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# STIMULATING INTERCULTURAL INTELLECTUAL CAPABILITIES IN INTERCULTURAL COMMUNICATION

TESTING AN INNOVATIVE COURSE DESIGN

Tatiana Antonenko



Tatiana Antonenko Stimulating intercultural intellectual capabilities in intercultural communication



STIMULATING INTERCULTURAL  
INTELLECTUAL CAPABILITIES  
IN INTERCULTURAL COMMUNICATION

TESTING AN INNOVATIVE COURSE  
DESIGN



UNIVERSITEIT VAN AMSTERDAM  
*Graduate School of Teaching and Learning*

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STIMULATING  
INTERCULTURAL INTELLECTUAL CAPABILITIES  
IN INTERCULTURAL COMMUNICATION

TESTING AN INNOVATIVE COURSE DESIGN

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ter verkrijging van de graad van doctor

aan de Universiteit van Amsterdam

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## PREFACE

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# CHAPTER 1

## INTRODUCTION

“Just as iron rusts from disuse, even so does inaction spoil the intellect”  
-- *Leonardo da Vinci, Italian scientist, architect, sculptor and inventor*

Having taught for over 10 years at Tomsk State University at the Faculty of Languages, interaction with the students was one of the main drivers during my classes – to see how motivated and dedicated students would get the best out of themselves in the time available, and grow into more capable professionals and stronger personalities. It was, however, also difficult to push for a lot of interaction as this would require students to go ‘the extra mile’ in many aspects with the system not being appreciative of it in terms of rewarding the extra efforts. The question I have asked myself numerous times is ‘Are the extra interactive efforts worth the while for the students beyond the knowledge they are supposed to obtain?’. This study provides me with the opportunity to dig deeper into this question, look at effects of a different way of teaching; teaching with a different focus and with different aims, providing the students with ample opportunities to grow and develop.

### 1. INTERCULTURAL COMMUNICATION, COMPETENCE AND INTELLECTUAL CAPABILITIES

Intercultural communication (IC) is an essential part of the contemporary world and becoming increasingly important with increasing levels of globalisation, the IT and internet revolution, and increasing levels of mobility of people and companies globally (Hall, 1959; Yore, Bisanz and Hand, 2003; Torres, 2005). Misunderstandings and cultural miscommunications with representatives of other cultures pose the need to reconsider and improve IC between people working in intercultural environments. The importance of studying IC by students from any background is recognised as a vital need to promote mutual understanding between intercultural communicators from different cultures communicating with each other.

Though the importance of IC has been largely acknowledged and accepted, there are different views and practices on how education and university courses should

contribute to – and *de facto* do – better IC in today’s world. Researchers in the field of IC are convinced that higher order learning and higher order cognitive processes like critical thinking, elaboration, argumentation, and self-reflection are important as part of a course in IC, but in practice many courses have not yet implemented this consensus. In fact, many courses on IC in the past have focused, and still do so today, on lecturing about knowledge of IC or have been designed to talk and lecture about intercultural communicative competence (ICC) within a foreign language (Saphonova, 1992; Little, 2000; Leask, 2005; Eisenchlas and Trevaskes, 2007). Also, this is still often the case in the context of teaching Intercultural Communication in Russia in general and at Tomsk State University (TSU) in particular. Education is like the ancient Indian proverb: “If you give a man a fish, he will be hungry tomorrow. If you teach a man to fish, he will be richer forever”. Presenting intercultural knowledge to learners instead of making them work with it, and experience it, really developing competences and intercultural intellectual capabilities (IIC), is like teaching someone to fish. In teaching university courses, still often, we are limited to “feeding students with fish, rather than teaching them how to fish themselves and be richer forever”.

Going beyond this view of teacher-centred learning, with the teacher as the centre and knowledge provider of the class, many authors have focused on internalising knowledge and international experiences by aiming to grow competences: intercultural communicative competences (Kim, 1994; Byram, 1997; Lustig and Koester, 1998, Sercu, 2002; Renshaw, 2004; Williams, 2005; Deardorff 2006, 2009), and to create a focus on higher and more complex levels of learning (Burbules & Berk, 1999; Belluigi, 2009). Stimulating different types of IC has become more important than just knowledge absorption alone, for any university programme, but especially for language programmes incorporating IC in their curricula (Lustig and Koester, 1998; Sercu, 2002). Stimulating intercultural competences is like teaching learners how to fish, because once they acquire competences, they can be applied in multiple situations and settings anywhere and anytime, making the learner ‘richer’ forever.

Another way of looking at personal development is through intellectual development (Kholodnaya and Shavinina, 1996; King and Baxter Magolda, 2005; Matsumoto, Leroux, Ratzlaff, Tatani, Uchida, Kim, and Araki, 2001; Arasaratnam and Doerfel, 2005; Shavinina, 2010). The focus of intellectual development is on intrapersonal growth and development that takes place within a person. Through cognitive and meta-cognitive experiences and learning, individuals develop intellectual capabilities – based on experiential learning (Kholodnaya, 2002). Once capabilities are mastered – learning how to fish – learners can aspire to a next level of capability and maturity. Linking intellectual development to the specific case of internalising aspects of Intercultural Communication, the focus of this strand of literature is on intrapersonal intercultural intellectual development; i.e. about personal autonomous learning and growth. Growth occurs through various mental cognitive processes a learner is going through. Intercultural experiences – in this view – are seen as inputs into the experiential learning process that takes place at the cognitive dimension of a person. At the cognitive dimension, they can create disequilibria that start a mental process of thinking, contemplation and reflection on existing beliefs and values,

convergent and divergent thinking processes, that may in turn lead to different mental outcomes.

We agree with and aim to combine both strands of thought that state that emphasis in university courses should be placed on intellectual development, and on stimulating intercultural competences, so that learners truly internalise what they see, feel and hear. The stronger the intrapersonal process students have to go through, the longer-lasting their effects, the more fundamental the changes in a learner, and the more students can benefit from the course, both in- and outside the classroom. Especially for a course on IC, the lessons learnt and experiences gained have ample value in multiple other situations in life. The question for course designers then becomes how we can integrate the literature on intellectual development with the more interpersonal approach to developing intercultural communicative competences and how this integration should be reflected in course design.

## 2. AIMS AND STRUCTURE

This study aims to design and implement a new course in Intercultural Communication that stimulates both intrapersonal and interpersonal growth in IIC of learners. To that aim, we present a new model focused on growth of intercultural intellectual capabilities (chapter 2), develop course design parameters and course design specifications based on that model (chapter 2), test the measurement instruments for measuring IIC and higher order cognitive processes (chapter 3), test the validity of the course design (chapter 4), and run and measure the effects of the full experimental course in IC on a large group of students (chapter 5).

## 3. THE THEORETICAL MODEL

ICC consists of dimensions that various authors have touched upon: a (socio)linguistic component, a cognitive and operational component (behavioural, skills), and an affective component. Interculturally competent communicators are able to link their individual intrapersonal learning processes to intercultural dialogue with others who have gone through different experiences. Growth of ICC requires more than skills; it requires both intellectual and psychological individual learning that builds on a complex mental architecture. It is this focus on growth of intellectual capabilities and intrapersonal learning aspects of ICC that links it to IIC.

Through experiences and experiential learning, IIC grows because the experiences create disequilibria in a person's mind, setting a cognitive process of development going (Kholodnaya, 2002). This process is fed in part by interpersonal experiences gained as a result of interaction with others. The combination of interpersonal experiences with intrapersonal experiential learning cause the learner to go through the cognitive (first dimension), meta-cognitive (second dimension), intentional (third dimension) and intellectual capability dimensions (fourth dimension) of growth leading to growth in IIC. New experiences create disequilibria that stimulate critical cultural awareness, cultural stress tolerance and the willingness to experi-

ment with the cultural self. The more these are stimulated, the stronger the intrapersonal process of growth of IIC is expected to be.

Interpersonal dialogue strengthens this process by providing more experiences that feed into the intrapersonal growth process. Intra- and interpersonal experiences are also linked as an outcome of growth of IIC. Interpersonal behaviour can be seen as the manifestation of intrapersonal intercultural growth and maturation. Once a learner has acquired new IIC and has created shared meanings, new frames of mind, divergent ways of thinking, new cognitive schemata, epistemological styles and new ways of coding information have grown. From this point onwards, the full process of further intercultural intellectual growth can start anew when new experiences feed into the cognitive dimension of the human intellect, in a continuous feedback loop.

#### 4. MEASUREMENT INSTRUMENTS

Many measurement instruments to measure ICC have been developed and used in practical courses on IC over time (Fantini, 2006; Sinicrope, Norris and Watanabe, 2007; Gottfredson, 1997). For the purpose of measuring IIC and related complex cognitive processes that occur at the fourth dimension, we will analyse what measurement instruments to select, if necessary to redesign, and to use.

Our model of IIC depends on four Course Design Parameters (CDP): critical cultural awareness, cultural stress tolerance, willingness to experiment with the cultural self, and learning in a dialogue, as well as related psychological traits that affect growth in intercultural and intellectual competences positively. These traits are openness, empathy, tolerance for ambiguity, creativity, emotional resilience, and behavioural flexibility. Our search for measurement instruments that cover these CDP and psychological traits have resulted in the selection of two instruments: (1) ICAPS-46 (Matsumoto et al., 2001) to measure the intrapersonal process of growth in IIC, and (2) INCA (INCA project, 2007) to measure the interpersonal dimension of IIC growth. It is assumed that growth in IIC requires learners to go through all four of the dimensions of intellectual development: the cognitive, meta-cognitive, intentional and intellectual capability dimensions (Kholodnaya, 2002). In addition to the two aspects of IIC, we also want to measure two processes typical for intellectual capability, the fourth dimension of the theoretical model: critical thinking and self-reflection. For critical thinking we choose the MSLQ-CT (Pintrich et al., 1991) instrument, and for self-reflection, we created the Self-reflection instrument. Finally, in order to aid course design validation, we select the IMI instrument (Ryan and Deci, 1992) to measure intrinsic motivation. Though not directly, an output sought after from the viewpoint of our theoretical model, intrinsic motivation provides information about how much students enjoy the course; and therefore insight into their levels of engagement and openness to the course and its course aims.

All five instruments are tested for internal validity and reliability with the Cronbach alpha values for separate factors and the instrument as a whole (internal validity), and with Pearson correlation coefficients between instruments (discriminant validity). With three testing occasions, we have ample opportunity to evaluate the

quality of the instruments and by revising items and factors to improve validity and reliability before commencing with the full experimental course on IC.

## 5. COURSE DESIGN

Based on the theoretical model, the course needs to include activities that enhance critical cultural awareness among students, stimulate their tolerance to cultural stress and encourage them to be open and willing to experiment with their cultural selves. The course also needs to stimulate development of interpersonal experiences through dialogue with others. We design the course in IC based on CDP and Course Design Specifications (CDS) that are content-related, pedagogical and comprise of various teaching formats.

The *intended* course design is based on the CDP and CDS that we derived from the theoretical model. The intended course design is the one that exists in the minds of the course designers. We present the course design in chapter 4. The *implemented* curriculum is the operationalised course design as it is *de facto* conducted in the classroom. It is manifested by how it is *perceived* by the students and teachers with whom it has been put in use. Ideally the implemented and perceived course matches the intended course design; i.e. the course as it was given matches the CDP and CDS. In chapter 4, we present and test the course design.

In this study we are then able to test the validity of our course design, by making use of student evaluations, learner reports, learner questionnaires, teacher notes, levels of intrinsic motivation of the students, and time-on-task measurements regarding the course as it is *de facto* implemented. For the trial course run, these measurements lead to suggested modifications that are implemented before the full experimental course is taught. During the full experimental course, measurements will also be taken to see whether the modifications from the trial course have had an effect and to see whether the course design is validated.

## 6. EFFECTS OF A DESIGNED COURSE ON IIC

Our study culminates in chapter 5 where we will present the results of a full run of the experimental course on IC. The course design is grounded in the theoretical foundation of growth of IIC through intra- and interpersonal experiences (chapter 2). The course design is based on the CDP and CDS that follow from the theoretical model and is tested for validity in the trial course (chapter 4). The instruments used to measure the effects of the designed course on growth in intra- and interpersonal IIC, critical thinking and self-reflection have been tested twice and have been validated (chapter 3). We have implemented a pre-test post-test design with swapping panels (Shadish, Cook and Campbell, 2002) to test whether the course positively affects levels of intra-IIC and inter-IIC of the participants, and whether participants' levels of critical thinking and self-reflection are affected significantly. In chapter 6 we provide a short summary of our findings, a review of the total research and an analysis of strengths and weaknesses of this study as well as points for further research.



## CHAPTER 2

# A MODEL FOR FOSTERING GROWTH IN INTERCULTURAL INTELLECTUAL CAPABILITIES

"We have to invest in our intellectual capability, because it is the intellectual horsepower of the country that will create new wealth."  
-- *US Secretary of Energy, Steven Chu (20.03.2009)*

### Abstract

In the times of increased global interdependence, intercultural competence is a skill that is increasingly emphatically called for everywhere in the world. In intercultural communication, when confronted with problems that involve a diversity of perspectives, citizens need to be able to create shared perspectives and common goals. When mutual understanding and respect are in place, chances increase that through peaceful cooperation a better world can be created.

The intercultural skills call for more than being knowledgeable about cultures or being aware that cultural issues can impact intercultural communication. They imply that a fundamentally different frame of mind is developed, that a transformation takes place from a person who perceives information from a mono-cultural perspective to a person who can handle information that has culturally diverse and unfamiliar roots from a multicultural perspective. This process of diversification of personal perspectives requires the development of a more mature intellect, of an intellect that can apply already (partly) acquired intellectual, cognitive, meta-cognitive and intentional capabilities to intercultural diverse situations and problems. Intercultural development then comes to mean that a learner is developing "the ability to integrate cognitive, meta-cognitive, intentional and intellectual knowledge, self-reflective skills and awareness to act in intercultural mature ways" (King and Baxter Magolda, 2005: 572).

This chapter pursues two aims. First, it presents the developmental model of intercultural competence that undergirds the investigation we report on here. The model perceives of the intercultural competent person as a mature intercultural thinker in the sense described above. It supports the cognitivist argument that an intercultural world view and intercultural intellectual architecture need to be in place before intercultural behaviour can be successfully developed and applied in intercultural communication. Secondly, the chapter explains how

this developmental model can be used to guide teaching practice, deriving four course design parameters from it that should guide the course designer if a course wants to foster growth in Intercultural Intellectual Capabilities (IIC).

Course design parameters make explicit what the outcomes of successful participation in an IIC course should be and what intellectual capabilities a course should foster in order to support participants in their development towards more mature intercultural communicators. These intellectual capabilities will be termed ‘the ability to experiment with the cultural form of the self’, ‘the ability to experience the world from different points of view’, and ‘the ability to manage any stress arising from intellectually disturbing experiences’.

As we see it, intercultural intellectual growth will be stimulated most when learners experience situations that make them aware (*critical cultural awareness*) of the incompleteness of their intellectual capabilities for fully understanding intercultural issues. These experiences set an intrapersonal dialogue going that stimulates learners to (re)consider what causes their feelings of disturbance and manage the stress accompanying this instability (*cultural stress tolerance*). When an individual can – so to speak – interrogate the cultural adequacy of his current intellectual intercultural capabilities in an *intrapersonal dialogue* and pin down the intellectual nodes in the cognitive architecture that seem to be in need of re-construction, experimentation with possible solutions may lead to a new stability in the system (*experimentation with the cultural form of the self*). This cycle of interrogating one’s intellectual capabilities – pinning down inadequacies, experimenting with solutions that can create new stabilities, and actually creating a new but enriched stability in one’s intellectual intercultural architecture – we will argue – constitutes intercultural learning and development towards more advanced intercultural intellectual competences and capabilities (IIC).

