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**ASSESSMENT OF INTERCULTURAL COMPETENCIES:  
A CASE STUDY IN SWITZERLAND**

In this study, we conducted a review of literature of instruments to measure intercultural competence in the domain of education and we evaluated the most relevant and scientifically valid to teachers. Eight instruments were identified and the Multiculturally Efficacy Scale was select. The purpose was to apply this instrument to analyse intercultural competence of 88 teachers from primary schools of the International School of Geneva. A comparison between English-speaking teachers and the French-speaking teachers about experiences with diversity, multicultural competence and the conception of multiculturalism in a multicultural school environment was also verified. Preliminary analyses comparing two groups revealed some difference but both groups of teachers have an attitude regarding diversity. We would discuss the results concerning this experience of diversity in English-speaking teachers and French-speaking. Findings lead to directions for future research.

**Key words:** competence, cultural, intercultural, transcultural, cross-cultural, multicultural, scale, inventory, education, teacher training, teacher education.

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**Мәдениетаралық құзыреттіліктерді бағалау  
Швейцариядағы тақырыптық зерттеу**

Осы зерттеулерде біз білім беру саласындағы мәдениетаралық құзыреттілікті бағалау құралдарының әдебиетіне шолу жасалды. Педагогтар үшін ең өзекті болып табылып ғылыми негізделген баға берді. Сегіз құрал анықталып, мультимәдени тиімділік шкаласы таңдалды. Мақсаты – Женева Халықаралық 88 бастауыш мектебінің мәдениетаралық құзыреттілігін талдауда қолдану. Сондай-ақ, ағылшын және франк тілді мұғалімдер арасында көптірлілігімен, мультимәдениеттілігімен және мультимәдени мектеп ортасындағы мультимәдениеттілік тұжырымдамасымен жұмыс тәжірибесін салыстыру жүргізілді. Екі топта салыстыруда алдын ала талдау жасалып кейбір айырмашылықтар анықталды, бірақ екі топтың да әртүрлілікке қатысы бар. Ағылшын тілді және франкотілді мұғалімдер әртүрлі тәжірибесіне қатысты нәтижелерді талқылағымыз келеді. Алынған нәтижелер болашақ зерттеулердің бағыттарын анықтайды.

**Түйін сөздер:** құзыреттілік, мәдени, мәдениетаралық, трансмәдениеттік, кросс-мәдени, мультимәдениеттік, шкала, инвентарь, білім беру, мұғалімдерді дайындау, педагогикалық білім.

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**Оценка межкультурного опыта: пример Швейцарии**

В данном исследовании был проведен обзор литературы по межкультурной компетентности и оценены наиболее актуальные и научно обоснованные методы для педагогов в области образования. Были определены восемь инструментов и выбрана шкала мультикультурной эффективности. Цель авторов состояла в том, чтобы применить эти инструменты для анализа межкультурной компетенции 88 учителей начальных школ Международной школы Женевы. Было также проведено сравнение между англоязычными и франкоязычными учителями, их опыта работы с многообразием, мультикультурной компетентностью и концепцией мультикультурализма

в мультикультурной школьной среде. Предварительный анализ сравнения двух групп выявил некоторую разницу, но обе группы учителей имеют отношение к разнообразию. Были обсуждены результаты у англоязычных и франкоязычных учителей. Полученные результаты определили направления будущих исследований.

**Ключевые слова:** компетентность, культурная, межкультурная, транскультурная, кросс-культурная, мультикультурная, шкала, инвентарь, образование, подготовка учителей, педагогическое образование.

## Introduction

In an increasingly globalized world, the assessment of the intercultural skills of professionals is becoming a priority in the education sector. Switzerland is a multicultural country, not only because of its linguistic and religious history but also because of the international migration that the country has been hosting for a long time. The aim of this study is to analyze and compare intercultural competencies working in Geneva international school. While our data point out the intercultural competencies developed by teachers in a school marked by a hyper-diversity, our findings suggest some differences between English and French speaking teachers. In addition, as the ECOLINT is more culturally diverse, we expected that teachers hold a higher level of cultural competencies compared

to others studies. However, this hypothesis was not confirmed. In other words, it is not enough to mix teachers and students from different cultural and linguistic backgrounds to expect developing intercultural competencies. Indeed, intercultural competencies are more constructed through meaningful activities rather than demographic diversity.

