highly culturally specific. Therefore, it is important to always reflect on cultural influences when assessing intercultural competences and its different dimensions. Taken together, we hope that the new short scale inspires future research in identifying relevant aspects of intercultural competence and serves as a useful tool in assessing intercultural competence in practice.

7. References

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8. Attachments: Tables of the study

Table 1

Study 1: Item wordings, coefficient alphas and item factor loadings.

	Factors, Alpha and Factor loadings			
	1 Openness	2 Knowledge	3 Respect	4 Behavioral Flexibility
Alpha	.87	.71	.70	.59
I enjoy interacting with people from other cultures	.847			
I avoid situations, where I have to interact with people from other cultures (R)	.826			
I enjoy handling persons from other cultures	.815			
I find it easy to talk to people from other cultures	.803		-.329	
I feel relaxed when I interact with people from other cultures	.750			
I find it easy to get along with people from other cultures	.605			
I respect the values from people from other cultures			.857	
I respect the way people from other cultures behave			.803	
I think people from other cultures are narrow-minded (R)			.649	
I watch carefully when I interact with people from other cultures				.756
I am sensible towards meanings my interaction partner from another culture is saying				.734
I change my verbal behavior (accent, subject) when an intercultural situation requires it				.694
I know about marriage traditions from other cultures		.810		
I know about the handcraft of other cultures		.770		
I know the cultural values and the religious believes of other cultures		.657		
I know the rules to express nonverbal ways to communicate in other cultures		.636		
Eigenvalues	4.83	1.99	1.63	1.20
Percentage of total variance	30.21%	12.43%	10.19%	7.51%

Note. Item factor cross-loadings greater than 0.3 are shown; Extraction Method was primary component analysis. Rotation of factors was done using Promax with Kaiser-Normalization.

Table 2

Study 1 : Intercorrelations of the factors and between the factors and demographic variables.

	Min	Max	IIIC	M	SD	Openness	Knowledge	Respect	Behavioral Flexibility	Participation in an Intercultural Training	Stay Abroad
Openness	1.17	5.00	.53	3.28	.78	1.00	.411**	.139	.348**	.154*	.137*
Knowledge	1.00	4.75	.38	2.59	.83	.411**	1.00	-.008	.294**	.193*	.023
Respect	1.67	5.00	.44	.44	.56	.139	-.008	1.00	.213*	.022	.089
Behavioral Flexibility	1.67	5.00	.33	3.72	.76	.348**	.294**	.213*	1.00	.247**	.089

Note: Parenthetical values are alphas. *p < .05, **p < .01, N=240. For correlations between the factors, correlations coefficients by Spearman were used. For correlations between the factors and the demographic variables correlation coefficients by Kendall Tau b were used. IIIC=Inter-Item-Correlation; Max=Maximum; M=Mean; Min=Minimum; SD=Standard Deviation.

Table 3

Study 2: Item wordings, coefficient alphas and item factor loadings.

	Factors, Alpha and Factor loadings				
	1 Openness	2 Knowledge	3 Self- reflexivity	4 Respect	5 Behavioral Flexibility
Alpha	.87	.89	.83	.81	.78
I feel relaxed when interacting with people from other cultures	.949				
I am not afraid to express myself when interacting with people from different cultures	.785				
I feel comfortable opening up to people from other cultures	.770				
I like answering questions from people from other cultures	.751				
In general, I'm open when getting into contact with people from other cultures	.697				
I do not avoid meeting people from other cultures	.634				
I acquire knowledge about the history, politics and the structures of the society of another culture		.916			
I reflect about the cultural values and the believes about other cultures		.882			
In general, I try to acquire a good knowledge about the culture I interact with		.871			
I engage in the literature, art and music of other cultures		.853			
I read up on rules for expressing nonverbal behaviors in other cultures		.541			
I find it easy to explain what my culture is about			.862		
In general, I actively deal with my own culture			.838		
I can easily put my worldview into words.			.748		
I'm aware of my own cultural imprinting			.729		
I have the ability to identify my own culturally affected behavior			.711		

I respect the values of people from other cultures, even if they are not consistent with my own values	.850
I respect the way people from other cultures behave even if I do not support that behavior	.800
I acknowledge the opinion of people from other cultures, even if it is not equal with mine	.786
In general, it is easy for me to show respect towards other cultures	.759
I use pause and silence differently to suit different cross-cultural situations	.847
I change my nonverbal behavior (e.g., accent, tone) when a cross-cultural situation requires it	.841
I have the ability to adapt my behavior to the cultural context even if this behavior seems unusual to me	.702
In general, I have the ability to act effectively and appropriately in an intercultural situation	.682
Eigenvalues	8.32 2.33 1.86 1.73 1.53
Percentage of total Variance	34.65% 9.71% 7.75% 7.21% 6.37%

Note. Extraction Method was primary component analysis. Rotation of factors was done using Promax with Kaiser-Normalization.

Study 2: Intercorrelations between the factors and between the factors and demographic variables.

	Min	Max	IIC	M	SD	Openness	Knowledge	Self- reflexivity	Respect	Behavioral Flexibility	Stay Abroad	Length of Stay	Contact	Training
Openness	1.00	4.17	.54	1.85	.63	1.00	.459**	.455**	.350**	.475**	.193**	.214**	.229**	.150**
Knowledge	1.00	5.00	.63	2.18	.86	.459**	1.00	.431**	.225**	.444**	.175**	.188**	.223**	.149**
Self- reflexivity	1.00	4.20	.50	2.01	.63	.455**	.431**	1.00	.317**	.386**	.070	.086	.137**	.137*
Respect	1.00	4.50	.52	1.92	.61	.350**	.225**	.317**	1.00	.229**	.074	.084	.047	.080
Behavioral Flexibility	1.00	4.50	.49	2.31	.71	.475**	.444**	.386**	.229**	1.00	.119*	.181**	.223**	.145**

Note. Parenthetical values are alphas. *p < .05, **p < .01, N=240. For correlations between the factors, correlations coefficients by Spearman were used. For correlations between the factors and the demographic variables correlation coefficients by Kendall Tau b were used. IIC=Inter-Item-Correlation; Max=Maximum; M=Mean; Min=Minimum; SD=Standard Deviation.