*Key words: Intercultural development, Intercultural Communicative Competence, Experiential learning, Intellectual development, Intercultural Intellectual Capabilities, Course design parameters*

## 1. INTRODUCTION

Intercultural Communication (IC) has become a part of everyday routine in the current age of globalisation and intercultural contacts (Yore, Bisanz and Hand, 2003; Torres, 2005). Moreover, it has become a competence that is deemed essential for any professional work in an intercultural environment. The importance of acquiring intercultural communicative competence (ICC) by students from any background is recognised as a vital skill to create mutual understanding between people from different cultures (Scollon and Scollon, 1995; Sercu, 2002; Samovar, Porter and McDaniel, 2008; Byram, 1997) and act interculturally when interculturally loaded problems arise or intercultural communication is endangered because of lack of understanding or respect that arise from interculturally diverse world views.

Together with the universal call for interculturally competent citizens the need is growing for courses that can effectively foster ICC. Even though a relatively large body of theoretical research is available (e.g., Byram, 1997; Kramsch, 1998; Savignon and Sysoev, 2002; Sercu, 2009, Risager, 2007; and many others), practical implementation falls somewhat behind (Chen, 2001; Sercu et al., 2005; Eisenchlas and Trevaskes, 2007). This is not because examples of effective approaches would not be available (see, e.g. Byram, Nichols and Stevens, 2001; Corbett, 2003; Alred, Byram and Fleming, 2006), but because the majority of foreign language classes are still mainly conducted within the parameters of promoting communicative competence in a foreign language and do not reflect developments in academic theoretical work on ICC of the last decade (Chen, 2001; Sercu, 2002; Eisenchlas and Trevaskes, 2007).

Thus development of ICC in an individual is often the result of the learner's individual capabilities and interests, not of formal educational efforts. Learners may become aware of intercultural issues and come to realise the importance of intercultural competence because of personal interculturally meaningful experiences, not through participation in a (foreign language) course that aims to foster intercultural growth. ICC is quite often – naively – seen as an almost automatic outcome of intercultural contacts and information (Leask, 2005). However, already Allport (1954), Amir (1969) and later authors like Williams (2005) showed that intercultural exposure does not automatically lead to more intercultural world views or interculturally skillful behaviour. In countries where explicit attention to interculture has become an officially recognised educational attainment target (Byram and Risager, 1999; Sercu et al., 2005), teaching does not necessarily also pursue intercultural learning aims, despite its paying attention to phrases, such as 'broadening the learners' horizon' or 'developing intercultural competence in learners'.

When educational initiatives with a view to broadening the learners' horizon, fostering an interest in cultures or developing the skill to compare cultures are actually taken, these mostly are not grounded in theories of intercultural development. They may therefore fail to have any effect on learners, either because the activities are too far above the learners' current understanding of interculture or because the activities are not powerful enough to cause substantial disturbance in a learner's current ways

of perceiving and acting upon the worlds. A third reason might be that these initiatives only tap into one dimension of intercultural competence (e.g., the emotional dimension), but fail to also address other dimensions (e.g., the cognitive, meta-cognitive or intellectual dimensions).

### *1.1 Aims of this Chapter*

This chapter aims to present and discuss a model in which course design parameters can be rooted for developing courses in Intercultural Communicative Competence (ICC) or Intercultural Intellectual Capability (IIC) as we will come to call it later.

The model builds on previous work carried out in Russian experiential psychology, especially work on 'cognitive experience' and 'intellectual development' (Arina and Koloskova, 1989; Kholodnaya, 1983, 1990, 1993, 1997, 2002; Krutetskii, 1968, Shavinina, 1994, 1995, 1996, 2001, 2008; Shavinina and Kholodnaya, 1996; Vygotsky, 1978). This work suggests that experiences that cause a disequilibrium in the individual learner's current experience of the world, create opportunities for learning. In case of intercultural learning opportunities, the learner may construct (more) interculturally oriented frames of reference at the cognitive, meta-cognitive, intentional and intellectual levels of the intellect. This inner (re)construction process may lead to changes in an individual's intellectual architecture, which may become better adapted to approaching and processing intercultural experiences, i.e. become a successful intercultural communicator. Such development will become manifest in (slightly) changed approaches to new experiences in communicative behaviour in intercultural situations, in interculturally loaded problem situations, or ethical issues. This model allows us to derive CDP that can guide the conceptualisation and actual design of specific ICC courses.

The following research questions have guided our thinking:

- 1) What theory of human development can courses in ICC be grounded in?
- 2) What outcomes will a course on IIC work towards?
- 3) What course design parameters (CDP) follow from the answers to these two questions?

### *1.2 Structure of the Chapter*

In the next sections, we will first define what characterises an interculturally competent person. Then we move to discussing a particular model of intellectual development (Kholodnaya, 2002) rooted in experiential psychology, and demonstrate that it can be applied to describe and explain growth in intercultural intellectual capabilities (IIC).

Next, growth of IIC is explained in terms of changes within the four dimensions that Kholodnaya (2002) distinguishes: the cognitive, meta-cognitive, intentional and intellectual dimensions of intercultural intellectual capability. Intercultural intellectual ability is then seen as comprising particular divergent and convergent intellectual capabilities, explicit and implicit learning abilities as well as different knowl-

edge perception styles, which together affect an individual's intellectual picture of the world (Shavinina and Kholodnaya, 1996) that is responsible for performance and/or achievements, also with respect to interculture.

Before moving on to presenting the course design parameters (CDP) that can be derived from our conceptualisation of intercultural competence as intercultural intellectual capability, it will be argued that more advanced intercultural intellectual processing can be developed through creating learning experiences that can trigger inner "scaffolding" speech (Vygotsky, 1978). In such dialogues with the self, the intelligent mind is perceived as being in the act of reconsidering its intellectual picture of the world, i.e. the adequacy of the structure of his intercultural intellectual system: do the current frames of reference for handling intercultural information still suffice or do they need to be enlarged, re-organised or considered of less importance than was hitherto believed?

In the final part of this chapter, we will explain how our understanding of growth of IIC can be translated into general CDP, which in turn are translated into particular course specifications in chapter 4. In this final part, the importance of creating dialogic learning situations that can trigger intellectual activity that in its turn can lead to growth in intercultural intellectual capability will be highlighted.

From the above structure, it is clear that this chapter, offering a theoretically grounded definition of growth of IIC as the basis for course design in ICC, sets the scene for chapters 3, 4 and 5, that will demonstrate how the validity and effectiveness of a course grounded in theory can be investigated and measured.

## 2. TOWARDS A DEFINITION OF INTERCULTURAL INTELLECTUAL CAPABILITY (IIC)

This section describes different definitions of Intercultural Communicative Competence (ICC) and its various dimensions that have been researched over time. It has come to be recognised that ICC is comprised not only of (socio)linguistic, cognitive and operational (behavioural, skills) dimensions, but also of an affective dimension. Interculturally competent communicators link their individual learning processes to intercultural dialogue with other communicators that have undergone different experiences. Growth of ICC involves both intellectual and psychological individual learning that build upon a complex intellectual architecture. This section links ICC to IIC because of the focus of our research on the intrapersonal learning aspects of ICC development.

### 2.1 *Building on current definitions of Intercultural Communicative Competence*

Over the past many years, a lot of research efforts have gone into circumscribing intercultural communicative competence (ICC), identifying its different components, listing the (psychological) traits of character that seem to be present in successful intercultural communicators or what emotional qualities such persons demonstrate, identifying what behaviour or demonstrated skills seem to be manifestations of intercultural competence or where in human language manifestations of

people's culture are present (for an overview of these research efforts, see, e.g., Deardorff, 2006, 2009; Lustig and Koester, 2003). Recently, effort has gone into identifying the thinking skills that undergird intercultural competence (see, for example, Baxter Magolda, 2001; King and Kitchener, 2004).

*Dimensions of intercultural communicative competence*

Within (applied) linguistic research traditions, focusing on language as the means for communication, communicative competence (CC) came to be defined as comprising grammatical, socio-linguistic, discourse and strategic competences, with Canale and Swain being considered the seminal theoreticians of CC of that time (Canale and Swain, 1980). The realisation that communication is affected also by socio-cultural variables and that socio-cultural relationships are manifested in language, for example, in the fact that different languages use different registers, led to the explicit distinction of sociolinguistic competence as an essential part of communicative competence. In 1982, the linguist Muriel Saville-Troike put forward that “communicative competence must be embedded in the notion of cultural competence” (1982: 22). Also other linguists of her generation and beyond, such as Dell Hymes or Michael Halliday, drew attention to the fact that language is a social act and that one needs to know what to say to whom and how to say it in appropriately selected language, but did not go further than considering culture as background knowledge useful in acts of communication.

About a decade later, theoreticians like Byram (1989) or Kim (1994) came to circumscribe intercultural communicative competence (ICC) as comprising not only of a (socio)linguistic, cognitive and operational (behavioural, skills) dimension, but also an important affective dimension. “Affective competence” (Kim, 1994: 395) was exemplified as our emotional capacity to deal with stress when communicating with people from differing linguistic and cultural backgrounds. Along similar lines, Matsumoto et al. (2001) put forward emotional regulation management in response to intercultural experiences as an important requirement for intercultural development, alongside other psychological constructs, such as openness and flexibility, interpersonal security, tolerance of ambiguity, and empathy, which help learners to cope with stress and conflict throughout the process of becoming intercultural communicators (Furukawa, 1997; Byram, 1997; Sercu, 2002).

In 2002, Byram, Gribkova and Starkey circumscribe intercultural competence as “the ability to ensure shared understanding by people of different social identities<sup>1</sup>, and their ability to interact with people as complex human beings with multiple identities and their own individuality” (Byram, Gribkova, and Starkey, 2002: 5). Implied in this definition is the view that interculturally competent communicators can bring an awareness of their individual socialisation processes and its outcomes to an intercultural dialogue. They are aware of and remain open to others' identities that have arisen from different socialisation processes. These largely idiosyncratic

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<sup>1</sup> *Different social identities may be traced back to the particular national, ethnic, social, regional, professional or institutional communities into which a person has been socialised (Byram & Zarate, 1995; Sercu, 2002).*

developmental processes may have given rise to different world views, interpretative schemes, preferences for particular communicative styles, meta-cognitive insights regarding what constitutes, for example, an efficient negotiation, different metaphors or prototypes, etc. Yet, such interculturally competent individuals are able to contribute to creating shared understandings among people of different social identities. They can interact with complex human beings with multiple identities because they are prepared and willing to reconsider their own views and interpretations in the light of the new identities and ideas they are confronted with. In addition, such individuals can apply these skills in socio-culturally loaded communicative situations, managing any intercultural stress arising from lack of clarity as to how to interpret participants' socio-culturally shaped ways of reasoning, reactions or behaviour.

Building on Watson and Glaser's (1994; quoted in Garseen, 1996: 213) definition of critical thinking, and Stronge's (2002) definition of self-reflection, this complex of intercultural abilities can be referred to as critical cultural thinking which in part overlaps with self-reflection. Critical cultural thinking is conceived of as the persistent and intentional effort to examine any cultural belief or supposed form of cultural and intercultural knowledge in the light of new evidence that supports it or does not seem to support it (Stronge, 2002; Ten Dam and Volman, 2004). It can also be viewed as the intellectual ability to recognise thinking problems, weigh intercultural evidence, interpret intercultural misunderstandings or recognise the existence (or non-existence) of logical relationships between propositions. Self-reflection is analytical introspection, continuous reconstruction of new intercultural information and transformation of personal beliefs and skills (Stronge, 2002). A critical cultural thinker can draw warranted conclusions and generalizations concerning intercultural matters and test these provisional conclusions by applying them to new intercultural situations and new intercultural experiences to which they seem pertinent. A critical cultural thinker is also able to take in new intercultural experiences and views and engage in analytical introspection of these experiences and views, i.e. to self-reflect upon them. Critical cultural thinking and self-reflection will involve quite some intellectual stress as the learner has to cope with as yet unclear answers to disturbing questions and inner reflections that may not (yet) match new incoming information and experiences. Any person going through a disturbing and disruptive intercultural experience will need to be prepared to accept that one's understanding of the world is as yet incomplete (DeRoma, Martin, and Kessler, 2003).

Even if other components of ICC have been distinguished in the literature (for a chronological overview of conceptualisations of intercultural competence, see Risager, 2006; 2007), we focus on developing critical cultural awareness, experimenting with the cultural self, and cultural stress tolerance as the main components of ICC. These are the most crucial components that matter both in intercultural competence and in intellectual learning processes. Thus, we will not focus on linguistic, sociolinguistic or discourse competence for example, three other major dimensions which tend to be considered important parts of intercultural speaker's communicative competence in a foreign language (Byram 1997), nor will we focus on culture-general or culture-specific *savoirs* (Byram, 1997) as the body of cultural

knowledge an intercultural competent speaker possesses or should possess (Byram, 1997).

From the above clarification of Byram, Gribkova and Starkey's (2002) definition, it will be clear that we will focus on inner cognitive developmental processes here and not so much on (foreign) language acquisition, the acquisition of a body of culture-general or culture-specific knowledge or visible manifestations of intercultural competence, e.g. in intercultural appropriate behaviour. Being able to handle language appropriately, and being able to bring cultural knowledge adequately to intercultural communication can be considered manifestations of the underlying psychological and cognitive basis which we will come to call intercultural intellectual capability, but they will not be in focus in this study.

Indeed, we will focus on the individual human mind and its capacity to process new intercultural and cultural *savoirs* presented to her. We will conceive of the human mind as a developing cognitive, meta-cognitive, intentional and emotional dynamic system that has to become aware of possible differences in interpretation of intercultural events (*cultural awareness*), learn how to handle new information critically (*savoir-apprendre/ savoir-comprendre*), be willing and intellectually able to engage in disturbing intellectual challenges to one's understanding of the world and in experimentation with the cultural self (*savoir s'engager*) and develop intercultural intellectual capabilities (including intercultural frames of reference, views, values, beliefs (*savoir-être*) (Byram, 1997).

*How a person processes* this intercultural information may also change. Whereas at earlier stages, (inter)cultural information may have been processed in predictable convergent ways only, it may now be processed in divergent ways too. Likewise, while previously a learner might only have processed intercultural information on the basis of the particular example brought to the attention in a particular intercultural situation, at later stages this learner may be able to view examples as part of a larger system and be able to relate one to another and yet to another.

Finally, with growing intercultural competence, changes will come about in the *attributes* learners *assign* to disturbing incoming intercultural information. Whereas at lower levels of intercultural competence, a person may *feel* torn apart by doubts, feel disunited and emotionally and intellectually blocked, at later stages this person may be able to control any stress or negative appreciations arising from not being able yet to fully disambiguate incoming information.

#### *Psychological traits considered favourable to developing intercultural competence*

Because we will focus on inner cognitive developmental processes and not so much on (foreign) language acquisition, it is important to look at psychological acclimation as part of developing ICC. We find that psychological traits studied mostly are following from two core aspects that are needed for intra-personal growth: *adjustment* and *adaptability* (Lundstedt, 1963; Brein and David, 1971; Ruben, 1976; Furnham and Bochner, 1982; Furnham, 1986, Furnham, 1987; Brislin and Yoshida, 1994; Kealey, 1996; Matsumoto, Leroux, Ratzlaff, Tatani, Uchida, Kim, Araki (2001); Riemer, 2003; Williams, 2005; Matsumoto et al, 2005; Abarbanel, 2009; Osland, Bird and Gundersen, 2010).

Williams (2005) sums up several of these important psychological traits while looking at the impact of studying abroad on students IC skills, mentioning – first of all – *cognitive flexibility* and *open-mindedness*. Open-mindedness – or *openness* – includes open-mindedness to new ideas, openness to change, and high levels of *tolerance for ambiguity*.