## Context of the study

The International School of Geneva was founded in 1924 by local educators and by officials of the League of Nations and International Labor Organization (ILO). The purpose of the school was to provide an international education based on the progressive educational principles associated with pedagogues based in Geneva such as Adolphe Ferrière and Edouard Claparède.

**Table 1** – Teaching staff

Nationality	Full time	Part time	Our sample representative
Great Britain	129	43	7
Switzerland	81	50	10
France	61	40	29
USA	24	4	5
Canada	22	1	6
Other countries	44	25	26
Total	361	163	83

Source: International school of Geneva (2016)

The International School of Geneva (also called Ecolint) is the largest K-12 school in the area. There are three campuses around the city: La Chataigneraie, Nations and La Grande Boissière (the oldest). Ecolint enrolled 4 434 students in 2015, up from 4043 in 2011. The school have 138 different nationalities and over 83 different mother tongues represented among the students' population ranging from age three (reception class) up to eighteen (the last year of high-school). In the school year

2015-16, teaching staff was diverse with different nationalities represented. 361 full time and 163 part time teachers worked at the school (International school of Geneva, 2016).

## A review of instruments measuring intercultural competence

A number of instruments have been designed to measure intercultural competence, mainly

developed in the workplace (Bartel-Radic, 2009:11-26.). A review of this literature has been conducted by a number of authors, in particular with regards to the domains of international organizations as well as health (Dunn, Smith, & Montoya, 2006; Gozu et al., 2007 ; Hays, 2008:471-482). However, up until now, no systematic review of the literature has been conducted which examines the instruments used to measure intercultural competence in the domain of education specifically. In order to address this gap, we conducted a systematic review of the literature to analyze instruments currently being used to measure intercultural competence in education published over a ten-year period from 2004 to 2014. We searched the database *Google Scholar*, using the key word ‘*intercultural competence*’ and adding other prefixes to cultural terms: -trans, -multi-, pluri, -cross and beliefs and other words such as: tools, measures, scales, education, teachers, training of teachers/trainers, conducting this search in English.

We therefore decided to adopt this strategy using the following English words: *competence, cultural, intercultural, transcultural, cross-cultural, multicultural, beliefs, scale, inventory, education, teacher training, teacher education.*

First, we identified key articles which made up the majority of search results based on the key words mentioned above. Second, we evaluated the abstract of these articles to select the most relevant to our review, by excluding:

- Those not published in peer-reviewed journals
- Articles published before 2004

- Literature reviews of instruments used to measure intercultural competence in domains – other than education

- Articles referring to specific instruments used to evaluate intercultural competence in domains other than education

The application of these criteria lead us to select the eight following instruments:

- *Multicultural Efficacy Scale (MES)*;
- *Munroe Multicultural Attitude Scale Questionnaire (MASQUE)* ;
- *Blueprint for Integration of Cultural Competence in the Curriculum Questionnaire (BICCCQ)*;
- *Intercultural Development Inventory (IDI)*;
- *Multicultural Teaching Competency (MTCS)*;
- *Intercultural Communication Competence (ICC)*;
- *Teacher Cultural Beliefs Scale (TCBS)*;
- *Wesleyan Intercultural Competence Scale (WICS)*.

We evaluated these eight instruments according to their dimensions (outlined in the Table 2 below) and psychometric properties (summarized in the Annex 1) in order to find the most relevant for researches about teachers working in multicultural environments.

The most relevant to analyze teachers’ practices, attitudes, efficacy, beliefs, regarding multicultural environment and multicultural education. We also evaluated these eight instruments in order to find the most scientifically valid.

**Table 2** – Properties, items and format of responses in the instruments used to measure intercultural competence in education

Author, Instrument	Properties (sub-scales)	Tot. Items	Format of responses	Place, Year
(Guyton & Wesched) MES Multicultural efficacy scale  (undergraduate and graduate teacher education students N=626)	Experience with diversity  Attitudes Efficacy	35-item in tot. 34 item : 4 –point likert- type scale 1 item : select one of five possible responses to the statement  7-items  7-items 20-items	Disagree strongly or disagree somewhat; Agree somewhat; agree strongly	USA 2005

Author, Instrument	Properties (sub-scales)	Tot. Items	Format of responses	Place, Year
(Munroe & Pearson) MASQUE Munroe Multicultural Attitude Scale Questionnaire  (undergraduate students enrolled in university or collegiate programs – various courses N=422)	Know Care Act	18-item in tot. 6 – point likert-type scale  7-items 6-items 5-items	From 1 strongly disagree through 6 strongly agree	USA, 2006
(Tulman & Watts) BICCCQ Blueprint for Integration of Cultural Competence in the Curriculum Questionnaire  (students enrolled in either the bachelor of science in nursing or master of science in nursing degree program N=219)	Attitudes and Skills Knowledge of basics Cultural Communication  Knowledge of Theory  Knowledge of Key Concepts	31-item in tot. 3 – point likert-type scale  (contained all of the items initially believed to address these two components)    (contained items initially believed to relate to knowledge)	0=never 1=sometimes 2=quite often	USA, 2008
(Hammer) IDI Intercultural Development Inventory  (managers, member of local church, students university, high school students N=4763)	Denial Defense Polarization Reversal  Minimization Acceptance Adaptation Cultural Disengagement	50-item in tot. 5 –point likert-type scale  7-items 6-items 9-items  9-items 5-items 9-items 5-items	1=disagree, 2=disagree somewhat more than agree, 3=disagree some and agree some, 4=agree somewhat more than disagree, and 5=agree	USA, 2011
(Arasaratnam) ICC Intercultural communication competence  (graduate and undergraduate students university N=302)	Intercultural communication competence	10-items 7 –point likert-type scale  10-items	From 1 strongly disagree to 7 strongly agree	Australia, 2009
(Spanierman et al.) MTCS Multicultural teaching competency scale  (in-service and pre-service teachers n=258)	Multicultural Teaching Skill  Multicultural Teaching Knowledge	16-item in tot. 6-point likert-type scale  10-items  6-items	From 1 strongly disagree through 6 strongly agree	USA, 2010

Continuation of table 2

Author, Instrument	Properties (sub-scales)	Tot. Items	Format of responses	Place, Year
(Hachfeld et al.) TCBS Teacher Cultural Beliefs Scale  Study 1 (beginning teachers N=433) Study 2 (teacher candidates and educational science students)	Multicultural beliefs  Egalitarian beliefs	10-item in tot 6 –point likert-type scale  6-items  4-items	From 1 strongly disagree through 6 strongly agree	Allemagne, 2011
(Stemler, Imada, & Sorkin) WICS Wesleyan Intercultural Competence Scale  Part 1 (undergraduate students N=97) Part 2 (undergraduate students N=30)	Openness Patriotism Nationalism Internationalism Smugness Empathy Perspective-taking  Ambiguity tolerance  Background questionnaire	16 situations 5 –point likert-type scale  10-items 12-items 7-items 8-items 4-items 7-items 12-items  20-items  10-items	From 1 very inaccurate to 5 very accurate	USA, 2014

The table above shows that the instruments used to measure intercultural competence can be divided into two main categories. The first category focuses on stages through which the individual passes to become inter-culturally competent (Munroe Multicultural Attitude Scale, Intercultural Development Inventory, Wesleyan Intercultural Competence Scale). This first category highlights the potential development of an individual in adapting to contexts of diversity. The second category of instruments focuses on the different sub-forms of competence contributing to the individual being inter-culturally competent (Multicultural Efficacy Scale, Blueprint for Integration of Cultural Competence in the Curriculum Questionnaire, Intercultural Communication Competence, Multicultural Teaching Competency Scale, Teacher Cultural Beliefs Scale). This second category examines the knowledge, know-how, experiences and communication abilities of individuals.