#### *Openness and flexibility*

*Openness and flexibility* “are characterised by accepting other ways of doing things, a lack of rigidity, and an ethno-relative perspective” (Brislin and Yoshida, 1994: 90). Brein and David (1971) are among the earlier researchers stressing personality factors like rational attitudes, universalistic tendencies, open-mindedness and flexibility as important for sojourners to adjust elsewhere. In 1974, Bochner and Kelly define behavioural flexibility as “the ability to behave appropriately in different situations” while Parks (1976) further details behavioural flexibility as to be “flexible in attending to information”, to be flexible “in the response repertoire”, and to be flexible “in selecting strategies” (Parks, 1976: 16). Indeed, Martin (1987) also concludes that “the ability of behavioural flexibility was found to be one of the dimensions of ICC” (Martin, 1987: 23). Wheelless and Duran (1982) proposed communication adaptability as an important trait for developing ICC as it focuses on “the ability to be flexible and feel comfortable with a variety of people” (Wheelless and Duran, 1982: 55). Mendenhall, Stevens, Bird and Oddou (2008: 28) find that “the extended effect of inquisitiveness is often that it leads to a preparation and a motivation to exhibit or improve competencies associated with [...] interpersonal engagement” which in turn leads to the development of ICC. They use the word exploration to describe an openness and flexibility towards understanding new and different ideas, values, norms, and behaviours. Tucker, Bonial, and Lahti conceptualise openness as “the capability to accept new ideas and see more than one’s own way of approaching and solving problems” (2004: 230). Looking at the integration of emotional intelligence in engineering education, Riemer (2003), finds that EQ skills<sup>2</sup>, especially those related to flexibility, self-awareness, adaptability and higher levels of motivation, matter.

#### *Tolerance for ambiguity*

Turning to *tolerance for ambiguity*, Furnham (1986, 1987) and Furnham and Bochner (1982) found that psychological adaptation is typically associated with personal ability to deal with situations such as frustration, stress, alienation, and ambiguity caused by the host culture. Matsumoto, Leroux and Yoo (2005) find that personal growth is based on emotion regulation, critical thinking, openness and flexibility. These processes are intrapersonal and are seen as the engines for adaptation and adjustment, whereby emotion regulation is one of the answers to tolerance for ambiguity. Ruben (1976) – while laying an important foundation in academic literature regarding ICC components by integrating various hitherto different schools of thought (Wiemann, 1976) – already mentions tolerance for ambiguity (Norton,

<sup>2</sup> EQ stands for emotional intelligence, whereas IQ stands for intellectual intelligence.

1975) as one of the seven dimensions of ICC. This psychological trait is one of the unique aspects of intercultural interactions (Gudykunst and Nishida, 2001; Gudykunst, Nishida and Chua, 1986; Gudykunst, Yang and Nishida, 1985), and has been quoted frequently as an important aspect of a successful intercultural communicator must master (Nishida, 1985; Ely, 1989; Zimmermann, 1995; Furnham and Ribchester, 1995; Cushner and Brislin, 1996; Matsumoto, Leroux and Yoo, 2005; DeRoma, Martin and Kessler, 2005; Williams, 2005; INCA, 2007). King and Baxter Magolda (2005), Baxter Magolda (2001) as well as King and Kitchener (2004) argue that because there is a lot of cognitive complexity in different world views, “accepting ambiguity and understanding the basis of different world views require complex thinking skills” (King and Baxter Magolda, 2005: 577). Mendenhall et al. (2008), looking at ambiguity from the perspective of international business, refer to various literature sources confirming that coping with stress influences intercultural effectiveness positively (Arthur and Bennett, 1995; Arthur, Bennett, Stanush and McNelly, 1998; Kealey, 1996; Ones and Viswesvaran, 1998; Ronen, 1989).

#### *Cultural empathy*

Another characteristic often noted as an important psychological trait favourable to developing ICC is *cultural empathy*: “the perceptual acuity, or ability to perceive and interpret the other’s actions through a broad cultural lens” (Williams, 2005: 5). Gardner, already in 1962, suggested that universal communicators would have least difficulty in adjusting to other countries and cultures, whereby a universal communicator would have – among others – a high degree of sensitivity toward others. Ruben (1976), next to tolerance for ambiguity, also mentions empathy as a core dimension of ICC, meaning the ability to “put oneself in another’s shoes” (Ruben, 1976: 340). He argues that an empathic individual usually understands and responds well to “apparent and less apparent expressions of feeling and thought by others” and usually “projects interest and provides verbal and non-verbal cues that he or she understands the state of affairs of others” (Ruben, 1976: 349). Empathy is also mentioned as an important psychological trait in the work of Wiemann (1977), Cegala, Savage, Brunner and Conrad (1982) and the INCA project (2007).

#### *Emotional resilience*

*Emotional resilience* is another aspect mentioned by Williams (2005) of importance for developing ICC. Emotional resilience is “the ability to create a new set of social rewards to sustain one’s behavior, problem-solving abilities, or the ability to manage psychological stress” (Williams, 2005: 5; Osland, Bird and Gundersen, 2010). An emotionally resilient person – or one that can regulate emotions (Matsumoto et al., 2005) – can achieve personal growth and is able to deal with stressful feelings in a constructive way, is more tolerant for intercultural ambiguity and can recover from emotional setbacks. Out of the four main ingredients specified by Matsumoto et al. (2005), emotional resilience is mentioned as the key ingredient because “it is the gatekeeper of the growth process. If we cannot put our inevitable negative emotions in check, it is impossible to engage in what is clearly higher order thinking about cultural differences” (Matsumoto et al., 2005: 20). Abarbanel (2009) calls the acqui-

sition of skills to emotionally regulate challenging experiences in cultural encounters and transitions developing an ‘emotional passport’ (Abarbanel, 2009: 1). In their work in 1994, Wills and Barham (1994) found that emotional self-awareness was an important predictor of intercultural effectiveness, and Chen (1987) found that emotional resilience related directly to ICC. Indeed, Riemer (2003) found that emotional resilience, being the ability to perform consistently under pressure, also matters for engineering education. According to Mendenhall et al. (2008: 33): “subsequent reviews of both the global leadership and the expatriate literature support the validity of this dimension as an important contributor to intercultural effectiveness”. This view is similarly expressed in Arthur and Bennett (1995), Kealey (1996), and Ronen (1989).<sup>3</sup> In the international business literature, emotional resilience is described by Kealey (1996) as an important characteristic of working in foreign cultures. Also Kelley and Meyers assert that “the emotionally resilient person has the ability to deal with stress feelings in a constructive way and to “bounce back” from them” (1992: 34).

#### *Creativity*

Creativity is another important psychological trait favourable to growth of ICC. Adler (1972) found creativity part of the process learners would have to go through when experiencing culture shocks. Parks (1976) already mentioned a creativity and flexibility dimension. He felt that “for creativity and flexibility, an individual must demonstrate ability to be accurate ... in order to achieve personal goals in communication (Parks, 1976: 16). Riemer (2003) finds that creativity is an element of EQ learning in studies linking learning and work attitudes.

There are four criteria to having a flexible intercultural communication. They are appropriateness, effectiveness, adaptability and creativity (Parks, 1976). Creativity is described as the ability “to produce something inventive through an imaginative lens and flexible skills” (Ting-Toomey and Chung, 2005: 19). Also, creativity is among the values described by researchers as important for functioning in foreign societies, as are knowledge/learning, independence, versatility and achievement (Chase, Macfadyen, Reeder and Roche, 2004; Bohm and Peat, 1987). Carroll (1992) and Carroll and Howieson (1992) mention originality and creativity as two important characteristics of knowledge development. Finally, following Sternberg and Lubart (1995, 1999) in their creativity research, we learn more from people who are different from us than from those who are similar to us. According to Bennett and Bennett (2004) it takes creativity and flexibility to seek new approaches and bridge cultural differences. Finally, Leung, Maddux, Galinsky and Chiu (2008) and Maddux and Galinsky (2009) look at and find a relationship between living abroad and creativity. The longer and in more locations an intercultural communicator lives abroad, the more creative this person is. This relationship is consistent across a number of sub-creativity measures like insight, association and generation.

The list of described psychological traits is not exhaustive, but contains the core traits that – according to the literature – constitute part of the underlying cognitive

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<sup>3</sup> *What is meant here is the dimension of emotional resilience.*

psychological intellectual basis that undergirds manifestations of intercultural competence.

*Complex thinking skills as prerequisite for growth in intercultural competence*

From the above, it has become obvious that growth of ICC cannot but involve both intellectual and psychological developments. Growth of ICC implies the ability to perform complex cognitive operations because of the cognitive complexity inherent in the presence of diverse world views and in coming to terms with others' different experience of the world. Simplistic levels of cognitive development involving concrete thinking and the belief in absolute knowledge do not suffice in intercultural maturation processes. More advanced intellectual skills are needed that use knowledge as embedded in context, as dynamic and the results of divergent, creative thinking. Advanced intellectual skills notably also involve critical (cultural) thinking and self-reflection (Danielewicz, 2001; Stronge, 2002; Burbules and Berk, 1999, Kalkofen, 2010). Complex thinkers avoid premature thinking. They analyse, categorise, diagnose, make connections, they can think in types instead of in examples, they can develop cognitive metaphors, and are able to think symbolically, they can disengage from emotionally influenced perceptions, focusing on the issue at hand, the decision to be made, the context to be analysed, etc. (Garseen, 1996).

### 3. A MODEL OF INTELLECTUAL DEVELOPMENT

King and Baxter Magolda (2005) distinguish between three major domains of development, following Landreman (2003), Kegan (1994) and Bennett (2001): cognitive, intrapersonal and interpersonal dimensions. The cognitive domain focuses on how personal views are constructed and meanings are created (Lustig and Koester, 2003), based on how intercultural information is gained and interpreted. The intrapersonal dimension involves understanding of a person's own beliefs, values and understanding of the self as a basis upon which to base reactions and behaviours. The interpersonal dimension looks at how a person looks at the self in relation to other people (i.e. *their* personal values, views and behaviours).

King and Baxter Magolda (2005) follow Kegan (1994) that growth in all three dimensions is needed for a person to develop interculturally. The cognitive dimension evolves from a learner assuming knowledge is certain, categorising it as right or wrong and viewing differing cultural perspectives as 'wrong' to awareness and acceptance of uncertainty and multiple perspectives to the learner consciously shifting perspectives and behaviours on culture and using multiple cultural frames. Intrapersonal growth takes a learner from lack of awareness of one's own values and beliefs through an evolving sense of identity and a travel of self-exploration of personal values to the capacity to create an internal self that is open to differences and engages in challenges to one's own views and beliefs. Interpersonal development runs from using others as primary sources of identity and an ego-central way of viewing social problems to willingness to interact with others and refrain from judgement, to the capacity to engage in meaningful, interdependent relationships with various others.

Our theoretical model undergirding the investigation presented here takes account of all three developments in intercultural competence theory, namely developments in identifying different dimensions in intercultural competence, developments towards identifying manifestations of growth in intercultural competence and developments suggesting that a complex intellectual architecture must be viewed as constituting the basis for development in ICC.

A theory we found particularly enlightening in our search for a model that could appropriately represent our conviction that growth in intercultural competence can be understood as building on and at the same time stimulating intellectual growth is that presented by the Russian experiential psychologist, Marina Kholodnaya (2002). On the basis of empirical studies with a view to identifying commonalities in the intellectual architecture of gifted children, she developed her theory of individual intelligence (Kholodnaya, 1990). Kholodnaya (1997, 2002), Shavinina (2008) and Kholodnaya and Shavinina (1996) further developed it into the cognitive developmental theory of giftedness, emphasising that the theory can not only describe statically how giftedness could work, but also provide insight in the dynamic process of stimulating giftedness and intelligence.

This model of intelligence and development of intelligence or cognitive experience, is presented in Figure 2.1. It includes reference to cognitive, meta-cognitive and emotional-intentional dimensions which stand in close interaction with and are operated on by convergent and divergent intellectual capacities, the ability to learn from explicit and implicit information as well as preferred knowledge perception styles and epistemological convictions.

The *cognitive dimension* represents a person's current ways of coding information, cognitive schemes and semantic structures that filter incoming information and experiences. Having been built on previous experiences, these schemes and structures will guide/frame the interpretation of any new experience to which the individual pays attention. The *meta-cognitive dimension* represents a person's current stance towards new knowledge. This stance may be open. The individual may or may not voluntarily control incoming information and may or may not possess appropriate meta-cognitive capacities that might allow him to reflect on or make explicit in what way new information is processed. Indeed, this dimension refers to the insight that learners can exercise control over what information or experience will be considered for further elaboration, or will be allowed to instigate change in current world views, frames of mind or preferences and which will not be allowed to affect them. The *intentional dimension* represents the overall emotional and intentional stances and preferences people may develop on the basis of growing intellectual maturation. Some individuals may develop a preference for a stable conservative frame of mind, while others may prefer variability and variance as a frame of mind. Some may show an inclination to only receiving information, while others will always try to create new information. Some may be able to manage emotional stress often accompanying the realisation that one might need to change one's current view on things in the light of new information presenting itself, while others will play it on the safe side, suppressing feelings of stress through imposing existing semantic structures right away and not consider alternatives to one's current understanding of particular aspects of the surrounding world or of one's understanding of oneself.

The final dimension of the intellectual system that is prone to intrapersonal development is that referred to by Kholodnaya (2002: 110) as 'intellectual capabilities', i.e. 'certain qualities of intellectual activity which manifest themselves in certain intellectual capabilities that characterise the productivity and individual peculiarity of intellectual activity of the individual' (Ibid., 2002: 110, our translation). In this dimension complex cognitive processes like critical thinking and self-reflection take place.

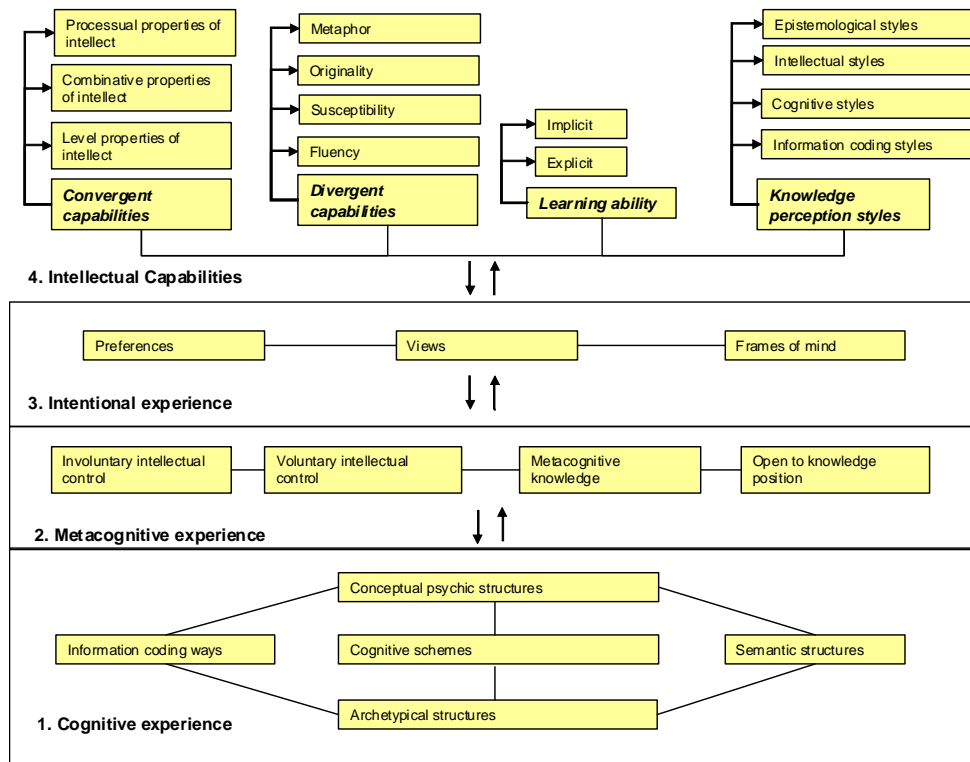


Figure 2.1. Model of the structure of the intellect (Kholodnaya, 2002).

Thus, individuals can use convergent as well as divergent capabilities to interact with the cognitive, meta-cognitive, emotional/intentional dimensions of their intellect, especially at times when disturbance is caused to one's current intellectual stance towards the world. Some will be able to learn from both implicit and explicit information presenting itself, while others may only be able to learn from explicit manifestations of something new.