We decided to focus on the second category of instruments in order to select the most valid instrument, given the concrete focus on the

operationalized composites of competence which is more aligned to the objective of our study. Through this filtering, we selected the Multicultural Efficacy Scale as an object of analysis as it was specifically developed for teachers in multicultural settings. The stability and validation of this instrument is appropriate for our study. (Nadelson et al. 2012: 1194) report that «it preparing teachers to work in multicultural environments. The dynamic, situation, and contextual issues associated with multicultural education require instruments that can measure the construct in concert with the zeitgeist of diversity education and educational environments».

### Research Questions

On the basis of our study goals and review of the literature we developed three research questions. Our research questions follow and asked:

#### *Research question 1:*

What differences exist between the English-speaking and French-speaking teachers with regards to *experiences with diversity*?

*Research question 2:*

What differences exist between the English-speaking and French-speaking teachers with regards to multicultural competence in terms of attitude with diversity and efficacy with diversity?

*Research question 3:*

What are the conceptions of teachers' multiculturalism in a multicultural school environment?

## Method

*Participants*

Our participants were drawn from the population of teachers of the International School of Geneva in Switzerland. Teachers of the International School of Geneva speak multiple languages, are of different origins and work within a multicultural environment. Furthermore, the ISG is composed of students of different nationalities and of students are often bilingual.

Data were collected from May 8 to 30 in 2015. The total sample consisted of 88 teachers from primary schools. The French sample consisted of 50 teachers (70% female). Teachers ranged from 25 to 60 years of age (40% had between 51-60 years). The English sample consisted of 33 teachers (70% female). Teachers ranged from 25 to 60 years of age (43% had between 31-40 years).

*Instrument*

The first page of the protocol contained some personal socio-demographic information such as gender, age, native language, nationality. The competence of teachers in a multicultural environment was assessed by means of the Multicultural Efficacy Scale (MES) designed by (Guyton and Wesche 2005:21-29.) The questionnaire was used across a variety of departments of the International School of Geneva. The same instrument was administered to both groups of teachers. A back-translation procedure (English to French) was used for the French-speaking teachers. When conducting the questionnaires, the researchers asked teachers to state in which language they would prefer to respond. Teachers who preferred to respond in French were categorized as 'French-speaking.' Those who preferred to respond in English were categorized as 'English-speaking.'

*MES*

The Multicultural Efficacy Scale – MES (Guyton & Wesche, 2005) concerns 35-item Likert-type scale and it is divided into three sub-scales: the Experience with diversity (7 items and 4-point Likert-type scale ranging from *never* to *frequently*;

this sub-scale is only for comparative purposes and is not intended to be scored to contribute to measure of multicultural efficacy), Attitude toward teaching in multicultural condition (7 items and 4-point Likert-type scale ranging from *agree strongly* to *disagree strongly*) and Efficacy for teaching in multicultural environments (20 items on a 4-point Likert-type scale ranging from *I do not believe I could do this very well* to *I am quite confident that this would be easy for me to do*). To interpret outcomes of the Attitude and Efficacy sub-scales Guyton and Wesche (2005) developed a guide for scaling items: for Attitude the range of scores between 0 and 15 represent a low attitude, between 16 and 24 represent an average score, and range between 25 and 28 indicate positive attitude; for Efficacy range of scores between 0 and 54 represent low efficacy, between 55 and 66 indicate an average score, and 67 to 80 denote high level of efficacy. The last item 35 instructs users to select one of five possible responses to the statement «Choose the position which most closely reflects your strongest beliefs about teaching» and the outcomes are evaluated in percentages. Through Item 35 intended to provide descriptive data of the teachers in terms of their conceptualizations of multiculturalism. Guyton and Wesche (2005) in their study validating the MES report that 42% of responses (N=665 undergraduate and graduate teacher education students) identified multiculturalism and 8% advocacy (see Table 5).

*Data Analysis*

## Results

First, we calculated the Cronbach's alpha coefficient for the Experience sub-scale, for the Attitude sub-scale, and Efficacy sub-scale. Results show .60, .73, and .89, respectively. The Cronbach Alpha for the 35-total item of instrument was found to be .86 which is slightly lower than the .89 reported in the instrument validation study.

Our first research question asked «What differences exist between the English-speaking and French-speaking teachers with regards to *experiences with diversity*?». The relative frequency of experiences such as playing, working, and socializing with «people different from them» during childhood, adolescence, and adulthood was calculated.

The frequency analysis showed the following: French-speaking children played more frequently with people different from them than English-speaking children; French-speaking adolescents went to school with diverse students more frequently

than English-speaking adolescents; French-speakers chose to read about people different from them more occasionally than English-speakers; English-speakers chose to read books about people different from them more frequently than French-speakers; English-speakers stated that a diverse person was one of their role models when they were younger more occasionally than French speaking; English-speakers stated that in the past chose to watch TV shows and movies about people different from them more occasionally than French-speakers and French-speaking adolescents «were on the same team and/or club with diverse students» more frequently than English-speaking.

Our second research question asked «What differences exist between the English-speaking and French-speaking teachers with regards to multicultural competence in terms of attitude with diversity and efficacy with diversity?»

With the aim of verifying the existence of differences with regards to multicultural competence of French-speaking teachers and English-speaking teachers, we calculated the average scores and significance of differences for the *Attitude about Diversity* section and *Efficacy with Diversity* section with the *t test*.

Firstly, we verified the existence of some differences in the *Attitude about Diversity* between French-speaking teachers and English-speaking teachers. As the results reveal, there are no significant statistical differences found in the averages between the English-speaking and French-speaking teachers (see Tab. 3).

**Table 3** – Difference in Attitude about Diversity

Sample	N	M	SD
French-speaking teachers	50	19.0400	6.46801
English-speaking teachers	33	18.6364	5.82998

If we compare this data with that defined by Guyton and Wesche (2005) in their validation study (0-15 low; 16-24 average, 24-28 vary positive), the data reveals an average attitude of French and English-speaking teachers with slightly more positive attitudes demonstrated among the French-speaking teachers.

Secondly, we verified the existence of some differences in the *Efficacy with Diversity* between French-speaking teachers and English-speaking teachers.

According to the results of the *t test* with regards to *Efficacy with Diversity* there are no statistically significant differences in the averages between the French-speaking and English-speaking (see Tab. 4).

**Table 4** – Difference in multicultural Efficacy with Diversity

Sample	N	M	SD
French-speaking Teachers	50	60.3800	22.22601
English-speaking teachers	33	64.0900	11.47106

If we compare this data with that defined by (Bennett, M.J. 1986: 27-70). in their validation study (0-54 low; 55-66 average, 67-80 high), the data reveals an average efficacy of French-speaking teachers with slightly higher efficacy demonstrated among the English-speaking teachers.

1. Our last research question asked «What are the conceptions of teachers' multiculturalism in a multicultural school environment?». We answered this question by calculating the percentage of Item 35 of MES first in French sample and afterwards in English sample. In fact, item 35, included in the last section of the instrument, concerned conceptions of multiculturalism. Results for the French sample were shown to be very different to those reported (Dunn, T. W., Smith, T. B., & Montoya, J. A. 2006: 471-482.)

in their validation study (see Tab. 5). Instead, results for the English sample are more consistent with those reported by Guyton and Wesche (2005; see tab. 3). The 38% of the French sample responses identified Tolerance and Assimilation (6%). The 45.5% of the English sample responses identified Multiculturalism and 6% Tolerance.

**Table 5** – Percent reported by Guyton and Wesche (2005) in their instruments validation study

Purpose	Mesured percent (valid)	English sample	French sample
Tolerance	25.6	6.1	38.0
Assimilation	15.3	24.2	6.0
Pluralism	9.2	12.1	24.0
Multiculturalism	41.9	45.5	26.0
Advocacy	8.1	12.1	6.0
Total	100.0	100.0	100.0

## Discussion

Our research allows us to highlight various aspects regarding intercultural competence and its assessment. In order to present them we will start by a focus on our results and then on the Multiculturally Efficacy Scale.