The final quality is termed 'knowledge perception styles', referring to the normal approach to information processing or intellectual activity deployed by the individual. Whereas some will be able to reflect slowly about what different alternative solutions to a problem would imply, others will impulsively jump to conclusions.

Whereas some consider their own subjective interpretations of reality as knowledge, others will only consider detached objectified reality as knowledge.

From the description of the model above, it is clear that we cannot observe directly a person's intellectual stance and intellectual picture of the world. As Kholodnaya (2002) argues, we can only observe this experience of the world through observing intellectual behaviour. Intellectual behaviour refers to the way in which a person summarises information. For example, how a person reacts emotionally to a particular task this person has to carry out (for example by crying, going up the wall or procrastinating). Or for example, trying to solve a problem by turning to an expert, searching for and reading relevant background information, looking for a similar example from which an appropriate solution could be developed or thinking things through and coming up with a couple of alternative solutions that are then further scrutinised.

Having described what multidimensional structures are theorised as underlying human intellect, we can now turn to considering how *development* of the intellect can be viewed.

#### 4. INTERCULTURAL COMPETENCE VIEWED AS INTERCULTURAL INTELLECTUAL CAPABILITY

According to experiential psychology, the tradition within which the work of Kholodnaya and Shavinina can be situated, experiences may trigger development on the perceptual, affective and symbolic levels of thinking, provided that the person who lives these experiences self-initiates reflection and/or is committed to active experimentation with the self and the new insights gained from this reflective intrapersonal dialogue. In focus here are intercultural experiences. These are experiences that require individuals to take a perceptual, affective and symbolic stance towards facets of the surrounding world that present an intellectual challenge to the hitherto created cognitive experience of the world because it appears insufficiently adapted to processing the intercultural disturbing information presenting itself. To further clarify what we mean, we would like to refer to intercultural marriages. If such marriages are to stand firm, a constant re-examination will need to be carried through of one's hitherto taken for granted understanding of many specific facets of daily life, e.g. those related to time management, family life or raising one's children.

In Figure 2.2 below, we illustrate how Kholodnaya's model of personal development can be applied to a particular variant of intellect, namely intercultural intellect or, emphasising its operational side, intercultural intellectual capability (IIC). When faced with new intercultural information, an IC participant may be willing to reconsider old and create new intercultural semantic structures, intercultural archetypical structures, intercultural cognitive schemes, intercultural conceptual psychic structures and intercultural information coding styles so as to accommodate new incoming intercultural information.

This broad intellectual intercultural process does not necessarily lead to the replacement of old structures by new ones, but in many cases it does. New *intercul-*

*tural semantic structures* may replace old ones. For example, when you say ‘meat’ in Russia, Russians will think about veal, lamb, pork, as well as chicken, while in England, chicken is poultry and not meat. Living in England may induce a Russian national – in line with English semantics – to start distinguishing between the two words.

Similarly, *intercultural archetypical structures* can be perceived and processed as different but not contradicting already existing ones. An example of a difference in archetypical structures could be the use of the word darkness in a language. In some cultures darkness is seen as bad and evil, while in others it may be neutral or have a mysterious connotation.

Developing *intercultural cognitive schemes* becomes a possibility; schemes that are related to the already existing ones but – for example due to new incoming information on habits, behaviours and peculiarities of other cultures (e.g. the way foreigners are treated in different cultures) – are changing slightly.

*Intercultural conceptual psychic structures* can emerge and converge with already existing ones – for example the way people in some cultures consider silence as just silence, while in others silence has a meaning. Intercultural communicators could develop an understanding of when to employ what meaning (or no meaning) to silences in intercultural communication.

And finally, *new information coding styles* can develop just because in the society of another culture things are done differently. For example, shaking hands when welcoming someone in Western cultures is a common custom that signals you have nothing to hide. However, this custom does not convey that information in Islamic cultures. There shaking hands is rather seen as not hygienic, among others because of the weather conditions. The offering or refusal of a handshake will therefore be coded very differently in both cultures, sometimes even along different religious lines. Intercultural Competences at this first dimension consist in the voluntary reconsideration of existing schemata and in building new semantic structures and schemata that can accommodate these new intercultural relevant cognitive anchors.

If IC participants are open to intercultural experiences and the cognitive and meta-cognitive intercultural knowledge that can be drawn from such experiences (dimension 2), and if, moreover, they intend to become acquainted with and explore new views of the world, they may create new preferences, views or frames of mind as to what they are interested in and open up to (dimension 3).

Intercultural meta-cognitive experiences (dimension 2) help to set emotional and intellectual control vis-à-vis new knowledge concerning intercultural and understanding of intercultural. Components of this dimension are (1) motivation to control all information against an intercultural filter, (2) conscious (voluntary) choice to control cultural stress and develop *cultural stress tolerance* and tolerance to uncertainty, (3) reconsideration of new meta-cognitive knowledge, (4) striving for openness to new cultures, openness to otherness. Meta-cognitive knowledge can be culturally determined and *critical cultural awareness*, a critical look upon new knowledge of another culture, is stimulated at this stage of intellectual development. The concept of critical cultural awareness is related to the notions of ‘intercultural consciousness’ (Landreman, 2003) and ‘intercultural maturity’ (King and Baxter Magolda, 2005).

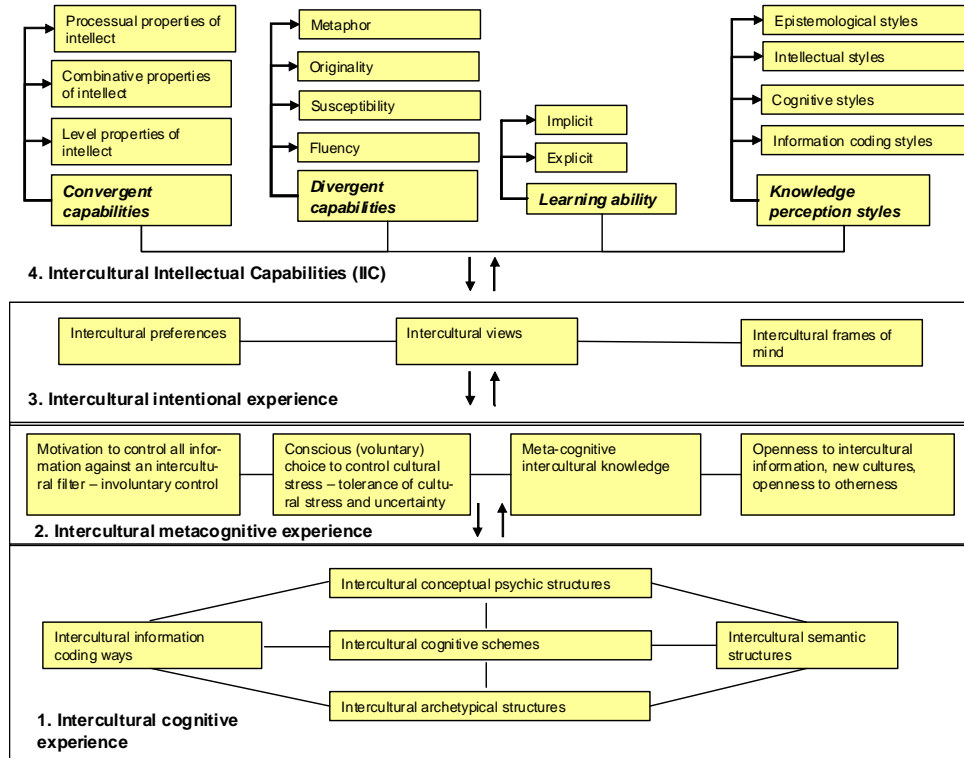


Figure 2.2. A model of Intercultural Intellectual Capability (IIC).

Intercultural intentional experiences (dimension 3) help to create new views and preferences and a new frame of mind as far as intentionally wanting to experience interculture, encouraging *critical cultural awareness*, is concerned. In terms of the acquisition of IIC, the third dimension represents a person’s willingness and intention to actually change own world views currently in place. With the changes brought about within dimensions 1 and 2 individuals have the opportunity to understand and develop within new culture(s) which leads to new intentional experiences connected directly with the new culture(s).

If IC participants are positively disposed to revisiting hitherto taken for granted understandings of cultural and intercultural issues, on the basis of changes in the foundational architecture (dimensions 1-3), they will be prepared for developing critical cultural thinking capabilities, departing from existing intercultural intellec-

tual capabilities (dimension 4).<sup>4</sup> Within this dimension, IIC include convergent and divergent capabilities, learning abilities, and knowledge perception styles. Convergent capabilities aim at operationalising intercultural, creating shared meanings (Lustig and Koester, 1998, 2003), constructing one approach to different cultures and their analysis, while divergent capabilities allow for processing intercultural in creative and unpredictable ways and arrive at original explanations and conclusions. This implies the IC participant develops openness and willingness to *experiment with the cultural self*. Moreover, divergent capabilities also include increasing levels of *tolerance for cultural stress*, i.e. the willingness to accept that it is not possible to understand everything, and that differences have to be tolerated (Ruben, 1976; Matsumoto et al., 2005). Learning abilities can become adapted to processing explicit as well as implicit intercultural information. Growth of IIC may become visible in changes with regard to preferred cognitive styles, information coding ways or epistemological styles.

## 5. TOWARDS AN INSTRUCTIONAL MODEL FOR DEVELOPING IIC

### 5.1 Intercultural development and maturation

Having described intercultural competence as a variant of intellectual capability, we can now address the question of how intercultural development or the development of intellectual capability needs to be understood. Through a comparison of different models of intercultural maturation, viz; King and Baxter Magolda's (2005), INCA's theory of intercultural development (2007), Matsumoto et al. (2001) and Kholodnaya's and Shavinina's (1996) views on development, we identified commonalities between these theories, that explain development towards intercultural intellectual maturity.

Table 2.1. summarises the comparison by looking at what the different models say about cognitive activity, emotion, picture of the world of the learner at three different stages (beginner, intermediate and advanced learner).<sup>5</sup>

The main developmental ideas in the model of Kholodnaya (2002) applied to IIC are that acquisition of experiences, expertise and development of talents lead to intercultural cognitive development. "This uniqueness consists in a more complex, rich, integrated, differentiated and unfolded structural organization of the cognitive experience of the gifted in comparison with the cognitive experience of those who were not identified as gifted" (Shavinina and Kholodnaya, 1996: 55). In other words, exceptional experts have a complex, rich, integrated, differentiated and unfolded structure of their experience. Expertise acquisition means the development of such cognitive experience (Shavinina, 2010). This links to the model of intercultural maturation by King and Baxter Magolda (2005) as well as to Matsumoto et al.,

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<sup>4</sup> This is in line with King & Baxter Magolda (2005) who argue that because of cognitive complexity in the presence of diverse world views, accepting ambiguity and understanding the basis of differing world views require complex thinking skills.

<sup>5</sup> The same levels in King & Baxter Magolda (2005) are called initial, intermediate, and mature.

(2001, 2005) in that it affects cognitive development. Intercultural cognitive developments subsequently enlarge the intercultural meta-cognitive repertoire, i.e. better functioning of self-regulation and improved levels of self-management with respect to intercultural.

For example a person can apply cultural filters to new information or tolerance to cultural stress (Brown, 1978, 1984; Flavell, 1976; Pressley, Borkowski, and Schneider, 1987; Shavinina and Kholodnaya, 1996; Shore and Dover, 1987; Shore and Kanevsky, 1993; Sternberg, 1986). Shavinina (2010: 34) states: "Leites's understanding of self-regulation is identical to regulatory processes in the structure of meta-cognition, which are responsible for planning, monitoring, and executive control."

The approach of Kholodnaya (2002) and Shavinina (2010) clearly links the model of IIC to the model of Matsumoto et al. (2001, 2005) that centers around emotional resilience, whereby advanced learners are able to keep their negative emotions in check, thus allowing them to adapt and adjust themselves to new situations and experiences, achieving personal growth. Intercultural cognitive development in Kholodnaya (2002) also leads to enlargement of the intercultural intellectual repertoire, like developing creative and critical thinking skills and developing knowledge perception styles to include intercultural knowledge. The focus on developing intercultural knowledge links to the INCA model (2007) while the development of critical thinking skills is preceded – according to Matsumoto et al (2001, 2005) by emotional resilience; critical thinking skills that clearly represent a higher order of thinking about cultural differences. Empathy, behavioural flexibility and openness are important components of the Intercultural Competence Assessment project (2004), but also part of the other two models on intercultural maturation. Intercultural intellectual capabilities, for advanced learners, lead to restructuring information coding ways, cognitive schemes, convergent and divergent capabilities when there is a willingness to reconsider previous world views, openness and behavioural flexibility as well as the skill of putting oneself in the mind of someone else.

The comparative analysis of the model of Kholodnaya (2002) and our adapted model of IIC that encompasses previous models, lays bare that development in the intellect (in its different dimensions) is subject to change at different dimensions of an individual's intercultural intelligence, namely the cognitive, meta-cognitive, intentional and intellectual dimensions. From the above it has also become clear that IIC growth involves the willingness and ability to engage in a critical cultural dialogue with the cultural self, considering anew one's understandings of and ways of viewing the world, one's degree of openness to intercultural issues, one's behaviour in intercultural dialogue, one's classification of cultural information, one's perceptions of what constitutes knowledge.

Dialogue participation is also found to reduce anxiety about intergroup contact, and to enhance skills related to communication across differences, conflict exploration, comfort dealing with diversity, and perspective taking. Finally, participation in intergroup dialogues, as a participant or a student facilitator, seems to promote more active involvement in social justice work (Zuniga, 2003: 18).

Table 2.1 Comparison of models on intercultural maturation

<i>Author/model</i>	<i>Beginner</i>	<i>Intermediate learner</i>	<i>Advanced learner</i>
King and Baxter Magolda, 2005 (information derived from their model of intercultural maturation)*	The learner assumes that knowledge is certain and knowledge claims can be readily judged as right or wrong. Thus it is difficult to accept different perspectives. Knowledge comes from authorities, not from within. The learner considers differing cultural perspectives as wrong, rather than different.	Views about knowledge shift in the learner's mind from knowledge as certain to increasingly acknowledging the uncertainty associated with making a knowledge claim. The learner relies less on authorities and more on personal processes. More openness to different perspectives: different people can hold different claims.	In the learner's mind there is a shift to knowledge as constructed and as grounded in context. Judgements derive from personal experience, and other evidence and others' experience.
	The learner has a lack of awareness of own values and social identity, lack of understanding of other cultures and lack of understanding of the own culture. Externally defined beliefs. Differences are viewed by the learner as a threat to identity.	The learner experiences an evolving sense of identity – different from other external perceptions. Tension between external and internal definitions results in self-exploration of values, beliefs, etc. The learner recognises legitimacy of other cultures.	The learner has the capacity to create an internal self – engages challenges to one's views and beliefs openly. Integrates aspects of self into one's identity.
	Dependent relations with similar others a	Willingness to interact with others and	The learner has the capacity to engage in

Table 2.1 Comparison of models on intercultural maturation

<i>Author/model</i>	<i>Beginner</i>	<i>Intermediate learner</i>	<i>Advanced learner</i>
	primary source of identity for the learner. Different others are viewed as wrong. The learner views social problems egocentrically and there is no recognition of society as an organised entity.	refrain from judgment – multiple perspectives exist. Begins to explore how social systems affect group norms and intergroup relations.	meaningful, interdependent relationships with others, grounded in understanding and respect for human differences. The learner is willing to work for the rights of others.
INCA, 2007 (information derived from INCA instrument)**	The learner at this level is on the ladder of progression. They will be disposed to interact with people of other cultures, picking things up as going along. Reaction to events is core as there is no experience to work out a system of dealing with intercultural situations in general. Therefore, responses to situations will be piecemeal and improvised rather than principled, even though mostly successful in avoiding short term difficulties. Learners are reasonably tolerant of others, although may approve or dis-	The learner at this level has begun to induce simple principles to apply to intercultural situations in a coherent manner, rather than improvise reactively in response to isolated features of it. There will be evidence of a basic strategy and some coherent knowledge for dealing with situations. A 'mental map' with skills is developing to cope with experiences. The learner is quicker to see patterns in experiences and starts to draw conclusions themselves. It becomes easier to respond in a neutral way to differences, rather than	The learner at this level will combine a strategic and principled approach to a situation to take the role of a mediator seeking to bring about the most favourable outcome. Knowledge of their own culture and that of others, including work parameters, will be both coherent and reactions to situations will become more intuitive. There is a large repertoire of strategies for dealing with differences the learner can choose from. You develop empathy to look at differences from the other person's perspective.