First, the comparison between teachers showed that French-speaking teachers seem to have a more practical experience of diversity than English-speaking teachers. If this first result has its importance, it is necessary to compare the items that allow us to identify some differences between these two groups of teachers. Indeed, French-speaking teachers described a childhood where they were confronted to diversity on a daily basis: at school, in their sport team ... Nevertheless, these kinds of experiences might not be the result of their choice: not a lot of children choose their school nor the members of their sport team. Besides, English-speaking teachers, even though they do not have the same experience regarding diversity, seemed to have experienced it based on a free choice (e.g. they chose more often than French-speaking teachers to watch a movie or read a book about someone different from them; their role-model were more occasionally different from them than French-speaking teachers).

This comparison is important because what French-speaking teachers described as an experience of diversity might be an effect of the context in which they grew up whereas what English-speaking teachers described might be a result of a personal will. Of course, this first point that we raised here is only a hypothesis; a qualitative study could be interesting in order to have a deeper understanding of these different kinds of experience of diversity.

Second, our research has shown that the two groups of teachers do not have the same beliefs regarding their efficacy in order to take diversity into account in their practices. In fact, English-speaking teachers have a stronger belief in their ability to develop multicultural practices than French-speaking teachers. From this, we could draw a first conclusion: experience with diversity might not have a significant effect on multicultural practices. However, we just raised a difference between the kinds of experiences that English and French-speaking teachers had with diversity. We cannot affirm that a chosen experience of diversity has a significant effect on multicultural practices; although this leads us to foster research on experience regarding diversity. On this matter, a recent research about teachers with a migrant background have shown that some experiences of

diversity might be more relevant than others in order to develop a multicultural competence; and how people transform these experiences into pedagogical resources is a key factor in the analysis (Radhouane, 2019).

These few elements highlight a limitation of the statistical analysis of the experiences of diversity. In order to go beyond the description of some experiences and have a deep understanding of their meaning for the different individuals in our sample, a qualitative study seems to be an interesting extension to this research. We could conduct semi-directive interviews in order to understand how a teacher uses – or not – an experience of diversity in his/her daily practices in a multicultural environment.

Third, our results showed that both groups of teachers have an «average» attitude regarding diversity. Different hypothesis can be drawn from this statement: 1) the different kinds of experience with diversity does not have a significant effect on the attitude developed by teachers regarding diversity (however, we explained above that a deeper analysis using a qualitative methodology would be interesting to have more information about this hypothesis), 2) working in a multicultural environment does not have a major impact on the attitude toward diversity.

This second hypothesis is paradoxical because the MES is based on the idea that experiences with diversity, efficacy and attitude toward cultural diversity are related; yet, working in a very diverse environment and having intercultural interactions on a daily basis does not seem to foster strong attitudes toward diversity. It is possible that diversity became trivial and therefore is less the subject of particular attention.

To further this study, it would be interesting to identify specific profiles of teachers such as:

- Those who have the «highest» and the «lowest» attitude toward diversity in order to understand what their experiences with diversity were and what are their efficacy beliefs towards diversity. This could lead to new hypothesis and a new understanding of aspects that can improve teachers' pedagogical practices regarding diversity.

Those who have the greatest experience with diversity in order to analysis the possible correlations with the two other dimensions of the MES. (Stemler, S.E., Imada, T. & Sorkin, C. 2014:26, 24-47).

## Conclusion

In order to discuss all our results, we need to focus on the last item of the MES. The latter

aimed at identifying the different conceptions of teachers' multiculturalism. Our results highlight major differences between French and English-speaking teachers. French-speaking teachers underlined the importance of tolerance where English-speaking teachers emphasized a multicultural approach to diversity. It would be interesting to cross this result with socio-demographic data since some conceptions towards diversity are anchored in socio-political and geographical contexts. As an example, Multiculturalism is a theory that relates more to the Anglo-saxon world and Advocacy can relate to social justice theories that are more developed in the English-speaking world. Nevertheless, our hypothesis that aim at connecting social, political and national background to conceptions of diversity is challenged by one of our results. Indeed, the Assimilation item is chosen more often by English-speaking teachers than French-speaking teachers (24.2% v. 6%) (Tulman, L., & Watts, R.J. 2008:161-166)

Finally, we must comment the limitation of the study. First, various correlations should be explored in order to understand the different effects of the

experiences with diversity on efficacy and attitude. These different patterns could be explored in an extension of this study:

- Experience → Efficacy beliefs
- Efficacy beliefs → Attitude
- Experience → Attitude
- Experience → Conceptions
- Conceptions → Efficacy beliefs
- Conceptions → Attitude

Second, statistical data does not allow us to understand what individuals do with their experiences: are they significant? Do they use them as resources? Do they analyse them in order to build a stronger understanding of intercultural interactions? Do they transform them as tool for their pedagogical practices? This study needs to be completed by qualitative data in order to understand the subjectivity of experiences.

Further results would be very interesting to exploit in teacher education. It would allow educators to foster the use of personal experiences with diversity as a proper tool to develop multicultural competence. Nevertheless, the role of the training is important in order to foster a deep reflective analysis of these experiences.

**Appendix 1** – Summary psychometric properties of instruments used to measure intercultural competence in education

<b>First category</b>	
MASQUE Munroe Multicultural Attitude Scale Questionnaire	<p><b>Description of the instrument</b> The Munroe Multicultural Attitude Scale Questionnaire (Munroe and Pearson, 2006) is used to measure multicultural attitudes (in theory based in Bank's transformative approach*). The authors evaluated the reliability and validity of instrument, that especially measurer multicultural attitude in education</p> <p><b>Psychometric analysis</b> The fraction of the model that was definitely used for the logical derivation of items was Bank's transformative approach of Know, 7-items, example item «I know that social barriers exist », empathy (Care) 6-items, example item «I am not sensitive to language uses other than English», and experience (Act), 5-items, example item «I actively challenge gender inequities». The preliminary version of the instrument was composed by 28-items. In the final version of the instrument was considered only 18-items (Likert scale). The authors reported: for total 18 items of instruments Cronbach's alpha</p>
IDI Intercultural Development Inventory	<p><b>Description of the instrument</b> The <i>Intercultural Development Inventory</i> (Hammer, 2011) is the first cross-cultural valid and reliable instrument of intercultural competence. This instrument has been further validated at the IDI by Paige et. Al. (2003) and Hammer et al (2003) – a validation confirmed by Bennett (1986, 1993). This instrument was developed to measure orientations towards cultural differences described in the DMIS (<i>Developmental Model of Intercultural Sensitivity</i>) of Bennett(1986, 1993).</p> <p><b>Psychometric analysis</b> The entire IDI is composed of 50 items, with 10 additional demographic items. The first validation of IDI was composed of 60-items. The IDI includes seven: <i>Denial, Defense, Polarization Reversal, Minimization, Acceptance, Adaptation, Cultural Disengagement</i>. Cronbach's alpha</p>

<p>WICS Wesleyan Intercultural Competence Scale</p>	<p><b>Description of the instrument</b> Wesleyan Intercultural Competence Scale Stemler, Imada, and Sorkin (2014) was developed in order to affected the limitations of intercultural competence assessment. The instrument presents 16 situations that study-abroad students probably to encounter. Combined with each situation are six distinct response options intend to reflect the six levels of intercultural competence (<i>Deniel, Defense, Minimization, Acceptance, Adaptation, Integration</i>) scheduled by Bennett (1986).</p> <p><b>Psychometric analysis</b> The validity of the items of this instrument are linked to eight measures, already identified in the literature and which evaluate personality and attitudes. These measures consist of: <i>openness (10-items, Cronbach's alpha</i></p>
<p><b>Second category</b></p>	
<p>MES Multicultural efficacy scale</p>	<p>Guyton et Wesched (2005) developed the <i>Multicultural efficacy scale</i>, primarily in order to measure the concept of multi-cultural competence as well as other dimensions: the intercultural experiences of teachers in training, their attitudes towards diversity, their competence in multi-cultural contexts etc. Its development was based on a literature review of existing tools.</p> <p><b>Psychometric analysis</b> The pilot version of Multicultural efficacy scale consisted of six sections and 160-items. The first step of data analysis reduced to 80-items. The second step of the analysis consisting of 35-items (Likert scale). The MES is divided into three sub-scales used for : <i>Experience with Diversity, 7-items</i> (example item «<i>I went to school with diverse students as a teenager</i> »), <i>Attitudes, 7-items</i> (example item «<i>Children should be taught mostly by teachers of their own ethnic and cultural backgrounds</i>») and <i>Efficacy, 20-items</i> (example item «<i>I can help students to examine their own prejudices</i>»). One additional and last item (35) intended to provide descriptive data of the teachers in terms of their conceptualizations of multiculturalism (five possible reponses «<i>Choose the position which most closely reflects your strongest beliefs about teaching</i>»). The authors reported: Cronbach's alpha</p>
<p>BICCCQ Blueprint for Integration of Cultural Competence in the Curriculum Questionnaire</p>	<p><b>Description of the instrument</b> The <i>Blueprint for Integration of Cultural Competence in the Curriculum Questionnaire</i> was developed by Tulman et Watts (2008) in order to measure the student's relationship to cultural competencies taught throughout the programme for nursing care in the first cycle and superior cycles.</p> <p><b>Psychometric analysis</b> The 31 items of this tool were extrapolated from the 67 items of the <i>Tool for Assessing Cultural Competence Training</i>, a tool used for mapping content linked to cultural competence in the medical programmes of universities. The <i>Blueprint for Integration of Cultural Competence in the Curriculum Questionnaire</i> asks students to indicate the extent to which aspects of cultural competence were included in their programme. Five principal factors were considered: <i>Attitudes and Skills Knowledge of basics, Cultural Communication, Knowledge of Theory, Knowledge of Key Concepts</i>. The internal validity of the instrument was calculated for these 5 factors as well as for the tool in its entirety. The authors reported: Cronbach's alpha</p>