*Table 2.1 Comparison of models on intercultural maturation*

<i>Author/model</i>	<i>Beginner</i>	<i>Intermediate learner</i>	<i>Advanced learner</i>
	approve.	approving or disapproving.	
	Learners are not tolerant to ambiguity, they experience un-structured and ambiguous situations as threatening and try to avoid them. These persons also have a low degree of behavioural flexibility and always act in the same way. They do not notice negative effects of their behaviour on others and cannot adapt. Not a lot of respect for otherness is also an aspect of a beginner. An ethnocentric approach with the own culture being right and others being wrong is a typical characteristic. Also having low degrees of empathy implies beginners do not recognise and describe the feelings of other people.	Learners are becoming more tolerant to ambiguity, feeling uncomfortable at times, but also learning to deal with unexpected situations. These persons start to become more behaviourally flexible, start to notice signals and are – to a limited extent – able to change their behaviour to adapt. An intermediate learner starts to develop respect for otherness, de-centering from one's own culture and taking the other's perspective onboard. An intermediate degree of empathy implies the importance of the other's feelings and motivation is recognised, but not always the learner acts correctly upon that.	Learners are tolerant to ambiguity and accept it as part of the intercultural engagement. They have developed multiple ways to deal with uncertainty. These persons also have a high degree of behavioural flexibility and are able to change behaviour when needed. They sense signals and adapt their behaviour accordingly. Advanced learners have a developed sense of respect for otherness, understanding that different views and cultures are natural to other persons, suspending belief about 'naturalness' of one's own culture and believe in other cultures. Empathic persons can place themselves in the other person's situation and mind.

Table 2.1 Comparison of models on intercultural maturation

<i>Author/model</i>	<i>Beginner</i>	<i>Intermediate learner</i>	<i>Advanced learner</i>
Matsumoto et al., 2001 and 2005 (information derived from the model of intercultural adaptation and adjustment)***	<p>Affect does not fuel cognitive development because there is no intra-personal willingness to change.</p> <p>The learner treats uncertainty and ambiguity regarding intercultural situations negatively – they may cause emotional stress, anger, frustration and resentment. Inter-cultural maturation of the learner through a process model takes place to a limited extent because emotions are not in check preventing complex critical thinking skills to develop.</p>	<p>In the learner's mind, affect to a limited degree fuels cognitive development.</p> <p>Uncertainty and ambiguity regarding intercultural situations are recognised by the learner and tolerated to a limited degree. They may cause limited degrees of emotional stress, anger, frustration or resentment. Inter-cultural maturation occurs inside the learner by keeping emotions in check most of the time and critical thinking skills are developed.</p>	<p>Affect fuels cognitive development in the learner's mind.</p> <p>Uncertainty and ambiguity regarding intercultural situations are recognised by the learner and do not cause negative emotions. Inter-cultural maturation is intra-personal in nature and occurs inside the mind of the learner. Intercultural maturation occurs because the learner keeps negative emotions in check and thinks critically, which leads to intra-personal development. The learner stays open and flexible towards other cultures and unexpected situations.</p>

\* Taken from King and Baxter Magolda, 2005. \*\* Taken from INCA (2007). \*\*\* Taken from Matsumoto et al. 2001, 2005.

Dialogue is both a communicative act and a learning act (Alvarez, 2007; Sercu, 2002; Oostdam and Rijlaarsdam, 1995; Braaksma, Van den Bergh, Rijlaarsdam, and Couzijn, 2001). We argue that such a two-functional dialogue not only matters for the dialogical activity with others, but more so requires a dialogue with oneself, i.e. an intrapersonal dialogue, kick-started by cognitive, meta-cognitive and intentional experiences as in the model of Kholodnaya. Intrapersonal development (i.e. learning) comes from thinking about and reflecting upon the changing external environment vis-à-vis those personal values and beliefs, trying to equilibrate the created disequilibrium(s). These intra-psychological processes contribute to intrapersonal growth which allows for deeper understanding of intercultural skills and competences, making learning more effective and for the longer run.

Interpersonal intercultural experiences thus create disequilibria that can promote intrapersonal growth. Intrapersonal growth means a person goes through the different dimensions of developing intercultural intellectual capabilities. This higher level of IIC can then manifest itself in the way a person engages in interpersonal interactions. This implies that the concepts of ‘interpersonal learning’ and ‘intrapersonal learning’ are nested because they continuously interact with each other.

## 5.2 *A model for developing IIC*

The general idea behind the acquisition of IIC, is that through experiences that create disequilibria, an intrapersonal process of development takes place. This is partially fed by interpersonal experiences gained in interaction with others (i.e. others that simultaneously develop intrapersonally). It can lead to increases in the intellectual ability to deal with intercultural issues. The model for IIC acquisition is graphically presented in Figure 2.3. This Figure synthesises in its entirety the model for IIC by combining Kholodnaya’s model for intellectual development with the theories behind learning in a dialogue as described above.

Experiential intercultural activities (Box A) form the basis of our model of stimulating IIC. These activities provide learners with the opportunities and challenges to improve their intellectual capabilities, i.e. critical cultural awareness, cultural stress tolerance and experimentation with the cultural self in the IIC context.

These are the main components of IIC as described above that students need to develop (Box C) to become fully interculturally competent. For development to occur, experiential intercultural learning activities need to create disequilibria inside learners – either directly inside the self from participating in those activities (Line a) or indirectly through dialogue with others (Lines b, c and e). The disequilibria experienced start a learning process that may stimulate the development of critical cultural awareness, cultural stress tolerance and/or willingness to experiment with the cultural self (line f). Learning takes place through intrapersonal development (Box C), fed also by interpersonal experiences (Box D).<sup>6</sup> The model of IIC focuses on

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<sup>6</sup> *In subsequent Chapters we will go into the measurement of development in IIC among learners who participate in a course on IIC, departing from disturbing cognitive experiences which set intrapersonal dialogue with the self going, aiming to create enhanced cultural critical awareness and ability to exercise control over intercultural stress.*

intrapersonal learning (Box C). Intrapersonal learning of intercultural capabilities evolves through cognitive, meta-cognitive, and intentional experiences as explained above.

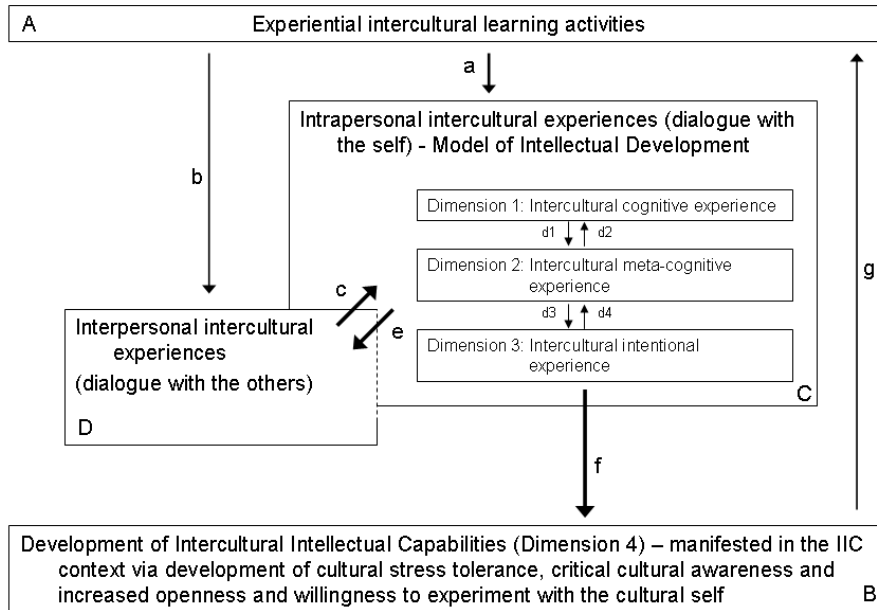


Figure 2.3. Theoretical model for stimulating ICC.

Intra- and interpersonal experiences are, however, closely linked in two ways. First of all, interpersonal behaviour and experiences can be seen as the manifestation of intrapersonal intercultural development, because a person that has become more intercultural competent, and will also show this in dialogue with the others (Line e). Secondly, interpersonal experiences contribute to intrapersonal learning, for it is also *from* the dialogue that learning experiences – and thus disequilibria that cause cognitive development – originate (Line c). A person learns from being placed in different situations with others, i.e. in a dialogue with others who have different frames of mind, values and beliefs, by being forced to listen, engage and discuss with these other persons, developing intrapersonal intellectual capabilities (Box B).

Through the interaction between intrapersonal and interpersonal experiences (dialogue with the self and dialogue with the others respectively) (Lines c and e), triggered by experiential intercultural learning activities, different characteristics of the intercultural person are developed, i.e. critical cultural awareness is raised in experiences meta-cognitively when a cultural filter needs to be applied, the levels of cultural stress tolerance are tested by staying open and consciously trying to control unease following from intercultural encounters, and – both during and following the encounter – the person can experiment with and test the cultural self following the development of divergent capabilities (Line f).

Once a person has gone through the full process of intellectual growth, new shared meanings have been created, the disequilibria are addressed or tolerated, and new frames of mind may have developed inside that person, as well as new semantic structures, new schemata, new ways of thinking, new epistemological styles and new ways of coding information. In other words: the person has developed IIC (Box B). If then – on another occasion – this person engages again in experiential intercultural activities (back through line g), this personal development is not lost, but rather serves as the new starting point for gaining new intra- and interpersonal experiences that, in turn, will lead to yet higher and new levels of critical cultural awareness, cultural stress tolerance and experimentation with the cultural self – in a continuous feedback loop (Line g).

## 6. COURSE DESIGN PARAMETERS (CDP)

### 6.1 *Designing a ‘good course’*

Fink (1999) presented five design criteria (DC) for a ‘good course’. A good course (1) challenges learners to higher levels of learning, (2) uses active forms of learning, (3) uses a structured sequence of different learning activities, (4) gives frequent and immediate feedback to learners on the quality of their learning, and (5) has a fair and transparent system for assessing and grading learners. In addition, we believe that the following design criteria also matter for a ‘good course’. A good course also (6) is clear upfront about the attainment targets that have to be achieved and has analysed the sub-attainment targets, (7) departs from the learner’s current levels of development, (8) motivates and interests learners for the topic and each other’s points of view, and (9) emphasises time-on-task. These design criteria will be explained in more detail below.

#### *Challenge learners to higher levels of learning*

Challenging learners to higher levels of learning, implies that a good course goes beyond comprehending and remembering basic information and concepts, but rather focuses on higher levels of learning like problem solving, decision making, critical thinking and creative thinking (Matsumoto et al., 2001; King and Baxter Magolda, 2005). This does not mean that no knowledge or information should be transferred, but rather that the focus is on creating internal development and growth processes in the learners. Already in 1972, Craik and Lockhart have shown that students remember learned items better when covered at deeper levels of processing, implying that learning situations need to be designed in order to guarantee deep engagement of the students (Craik and Lockhart, 1972). De Corte et al. (1981) distinguish between seven types of cognitive objectives, ranking them in terms of increase in the complexity of cognitive operations and ‘the degree of independence in information processing envisaged’ (De Corte et al., 1981). This implies that for a good course, we aim to employ learning tasks that stimulate productive rather than re-productive cognitive operations (i.e. the higher levels of complexity of cognitive operations) at deep levels for the student target group.

*Active forms of learning*

Active forms of learning are activities like group work, case studies, simulations, project and case work, video-courses, email-discussions and interactive learning. They aim to focus the learners on thinking critically and solving problems (i.e. higher levels of learning), not sticking to only aspects like reading and listening to the lecturer (i.e. passive forms of learning). One learns to solve problems by solving problems; one learns to think critically by thinking critically, etc. This approach encourages the learners to work themselves with topics and materials and develop intra-personally, by gaining experience and expertise while working (Fink, 1999; Matsumoto et al., 2001; Van den Berg, Admiraal and Pilot, 2006; Belluigi, 2009).

*Structured sequence of different learning activities*

Each course needs a variety of forms of learning (e.g. lectures, discussions, group work, writing, presenting, simulations) to support different kinds of learning goals. A structured sequence of different learning activities uses a pre-planned variety of forms of learning to support the aims of the course, while at the same time, ensuring that there is a gradual build-up of learning. This build-up of learning complexity and level of difficulty occurs at two levels. First, within one class, learning activities build on each other and increase in complexity with prior activities supporting – or already explaining part of – the latter activities. Second, at the course level as a whole, earlier classes and activities organised in those classes lay the foundation for complex and higher level learning tasks later on in the course.

*Structured and frequent feedback*

Knowing what you know and don't know focuses your learning. For learners to learn and develop further, and not to keep on making the same mistakes over and over, giving structured and frequent feedback is important. Extensive feedback functions as a lifting platform where the learners can learn from their mistakes as well as gain new insights in the process they have been going through. It is also a means to consolidate learning steps taking up to that point, and a starting point for a next level of learning. Giving feedback is especially important when learners engage in higher levels of learning to ensure they are heading in the right direction (Nicol and Macfarlane-Dick, 2006; Van den Berg, Admiraal and Pilot, 2006). Figure 2.4 illustrates this process. From A to B, learners learn (e.g. class 1 or a simulation activity), after which they get feedback (B-C). Feedback (*F*), however, increases their insights and understanding of processes gone through while learning from mistakes made, increasing the level from BC to B'C' during the feedback session. From C' (and not from C) the next activities or classes continue to build on what has been learnt so far.

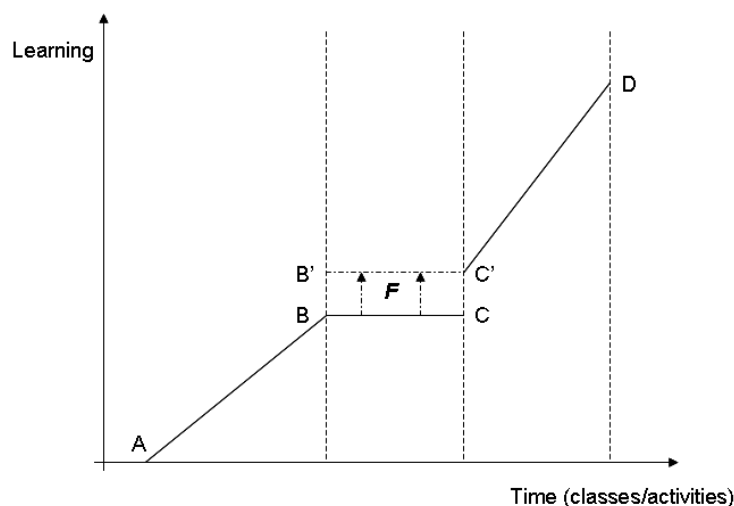


Figure 2.4 The effect of structured and frequent feedback.

#### *Fair and transparent system for assessing and grading learners*

Even when learners feel they are learning something significant, they are unhappy if their grade does not reflect this. Therefore, the grading system should reflect the learning process and be objective, reliable, flexible and communicated clearly before the course starts. Though, this may be difficult at times (Stefani, 1994). Also, grading should be done with integrity and represent academic achievement (Sadler, 2009).