\* «Based on specific stages of curriculum reform that could aid in measuring attitudes toward multiculturalism and that would serve a need that is now being addressed across many institutions of higher education» (Munroe & Pearson, 2006, p.820).

Cronbach's alpha: to provide a measure of the internal consistency (reliability) of a test or scale; it is expressed as a number between 0 and 1

ICC Intercultural communication competence	<p><b>Description of the instrument</b>                  The <i>Intercultural communication competence</i>, developed by Arasaratnam (2009), is in a preliminary phase of development and empiric validation. The dimensions of this tool were created to evaluate the capacity of an individual to adopt certain behaviors linked to interculturality as well as interpersonal competencies and competencies in interacting with people from other cultures.</p> <p><b>Psychometric analysis</b>                  The construction of the instrument was based on a selection of certain items <i>items</i> (Likert scale) of four dimensions belonging to existing tools in the literature: <i>Attitude towards other cultures</i> (8-items, Cronbach's alpha)</p>
MTCS Multicultural teaching competency scale	<p><b>Description of the instrument</b>                  The <i>Multicultural teaching competency</i> scale was developed by Spanierman et al. (2010). This instrument measures teachers' multicultural skills and knowledge. In developing this scale, the authors specifically focused on finding a definition for competence in multicultural teaching.</p> <p><b>Psychometric analysis</b>                  In the preliminary version, the scale was composed of 56-item (Likert scale) but only 16-item (Likert scale) were analysed to test its final factorial structure. The tool is composed of two subscales: the <i>Multicultural Teaching Skill</i> (10-items; example item «I consult regularly with other teachers or administrators to help me understand multicultural issues to instruction») and the <i>Multicultural Teaching Knowledge</i> (6-items; example item «I have a clear understanding of culturally responsive pedagogy»). In the version with 58-items, Cronbach's alpha</p>
TCBS Teacher Cultural Beliefs Scale	<p><b>Description of the instrument</b>                  The <i>Teacher Cultural Beliefs Scale</i> was developed by Hachfeld et al. (2011) to evaluate the different multicultural and egalitarian beliefs towards immigrant students of the school.</p> <p><b>Psychometric analysis</b>                  To develop the items concerning multicultural and egalitarian beliefs, the authors used a multi-stepped procedure by starting with an examination of the definitions of these concepts in existing social psychological research. In order to test the validity of the instrument, 2 different studies and two different scales were used, with beginner teachers and university students for the first and second study respectively. The instrument is composed of 10 total items (Likert scale): six items which measure the <i>multicultural beliefs</i> (Cronbach's alpha)</p>

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