#### *Clarity about and analysis of attainment targets and sub-targets*

A good course is structured in line with the learning aims or course attainment targets that have been pre-specified. The higher levels of learning, sequence of learning activities, use of active forms of learning, structured feedback and grading are all components of making sure the course attainment targets are reached. The topics as well as methods are designed in order to ensure achievement of the course aims. In order to do so, the attainment targets are analysed and dissected into sub-attainment targets that are specific enough but in the aggregate ensure the overall course aims are reached. Dissecting of targets also supports learners directly to make step-by-step improvements and engage in learning experiences that – in the end – add up to satisfying the course aims.

#### *Depart from learner's current level of development*

Teaching a course that is far too difficult or far too easy will not satisfy the learners. Neither will it induce any learning effects, either intra- or interpersonal, if the level is not at all understood or – on the opposite – far too easy. Therefore, a course should start from the learner's current levels of development and build on those lev-

els, increasing new information and complexity subsequently. Indeed, according to Ausubel et al. (1978), learning has to be meaningful in that it relates to existing levels of skills and knowledge.

*Motivate and interest learners for the topic and each other's points of view*

A good course, no matter what topic, is presented in such a way that it motivates learners to participate and engage and interests learners to dig deeper and further, thereby also exploring other participants' points of view. Motivation is an important factor in how much and deep learners engage and a prerequisite for personal growth and development.

*Emphasise time-on-task*

A good course uses its time efficiently and – no matter what activities or course topics – ensures that learners use their time efficiently and effectively. The measurement technique to measure what students are doing and for how long, we call time-on-task. The approach and enthusiasm of the students also can be reflected in time-on-task as is stated in motivational theory (Astin, 1999; Ames, 1990; Toorenaar and Rijlaarsdam, forthcoming, 2010). Time-on-task measurements make the workload and level of engagement more explicit. Therefore, assignments, tasks, and workload divisions with time-managed deadlines should be provided. We will measure time-on-task later for the full course in chapter 4.

## 6.2 *Designing a 'good course' in IIC*

From our theoretical model, we infer that, in a course focused on growth of IIC, we need to create intercultural experiences that cause disequilibria in learner's minds, which sets an intrapersonal process of intercultural maturation in motion through four dimensions: the cognitive, meta-cognitive, intentional and intellectual dimensions. In order for IIC to grow, each of these four dimensions needs to be stimulated to develop and grow. A 'good course' on IIC will do so for each of the dimensions individually but also for the dimensions together.

In Table 2.2 we present some examples of how the characteristics of a good course can be linked to each of the four dimensions of IIC growth.

Table 2.2 Examples of good course characteristics for each of the IIC dimensions

	<i>Cognitive dimension</i>	<i>Meta-cognitive dimension</i>	<i>Intentional dimension</i>	<i>Intellectual dimension</i>
Challenge learners to higher levels of learning	The course should contain elements that cause disequilibria starting cognitive change in their minds.	The course should contain elements that confront the learners with different cultures – looking for growth of openness and tolerance to others.	The course should contain elements where learners come to exchange intercultural view, frames of mind and preferences.	The course should contain elements that encourage learners to think both convergently and divergently.
	It is also important to complement activities designed for individual and intrapersonal growth by interpersonal ones – to encourage learners to learn in and from the dialogue.			
Active forms of learning	When teaching the course, most effects result among learners when active forms of teaching are used: simulations, case work, discussions, project work, video-conferencing or discussions, etc. These should be employed for each of the dimensions.			
Structured sequence of different learning activities	Starting from introductory elements to more difficult cognitive exercises – from an interactive lecture providing information to simulation games to create	Starting from more simple elements or an introductory discussion on meta-cognitive growth to awareness of each learner's level of openness to confrontational exercises asking learners	Starting from summarising the new information gained in dimensions 1 and 2, the learning activities could continue to focus on how world views of learners are affected and the result of	The activities in this dimension can start from the outcomes of the other dimensions – to practicing to operationalise interculture and to encourage creativity for new solutions among learners as

Table 2.2 Examples of good course characteristics for each of the IIC dimensions

	<i>Cognitive dimension</i>	<i>Meta-cognitive dimension</i>	<i>Intentional dimension</i>	<i>Intellectual dimension</i>
	disequilibria in the learners.	to practice their cultural stress tolerance.	their (un)willingness to change.	well as awareness differences will always remain and need to be tolerated.
	<p>Across the four dimensions, a build up of course elements – starting with the cognitive dimension (e.g. an exercise about how different learners interpret the same movie/text in different ways) – and then going through the meta-cognitive dimension (e.g. focusing on filtering intercultural information) to the intentional and intellectual dimensions (e.g. including creative elements asking for new, divergent solutions to intercultural problems).</p>			
Structured and frequent feedback	Give structured and frequent feedback and allocate sufficient time in the course to do so – this could be feedback from teacher to learners, but more likely also focus on intra-learner feedback sessions and discussions.			
Fair and transparent system for assessing and grading	The grading system needs to be focused on a proper and consistent assessment of the learning processes learners go through. Knowledge testing and assessment are not the focus of this course.			
Clarity about	Growth of the cognitive	Growth of the meta-cognitive	Growth of the intentional di-	Growth of the intellectual dimen-

Table 2.2 Examples of good course characteristics for each of the IIC dimensions

	<i>Cognitive dimension</i>	<i>Meta-cognitive dimension</i>	<i>Intentional dimension</i>	<i>Intellectual dimension</i>
and analysis of attainment targets and sub-targets	dimension of IIC the experiential learning with focus on learners reconsidering old inter-cultural information and behaviours for new ones. A sub-target is to create more inter-cultural awareness.	dimension of IIC with focus on learners developing new ways of looking at interculture, new frames of the world, new preferences, keeping emotional control. A sub-target is to create more stress tolerance and further critical cultural awareness.	mension of IIC with focus on learners wanting / being encouraged to engage with other cultures and growing and anchoring new views towards interculture. A sub-target is to further increase the willingness to experiment with the cultural self.	sion of IIC with focus on practicing critical thinking skills in inter-cultural contexts and both con- and divergent ways of thinking. Two sub-targets are to further increase willingness to experiment with the cultural self and developing more tolerance for cultural stress.
Depart from learner's current level of development	Starting point for the course – which needs to be tested before commencing – is the level of development already present in the learners. A class of expatriates requires a different level IIC course than a group of university students without much international experience.			
Motivate and interest learners for the topic and	To motivate and interest learners for the course, the teacher needs to be enthusiastic, knowledgeable and able to pass on and encourage development of new insights and ideas. Links to the personal level of experience, away from only abstract theory, are important, and so are discussions with other learners to compare, confront and look in an integrated way at differences and challenges. University students should be able to obtain credits upon participating actively.			

*Table 2.2 Examples of good course characteristics for each of the IIC dimensions*

	<i>Cognitive dimension</i>	<i>Meta-cognitive dimension</i>	<i>Intentional dimension</i>	<i>Intellectual dimension</i>
other points of view				
Emphasise time-on-task	For each of the dimensions, the course elements covering them should be balanced in time needed to complete them. This time should give ample space for discussion and feedback. Before the final course, a trial course should be testing time-on-task – for the course to be tested for workload and learner engagement.			

### 6.3 Designing a ‘good course’ in IIC – the Course Design Parameters

Acquiring IIC – the main attainment target of a course in IC – implies the development of a commitment to intercultural ways of viewing the world. In order to develop a university course on IIC that concentrates on stimulating the intrapersonal development process, supported by interpersonal experiences, as explained in the previous sections, an IC participant needs to go through several dimensions of intercultural intrapersonal development. Within each of these dimensions, various aspects matter. Course design parameters (CDP) aim to link these aspects – stemming from the theory on IIC development – to the practical course design of a good course that aims to stimulate learner’s IC-competences, i.e. they tap into the change that needs to be realised in the thinking of an IC participant before that person can be considered interculturally competent.

The CDP need to link natural intrapersonal growth (through cognitive, meta-cognitive, and intentional dimensions) to acquiring IIC. The general attainment target of this university course is to stimulate the development of IIC. From the theoretical framework above, it becomes clear that in order to reach this general course goal, sub-attainment targets must be met. In a course to develop IIC, these are to increase critical awareness of interculture in all communication, to increase the ability to control and tolerate cultural stress, and to develop the ability to think critically about intercultural matters. Our IIC model highlights several detailed sub-attainment targets – much like a good course should do (see the previous section) – IC participants work towards in a course in IIC when going through the different dimensions that detail the general attainment target. These detailed goals can be linked to each of the general course aims, as presented schematically in Table 2.1.

The links between the detailed learning aims (sub-attainable targets) and the general course aims or targets – which are also the course design parameters described above – are shown in Table 2.3. The detailed learning aims are presented along the lines of the four dimensions of our theoretical model.

Table 2.3 Links between intrapersonal development and CDP

<i>Detailed learning aims</i>	<i>Implications for detailed CDP</i>	<i>Implications for CDP</i>
Acquisition of new intercultural semantic structures	Include activities that stimulate the intake of new intercultural information	Create higher degrees of <i>critical cultural awareness</i> in the course participants to stimulate the development of IIC
Motivation to create new intercultural meaning	IC participants will be encouraged to interact and discuss to create shared meanings	
Openness to otherness and willingness to dialogue and reconsider personal schemata	Include activities focused on stimulating dialogue and openness among IC participants	

Table 2.3 Links between intrapersonal development and CDP

<i>Detailed learning aims</i>	<i>Implications for detailed CDP</i>	<i>Implications for CDP</i>
Motivation to control all information against an intercultural filter	Develop activities that encourage IC participants to think of the intercultural context of information	
Skill to be critical of one's own thinking and reflect upon this	Reflect upon intercultural information, compare this to personal beliefs and values, and learn from the analysis	
Openness to otherness and willingness to dialogue and reconsider acquired schemata	Include activities focused on stimulating dialogue and openness allowing IC participants to explore new intercultural solutions	Create more willingness to <i>experiment with the cultural self</i> in the course participants to stimulate the development of IIC
Motivation to control all information against an intercultural filter	Develop activities that encourage IC participants test their personal valued and beliefs against others	
Skills to analyse intercultural experiences in divergent and/or convergent ways	Engage IC participants in a way where they have to think of new solutions, compromise or ask them to argue for their personal ideas	
Skill to be critical of one's own thinking and reflect upon this	Admit to the limitations of personal thinking and engage in a process to broaden one's intercultural horizon	
Tolerance of cultural stress and uncertainty	Put IC participants at unease with certain activities	Create higher levels of <i>cultural stress tolerance</i> in the course participants to stimulate the development of IIC
Skills to analyse intercultural experiences in divergent and/or convergent ways	Engage IC participants in a way where they have to think of new solutions, compromise or ask them to argue for their personal ideas	
Skill to be critical of one's own thinking and reflect upon this	Put activities in the course that make IC participants aware of the fact that compromise or matching of personal thinking is not always possible	
The IC participant develops through interpersonal experiences	Incorporate interactive methods to encourage dialogue among the participants to exchange experiences and ideas	Create situations that include <i>learning in a dialogue</i> to create interpersonal experiences and stimulate the development of IIC

Thus, IIC can be enhanced via the integration of intrapersonal growth, supplemented by interpersonal experiences. Intrapersonal growth is triggered in a course on IIC by activities or situations that stimulate openness and willingness to experiment with

the cultural self, cultural stress tolerance and critical cultural awareness. Interpersonal experiences – that feed back into the intrapersonal development process – can be enhanced through activities that encourage IC participants to interact with each other, learn from each other and exchange experiences and ideas. This is presented in Figure 2.5 below.

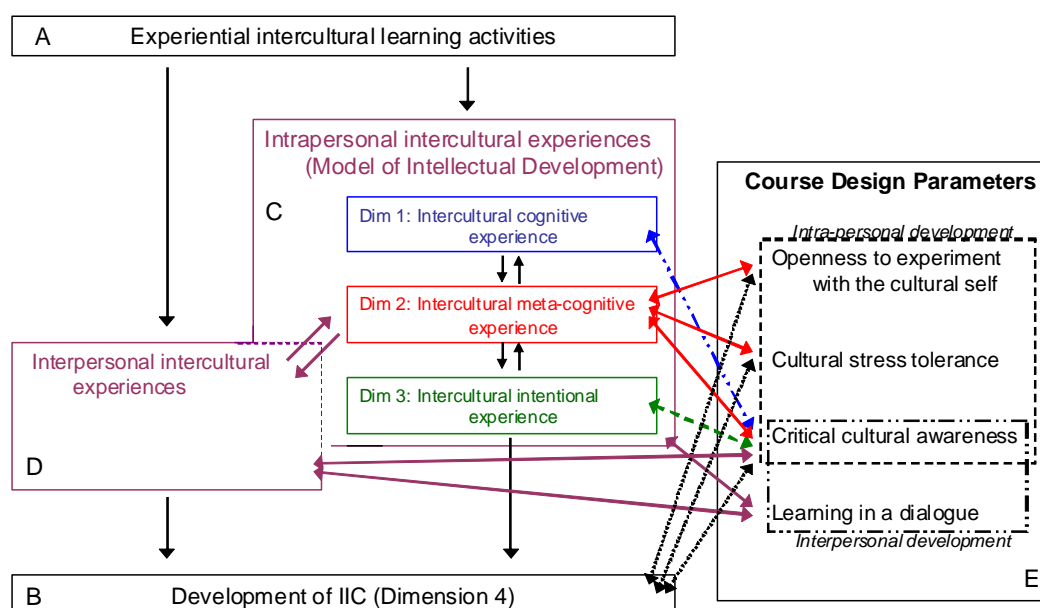


Figure 2.5. Links between the model for IIC development and CDP.

Again, experiential intercultural activities (Box A) form the basis of our model of stimulating IIC. These activities provide learners with the opportunities to improve their critical cultural awareness, cultural stress tolerance and experimentation with the cultural self in the context of IIC. These are the main components of IIC (Box B) as described above that students need to develop intrapersonally (Box C) and interpersonally (Box D) to become fully interculturally competent. Our model of IIC focuses on intra-personal learning (Box C).

Intrapersonal learning of intercultural capabilities evolves through cognitive, meta-cognitive, and intentional experiences. If we want to stimulate the 'black box' of intellectual development through these four dimensions, then we must create a course in which elements and activities on critical cultural awareness, cultural stress tolerance, and willingness to experiment with the cultural self are present; in which we place many elements of interpersonal dialogue; and in which we depart from the learner's existing levels of intercultural development. The four CDP cover both the intra-personal process of development and the input from interpersonal experiences through a dialogue as developmental triggers, as shown in Figure 2.5.

*Creating situations that stimulate critical awareness of interculture in all communication*

The course design needs to be geared towards increasing awareness of interculture in all communication. This means that the course design needs to allow intercultural learners to engage in activities asking them to be open to acquire new semantic structures and create new meanings. The course must create disequilibria in their minds by confronting them with new and culturally deviating information. Activities must stimulate and test the learner's degree of openness to otherness and willingness to dialogue and to reconsider acquired understandings in an intercultural context. Through specific exercises, both between learners and individually, they must learn to motivate themselves to control and verify all intercultural information they come across against an intercultural filter to pierce through the surface and explore its real meaning and significance. Awareness of interculture also implies that through various activities, IC participants are encouraged to acquire the skill to be continuously critical of one's own thinking, adapt and review thoughts, beliefs and values when engaging in new intercultural experiences. Discussions with others about various intercultural topics facilitate critical cultural awareness and promote the exchange of views, beliefs and insights between learners.

*Creating situations that stimulate the ability to control and tolerate cultural stress*

The ability to control and tolerate cultural stress, involving the capability of being able to handle uncertainty and tolerate ambiguity, is a second important aspect course design needs to address. In the course, exercises and activities that put learners in uncomfortable and confrontational situations need to be present; activities that make them realise that differences exist, that it is not possible to understand them all, and that they are likely to remain. This may lead to learners starting to accept those differences. Tolerating cultural stress also implies IC participants to be critical of and open-minded towards their own thinking. Exercises that encourage critical thinking and challenge learners to observe through the eyes of other cultures should be part of the course. Personal values and beliefs should be challenged through activities on a repeated basis.

*Creating situations that increase the willingness to experiment with the cultural self*

The third course design parameter and third attainment target is developing the ability to think critically about intercultural matters – i.e. the willingness to experiment with the cultural self. This involves organising activities that encourage learners to be open to otherness and willingness to dialogue and reconsider their own acquired schemata. Activities to make learners views matter through different cultural lenses or exercises and discussions to make them think whether or not they want to adapt or reconsider information and behaviour hitherto not questioned. Activities can promote dialogue with the self (intrapersonal) or with others (interpersonal). The degree to which new information is analysed through an intercultural filter is also a detailed learning aim, that needs to be incorporated in the course, because it may induce the IC participant to see information in a different light, prompting a hitherto not given response, changing the old boundaries of the cultural self. The same effect

is expected if – through interactive and simulating activities – IC participants aim to analyse intercultural experiences in divergent ways, allowing them to potentially process intercultural experiences in new and unpredictable ways to come to new and original explanations and conclusions. Discussions during the course, also make them aware of their own thinking vis-à-vis other intercultural communicators, allowing for a process of self-reflection.

*Creating situations that focus on learning in a dialogue with others*

Since interaction between intrapersonal development and interpersonal experiences is expected to take place, whereby the latter creates further intercultural experiences on which the learner has to reflect intra-personally, the course must create experiences and have elements that include learning in a dialogue. Learning in a dialogue is important because the interpersonal insights and exchange of information contribute to creating intrapersonal disequilibria which set the 4-dimensional intra-personal development process going, maturing a learner intercultural. A more mature intercultural learner, in turn, will use a more elaborate language, be more empathic, and is more aware intercultural, which is manifested in interpersonal engagements.

## 7. CONCLUSIONS AND DISCUSSION

In this chapter we have introduced an integrated model of personal development that we think has great potential for better understanding the nature of intercultural competence growth, how people develop this capacity and what process takes place in terms of cognitive, meta-cognitive, intentional and intellectual transformations to the mind.

The model lays a foundation for developing an integrated model of the IIC growth, one that is multidimensional rather than mono-dimensional. We have tried to show how an integrative model provides a more comprehensive, and therefore more powerful, conceptual tool for understanding and promoting development than do models that focus predominantly or exclusively on one domain. Further we have tried to describe how the growth of intercultural intellectual growth unfolds gradually and in a manner that reflects an individual's maturity in each of the three dimensions.

This conceptual framework is designed to reflect two elements that are not apparent in most of the existing literature on outcomes of research conducted on university students. First, in recognition that this is a complex collegiate outcome, we define intercultural maturity as multi-dimensional and consisting of a range of attributes, including understanding (the cognitive dimension), sensitivity to others (the interpersonal dimension), and a sense of oneself that enables one to listen to and learn from others (the intrapersonal dimension). Second, acknowledging that students typically learn and become capable of more complex learning by taking a series of steps (whether gradually or quickly), the framework proposed here not only identifies the desired outcome itself, but also includes two steps that lead to the achievement of the outcome, benchmarks along a developmental continuum. For example, being aware of cultural differences is an important first step in cultural

competence; respectfully demonstrating this awareness in a conversation with a coworker or community member is a more compelling indication of the achievement of this outcome. Each of these examples shows a basic developmental progression, with the application of one's learning in changing contexts as the more stringent criterion of educational success.

In this chapter we have presented a model of Intercultural Intellectual Capability (IIC) development which will serve as the basis for designing courses on and in Intercultural Communicative Competence (ICC). The model is based on theories of intellectual development, rooted in experiential psychology combined with theories on learning in a dialogue. We not only argue that intrapersonal development – supplemented by interpersonal experiences – matters, we also treat the mental processes of this development as endogenous to the model. This means that by including a model for intellectual development, we open the “black box” on how intercultural awareness, sensitivity and openness grow. The combination of learning in a dialogue with the theory on intellectual development in a course on IIC is a powerful explanatory model that can be used to the benefit of other IIC (ICC) courses as well.

We have presented what we (and others) believe constitute elements and characteristics of a good course and linked these to our model of IIC. Four Course Design Parameters (CDP) result from the model and – in combination with the characteristics of a good course – are believed to yield more effective educational interventions which we will further develop in the next chapters. CDP are the link between the theoretical model describing the processes for stimulating IIC and the practical implementation of this model in the situation of a university course on IC. The four CDP are: to create situations that stimulate critical cultural awareness, to create situations that stimulate the ability to control and tolerate cultural stress, to create situations that increase the willingness to experiment with the cultural self, and to create a course that focuses on learning in a dialogue.

The need to address intercultural issues personally and with more than one's intellect is not new a new insight. Believing with the intellect or relying on cognitive attributes may be a good first step in the development of intercultural maturity. We propose this integrated framework and identify educational programs that exemplify its major components as steps toward the end of helping students to gain the maturity to believe personally and "with the whole living self".



## CHAPTER 3

# DESIGNING AND TESTING INSTRUMENTS TO MEASURE INTERCULTURAL INTELLECTUAL CAPABILITY

An experiment is a question which science poses to Nature, and a measurement is the recording of Nature's answer.

-- *Max Planck, German scientist*

### Abstract

The purpose of this chapter is to select, adapt, design and test instruments to measure growth in Intercultural Intellectual Capabilities (IIC). Our model of intra- and inter-IIC growth has focused on critical cultural awareness, cultural stress tolerance and experimentation with the cultural self and related psychological traits like tolerance of ambiguity, emotional resilience, flexibility, creativity, openness, and cultural empathy. The selected measurement instruments must allow us to measure intra-IIC and inter-IIC through these clustered components and psychological traits. Because the higher order cognitive skills of the dimension of intellectual capabilities (dimension four) are at the core of IIC growth, and because a learner has to go through all four dimensions of intellectual development before IIC starts to grow, we decided to measure two complex cognitive skills separately: critical thinking and self-reflection. A fifth variable we aim to measure is intrinsic motivation. Intrinsic motivation gives an indication as to the way the course is perceived by students and therefore of importance for the attitude of the students towards the course and towards engaging themselves. It is a measure that may help to validate the course design.

Many measurement instruments to measure ICC have been developed and used in practical courses on IC over time (Fantini, 2006; Sinicrope, Norris and Watanabe, 2007). Out of these measures, we have selected and adapted the Intercultural Competence Adaptation Potential Scale (ICAPS-46), Intercultural Competence Assessment (INCA), Motivated Strategies for Learning Questionnaire (MSLQ), and Intrinsic Motivation Inventory Questionnaire (IMI) instruments to measure intra- and inter-IIC, critical thinking, and intrinsic motivation. We have used a combination of the MSLQ instrument and items created by ourselves to de-

velop a scale to measure self-reflection, which we name the Self-reflection instrument. By comparing the psychological traits each instrument is covering with the traits that need to be measured in order to measure intra- and inter-IIC, we confirmed theoretical validity of the instruments.

Following the instrument selection, we have tested the five measurement instruments on three different occasions regarding their reliability and internal validity. For each of the measurement instruments we have looked at ways to increase reliability and internal validity. For ICAPS, we reduced the number of items from 55 to 46, the coding of the open questions of the INCA questionnaire was changed from a 1 – 3 scale to a 1 – 5 scale, the number of items of the MSLQ-CT instrument was increased from five to eight. For the IMI instrument, we reduced the number of items first from 45 to 40 by removing the open-ended questions and two items on ‘friends’ that were not understood by the students, and later, we also removed the factor ‘pressure’ because in our approach pressure is a positive factor for creating intrapersonal disequilibria, while for the instrument, pressure was viewed as negative for motivation. We combined part of the MSLQ scale on self-regulation with our own items to create an instrument to measure self-reflection.

The ICAPS questionnaire (adapted from Matsumoto et al., 2001) was tested for reliability and it turned out to be between .75 and .90, which is high. We decided to use the instrument as a whole, and not its individual scales. The INCA instrument (2007) showed an overall level of internal consistency of between .69 and .96. We decided to use only the aggregate INCA instrument. Pearson correlations between the two instruments show a highest correlation of .24, which is sufficiently low to conclude that they measure something distinctly different. Our MSLQ-CT instrument for critical thinking (adapted from Pintrich et al., 1991) was tested and found reliable (reliability between .72 and .86). The Self-reflection instrument was also found highly reliable (reliability between .74 and .81), indicating a high degree of internal consistency. Correlation analysis shows that critical thinking and self-reflection had a correlation coefficient of between .66 and .75 (with one reading spiking to .81). This is a rather high level of correlation, but still there is a significant part of unexplained variance to warrant treating the two components separately. Our IMI instrument proved to be reliable. Reliability tests showed values between .75 and .97.

Having tested for all measurement instruments at three different moments in time, we find that – having made some changes to the instruments at various points – reliability and validity of the measurement instruments have been confirmed. We are therefore confident that ICAPS-46 instrument, the adapted INCA instrument, the MSLQ-CT and Self-reflection instruments, as well as the IMI instrument – in their revised forms – can be used to adequately measure the effect of our experimental course on inter- and intra-IIC growth, growth of critical thinking and self-reflection skills, and changes in intrinsic motivation.

*Key words: measurement instruments, intercultural intellectual capability, intercultural communicative competence, critical thinking, self-reflection, validity, reliability*

## 1. FROM OUR MODEL OF IIC TO COMPONENTS OF ICC AND PSYCHOLOGICAL TRAITS

### *1.1 Intercultural intellectual capabilities (IIC)*

In chapter 2, we have described our model for growth in IIC. According to experiential psychology, experiences can trigger development on the perceptual, affective and symbolic levels of thinking, provided that the person who lives these experiences self-initiates reflection and/or is committed to active experimentation with the self and the new insights gained from this reflective intrapersonal dialogue. Intercultural experiences matter. Specific experiences – through intrapersonal contemplation and/or through interpersonal encounters – cause disequilibria in the minds of learners and set a cognitive process of adaptation and adjustment going. This process runs through four dimensions of the human intellect: the cognitive dimension, the meta-cognitive dimension, the intentional dimension and the intellectual capability dimension. Growth of these dimensions leads to growth in our model of intercultural intellectual capabilities (IIC).

In the dimension of intellectual capabilities (the fourth dimension), complex cognitive processes take place. Two of the most important complex cognitive processes are critical thinking and self-reflection (see chapter 2). Learners explore personal traits and values that – because of created mental disequilibria following intercultural cognitive experiences – can adapt or modify to understand and accept the differences of other cultures through a process of critical thinking. Critical thinking is the persistent and intentional effort to examine any cultural belief or experience in light of new evidence that does or does not support it. Self-reflection is analytical introspection whereby through continuous reconstruction of new intercultural information the self is checked, tested and – if needed – adapted and adjusted. Critical thinking and self-reflection are part of IIC in that an adequate choice of behaviour that has been thought over and reflected upon is part of intellectual capability. Moreover, complex cognitive skills could be employed to reset one's earlier semantic structures and ways of encoding information. In essence, IIC focuses on the intrapersonal process underlying the acquisition of ICC, essentially opening up the 'black box' of how learners acquire intercultural capabilities. This implies that some of the components of ICC that are related to inner cognitive developmental processes are also coming back in our model of IIC.

Comparing our model to other models of intercultural maturation (Matsumoto et al., 2001, 2005; King and Baxter Magolda, 2005; INCA, 2007), we find that these other models specify different dimensions for intercultural growth and maturation, like intrapersonal developments, interpersonal developments and cognitive developments. From these models, we observe that for growth in IIC, complex intellectual and psychological processes take place in the mind of the learner, like critical thinking, problem solving, and self-reflection. This implies that advanced intellectual skills are needed. Our model of IIC encompasses these previous models and in addition lays bare that development in the intellect is subject to change at different

levels of an individual's intercultural intelligence, i.e. the four dimensions of the human intellect mentioned above.

### *1.2 Linking our model of IIC to components of ICC*

Inside each of the four dimensions of the human intellect a process of new information, combined with new processing skills implies potential for growth in IIC. More specifically, in order to develop IIC, we are looking for components of ICC that are most affected during the four-dimension growth of intercultural maturity. Many components of ICC have been identified in the literature up to now – for an overview see Spitzberg (1993), Fantini (2006), Risager (2006; 2007). However, as explained in chapter 2, even if other components of ICC have been laid bare before, we focus on developing critical cultural awareness, experimenting with the cultural self, and cultural stress tolerance as the main components of ICC. We do this, because these are the important components that matter both in intercultural competence and in intellectual learning processes at the same time. These three components of ICC are the three sub-attainment targets for the course. They also come back in the various dimensions of the human intellect in our model of IIC.

Cultural stress tolerance is developed in the meta-cognitive dimension, when meta-cognitive experiences lead to a conscious choice to control cultural stress and uncertainty. In the intellectual capabilities dimension, divergent capabilities include finding creative and new solutions to intercultural challenges, which in turn increases tolerance for cultural stress.

Critical cultural awareness, a critical look upon new knowledge of another culture, starts to grow in the meta-cognitive dimension, when intercultural knowledge is viewed meta-cognitively and when openness to other cultures develops. Also in the intentional dimension, critical cultural awareness is encouraged, when intentional experiences help to create new views, frames of mind and preferences. Critical cultural awareness also follows directly from the intellectual capability process development and from new perceptions to intercultural knowledge.

Willingness to experiment with the cultural self is found in the meta-cognitive dimension where openness to otherness and openness to new intercultural information is developed as well as where experimentation with different levels of control of intercultural information can be envisaged. It is also the result of the fourth dimension where IC participants that have been open to changes in their basic architecture, engage in complex thinking processes, like critical thinking and self-reflection. Divergent and convergent capabilities lead the learners to experiment with their own cultural selves.

### *1.3 Psychological traits considered favourable to ICC*

We have identified various psychological traits from the literature that relate to inner cognitive developmental processes and that are mentioned frequently in academic literature as favourable to growth of ICC. These traits centre around a person's ability to adjust and adapt. According to Byram (1989) and Kim (1994), ICC is com-

prised of (socio)linguistic, cognitive and operational (behavioural), and affective (capacity to deal with stress) dimensions. Matsumoto et al. (2001) added emotional regulation management (or emotional resilience) in response to intercultural experiences as a pre-requisite for intercultural adaptation and adjustment, as well as other psychological constructs like openness, behavioural flexibility, creativity, tolerance for ambiguity, emotional resilience and cultural empathy. These have been discussed in chapter 2 (Lundstedt, 1963; Brein and David, 1971; Ruben, 1976; Furnham and Bochner, 1982; Furnham, 1986, Furnham, 1987; Brislin and Yoshida, 1994; Kealey, 1996; Byram, 1997; Matsumoto et al., 2001; Sercu, 2002; Riemer, 2003; Williams, 2005; Matsumoto et al, 2005; Abarbanel, 2009; Osland, Bird and Gundersen, 2010).

#### *1.4 Linking components of ICC to psychological traits favourable to ICC*

The psychological traits overlap with and are closely linked to the three sub-attainment targets for the course on IIC.

Cultural stress tolerance is closely linked to behavioural flexibility, because the more flexible an IC participant, the lower cultural stress levels and the higher stress tolerance will be. It is also linked to - and even partially overlaps with - tolerance for ambiguity, because the higher the levels of tolerance of an IC participant, the lower the levels of cultural stress tolerance. Emotional resilience matters a great deal to keep cultural stress in check – not giving in to negative emotions when placed in uncomfortable situations increases cultural stress tolerance. Creativity matters for cultural stress tolerance, because creative learners are more flexible and dynamic in finding solutions to cultural stress, thus developing more tolerance against it. Finally, cultural stress tolerance is expected to be lower, when a learner is more culturally empathic, because when it is easier to stand in someone else's shoes and understand their ideas and viewpoints, stress tolerance will be much higher as the IC participant is more comfortable with differing views.

Critical cultural awareness requires openness, cultural empathy, and behavioural flexibility. When a learner is open to new experiences, new information and is open to otherness, awareness of different cultures and differences is much easier to obtain. Critical awareness involves reflecting upon different information and engaging in higher level cognitive activities like critical thinking and self-reflection. An IC participant with a high degree of cultural empathy will find it much easier to be critically culturally aware because it is relatively easier to get underneath someone else's skin and understand where other points of view, behaviour, and reactions come from. Behavioural flexibility matters – especially in the intentional dimension – because it is a driver for intentionally searching for and engaging in dialogues with others and being open to new intercultural frames of mind, views and preferences.

Willingness to experiment with the cultural self relates to a large number of the above-mentioned psychological traits. A person who wants to experiment will have to be open and flexible in terms of behaviour because experimentation may require different behaviours and an open mind to the process throughout the experiment. It also relates to emotional resilience and creativity. Only an emotionally resilient IC participant will truly be able to experiment with the cultural self, possibly facing

negative emotional experiences. It also helps to be creative so experimentation can go in different hitherto unexplored directions whereby creative solutions must be found, i.e. divergent capabilities are employed.

### *1.5 Intra-personal and inter-personal growth*

Growth of IIC is in essence an intra-personal process stimulated by interpersonal experiences. The learner goes through the four intra-personal intellectual dimensions of the model – dimensions that also have interpersonal elements – in order to become a more mature intercultural communicator, and is subject to two main forces. First of all, the force of individual experiential learning, whereby new information and experiences cause disequilibria at the cognitive level, setting a process of intercultural maturity in motion. In addition to the intra-personal process, interpersonal experiences and information – coming from interaction with others – also provide information to the learner adding more disequilibria, strengthening the intra-personal growth process. The second force is the interpersonal process of a dialogue that is in essence the exchange of opinions between actors that at the same time develop intra-personally, sharing with each other these experiences and this growth. At the end, the intra-personal growth and maturity of a person – following from going through cognitive, meta-cognitive and intentional developments multiple times – is seen in the way interactions with others are carried out, i.e. at a more mature intercultural level.

The two dimensions of IIC, we named intra-IIC – relating to the intrapersonal dimension of IIC – and inter-IIC – relating to the interpersonal dimension of IIC. The division between them is relative as they are interrelated. Intra-IIC focuses on how to deal with emotions and internal cognitive processes while inter-IIC focuses more on how to deal with situations and others, and both of these feed the intra-personal IIC growth process.

Experimentation with the cultural self is mostly an intrapersonal experience or process because, requiring openness to otherness and acceptance of possible changes in the basic cognitive architecture. It is, however, also based on and can draw from interpersonal communication and interpersonal exchange of information and exchange of cultural identities.

Cultural stress tolerance reflects upon intrapersonal experiences and learning how to deal with cultural stress, how to control negative emotions and filter intercultural information. Intrapersonally, cultural stress tolerance is also about allowing divergent capabilities lead to new and creative solutions to intercultural problems. It is also grown by learners when engaging in a dialogue or by being confronted with uncomfortable cultural differences in other IC participants, i.e. by interpersonal experiences.

In terms of the nature of the process, experimentation with the cultural self and cultural stress tolerance are more intrapersonal than interpersonal experiences, and that is why we refer them more to intra-IIC than to inter-IIC.

Critical cultural awareness – even though linked to, for example, tolerance for ambiguity as well – is mostly based on intercultural situations and confrontations,

intercultural behaviour rooted in intrapersonal intercultural development, and exchange of information.

The above sections are summarised in Table 3.1. The links between our model of IIC, (especially the four specific dimensions), the detailed explanations of those dimensions, and the components of ICC that matter both in intercultural competence and in intellectual learning processes at the same time (i.e. critical cultural awareness, cultural stress tolerance and willingness to experiment with the cultural self) are presented in columns (1), (2) and (4). The cognitive dimension is clearly the starting point, while in the other three dimensions, the components of ICC grow. Column (3) shows whether a process is mainly intra- or interpersonal. From this column we observe that in each dimension of the model, both intra- and interpersonal processes run and that – when combining column (3) and (5), several of the psychological traits have both an intra- and an interpersonal dimension. The links between these three components of ICC and related psychological traits that affect intercultural competence favourably, are summarised in columns (4) and (5).

From our theoretical model of IIC growth and the link to components and psychological traits of ICC presented in Table 3.1, we conclude that we have to measure both intrapersonal and interpersonal development of the components of ICC, i.e. critical cultural awareness, cultural stress tolerance and willingness to experiment with the cultural self. Since a learner has to go through all four dimensions of our model, eventually the one on growth in intellectual capabilities, we also want to look at whether complex higher order cognitive processes take place. Therefore, we choose to investigate separately whether the course on IIC – next to stimulating growth of intra- and inter-IIC – includes stimulating complex cognitive processes like critical thinking and self-reflection.

Table 3.1 Linking the model of IIC to ICC components and psychological traits

<i>Dimensions of model of IIC</i>	<i>Explanations of dimensions of IIC</i>	<i>Intra- or interpersonal experiences</i>	<i>Components of ICC relevant for IIC</i>	<i>Psychological traits favourable to ICC growth</i>
(1)	(2)	(3)	(4)	(5)
Cognitive dimension	New intercultural semantic structures	Intra		Openness
	Motivation to create new intercultural meaning	Inter		Openness
	New intercultural cognitive schemes	Intra		Openness
	New intercultural information coding ways	Intra		Openness
Meta-cognitive dimension	Motivation to control all information against an intercultural filter	Intra	Cultural stress tolerance	Behavioural flexibility, tolerance for ambiguity, emotional resilience
	Openness to otherness and willingness to dialogue and reconsider acquired schemata	Intra	Critical cultural awareness Experimentation with the cultural self	Tolerance for ambiguity, emotional resilience, cultural empathy, openness, creativity
	Motivation to control cultural stress and tolerate cultural stress	Intra	Cultural stress tolerance	Behavioural flexibility, tolerance for ambiguity, emotional resilience, cultural

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<i>Dimensions of model of IIC</i>	<i>Explanations of dimensions of IIC</i>	<i>Intra- or interpersonal experiences</i>	<i>Components of ICC relevant for IIC</i>	<i>Psychological traits favourable to ICC growth</i>
(1)	(2)	(3)	(4)	(5)
	and un-certainty		Experimentation with the cultural self	empathy
	Motivation to add more and classify new knowledge and information from others	Inter	Critical cultural awareness Experimentation with the cultural self	Behavioural flexibility, tolerance for ambiguity, cultural empathy, openness
Intentional dimension	Intentional search for new intercultural preferences	Intra	Critical cultural awareness	Behavioural flexibility, openness
	Motivation to gather more different information in dialogue with others	Inter	Critical cultural awareness	Behavioural flexibility, tolerance for ambiguity, cultural empathy, openness
	Intentional engagement with other intercultural frames of mind and views	Intra	Critical cultural awareness	Behavioural flexibility, cultural empathy, openness
Intellectual capabilities dimension	Skills to analyse intercultural experiences in convergent ways	Intra and inter	Critical cultural awareness	Openness
	Skills to analyse intercultural	Intra and inter	Cultural stress toler-	Behavioural flexibility, tolerance for am-

Table 3.1 Linking the model of IIC to ICC components and psychological traits

<i>Dimensions of model of IIC</i>	<i>Explanations of dimensions of IIC</i>	<i>Intra- or interpersonal experiences</i>	<i>Components of ICC relevant for IIC</i>	<i>Psychological traits favourable to ICC growth</i>
(1)	(2)	(3)	(4)	(5)
	experiences in divergent ways		ance	biguity, emotional resilience, openness, creativity
	Skill to be critical of one's own thinking and reflect upon this	Intra and inter	Experimentation with the cultural self	Behavioural flexibility, tolerance for ambiguity, cultural empathy, creativity
	Developed learning ability	Intra and inter	Critical cultural awareness	Behavioural flexibility, tolerance for ambiguity, emotional resilience, cultural empathy, openness, creativity
			Cultural stress tolerance	
	New intercultural know-ledge	Intra and inter	Critical cultural awareness	Behavioural flexibility, cultural empathy, openness
	perception styles			

## 2. SELECTION OF MEASUREMENT INSTRUMENTS

### *2.1 Review of existing measurement instruments*

There is quite a large variety of instruments available that have been elaborated to measure components of ICC (Fantini, 2006; and Sinicrope, Norris and Watanabe, 2007), as well as intellectual development (Gottfredson, 1997). They all provide extensive overviews. These instruments cover various foci. Some are aimed at specific countries (Pruegger and Rogers, 1994; Black, 1988) or specific purposes like work abroad, doing management tasks abroad or team processes (Casse, 1982; Kealey, 1988), or linguistic competences (ACTFL, 1982; Ingram and Wylie, 1984, 1997).

The Cultural Competence Self-Assessment Questionnaire (CCSAQ) by Mason (1995) focuses on working with children with disabilities and their families. Corbitt (1998) developed the GAP Test: Global Awareness Profile, that focuses on how much world knowledge a person has concerning items like politics, economics, geography, and culture.

Other instruments test (part of) the ICC competences relevant for intrapersonal and interpersonal development in IIC. The Behavioral Assessment Scale for Intercultural Communication (BASIC) of Koester and Olebe (1988) and Olebe and Koester (1989) looks at assessing behavioural traits from an interpersonal perspective, and so do the Multicultural Counseling Inventory or MCI (Sodowsky, Taffe, Gutkin, and Wise, 1994), and The Multicultural Counseling Awareness Scale or MCAS (Ponterotto et al. (1991). The Beck Depression Inventory (BDI) links to ICC components in that it views depression as sustained by intrusive negative cognitions (Beck, 1996), i.e. a lack of cultural stress tolerance and ability to handle uncertainty. BEVI – Beliefs, Events, and Values Inventory – by Shealy (2004) looks at developmental, affective and attributional processes and explains processes by which beliefs, values and ‘world views’ are acquired and maintained. The focus is on how ‘open’ people are to various transformational experiences.

With 18 scales grouped into four clusters, the California Personality Inventory (CPI) (Gough, 1987) studies: (1) measures of poise, ascendancy, self-assurance, and interpersonal adequacy; (2) measures of socialisation, responsibility, intrapersonal values, and character; (3) measures of achievement potential and intellectual efficiency; (4) measures of intellectual modes and interest modes. The Cross-cultural Adaptability Inventory (CCAI) of Kelley and Meyers (1988) and of Grove and Associates measures emotional resilience, flexibility and openness, perceptual acuity, and personal autonomy while the Intercultural Development Inventory (IDI) focuses more strongly on measuring individual’s intercultural development ranging from ethnocentrism to ethnorelativism (Bennett, 1991, 1993, 1994; Bennett and Hammer, 1998). The latter index was tested in corporate and educational settings.

The Intercultural Sensitivity Inventory (ICSI) by Bhawuk and Brislin (1992) measures intercultural sensitivity based on concepts of individualism and collectivism of Hofstede (1980, 1991).

When investigating empathy as a psychological trait, the Model of Intercultural Communication Competence developed by Arasaratnam (2004) and Arasaratnam and Doerfel (2005) is a good choice since it focuses mainly on the link between ICC and empathy. Studying personality measures – that matter for the way intrapersonal views on interaction manifest themselves – the California F Scale looks at different traits associated with the authoritarian personality like conventionalism, authoritarian aggression, anti-intraception and power and toughness (Hohn, 1972). The California Critical Thinking Disposition Inventory (CCTDI) (Facione, Sanchez, Facione, Gainen, 1995) is an important tool to survey dispositional aspects of critical thinking. It contains 75 statements about beliefs, values, attitudes and intentions, and focuses on measuring the willingness to think critically. The Eysenck personality inventory or EPI (Eysenck and Eysenck, 1975) covers various psychological traits relevant for ICC when it looks at personality as two biologically-based categories of temperament: extraversion vs. introversion (different optimal levels of arousal resulting in intercultural performance) and neuroticism vs. stability (high of low levels of stress tolerance).

Byram (1997), Byram, Nichols and Stevens (2001), Kuhlmann and Stahl (1998), and Muller-Jacquier (2000) were in charge of the Intercultural Competence Assessment (INCA) project for the Leonardo da Vinci II programme of the EU (2007). They defined ICC and developed a framework and diagnostics tool for the assessment of ICC in terms of tolerance for ambiguity, behavioural flexibility, communicative awareness, knowledge discovery, respect for otherness, and empathy, with an emphasis on interpersonal engagement.

In order to measure personality structure and psychopathology to look at mental health, the Minnesota Multiphasic Personality Inventory (MMPI) was developed by Hathaway and McKinley (1940). It looks at issues like awareness of problems and vulnerabilities in learners, conflict, struggle, anger, and respect for society's rules, level of trust and sensitivity, odd thinking, level of excitability and people orientation. The Overseas Assignment Inventory (OAI) (Tucker, no date) analyses 14 attitudes and attributes related to successful cross-cultural adjustment and performance.

A broad instrument for looking at international competencies and how to be highly effective operators is provided by TCO International (Trickey, 2004). They include the competencies of openness, flexibility, personal autonomy, emotional resilience, perceptiveness, listening, orientation, transparency, cultural knowledge and influencing synergy in their test items. The State Trait Anxiety Inventory (STAI) instrument by Spielberger, Gorsuch, Lushene, Vagg and Jacobs (1983) distinguishes between emotional and cognitive components in looking at intercultural competence.

An important index with respect to a learner's reactivity is the Interpersonal Reactivity Index (Davis, 1980; Davis, 1983) that was created to measure four factors related to empathy: the fantasy scale (imaginative empathy), perspective taking (tendency to take the psychological point of view of others, i.e. cognitive empathy), empathic concern (sympathy and concern for others – emotional empathy), and personal distress (feelings that get in the way of helping others).

Matsumoto et al. (2001) created the Intercultural Adjustment Potential Scale (ICAPS) based on social psychology of adjustment through an analysis of intercultural encounters and apply it to Japanese sojourners and immigrants to the US. This index builds on and incorporates various of the other testing instruments mentioned in this review (e.g. EPI, BDI, STAI, MMPI, and CPI). The components of ICC reflected in ICAPS are ability to regulate emotions, being free of over-attachment to previous ways of thinking, willingness to tolerate ambiguity, openness and flexibility, critical thinking, behavioural flexibility.

Finally, the NEO PI (Costa and McCrae, 1985) or – more recently – the NEO PI-R (Costa and McCrae, 1992) model is a 240-item measure, also called the Five Factor Model (Digman, 1990), looking at extraversion, agreeableness, conscientiousness, neuroticism (including inter alia six of its subordinate dimensions), and openness to experience.

In addition to the literature related to ICC and its components, there are also various measurement instruments directed more towards intelligence and intellectual development (Gottfredson, 1997; Gottfredson, 2004). While a lot of research has been done (Hogan, 1991; Schmidt, Ones and Hunter, 1992; Lubinski and Dawis, 1992), we focus on a few tests that have been developed and used to measure intelligence – or ‘g’ as intelligence is also called (Gottfredson, 1997). The US employment services have used the General Aptitude Test Battery (GATB) to measure aptitude of employees for jobs of different levels of complexity (Hunter, 1983, 1986). Components of the GATB are arithmetic reasoning, vocabulary, 3D-space, computations, name comparisons, tool matching and form matching – all testing cognitive skills and intelligence levels (US Department of Labor, 1970).

The Motivated Strategies for Learning Questionnaire (MSLQ) by Pintrich, Smith, Garcia and McKeachie (1991) also looks at cognitive components and shows high levels of predictive validity and reliability (Pintrich, Marx and Boyle, 1993). The testing instrument taps into: value (intrinsic and extrinsic goal orientation, task value), expectancy (control beliefs about learning, self-efficacy) and affect (test anxiety). The cognitive scale in Pintrich et al. (1991) includes among others elaboration and critical thinking and self-regulation.

Another test has been used by the US Armed Forces – the Armed Forces Qualifying Test (AFQT), focusing on testing intelligence and IQ related to ‘trainability’ of new recruits. The Wonderlic Personnel Test (WPT) is a 50-item intelligence test that many employers have used to screen job applicants, notably assessing the aptitude of these job applicants for learning and problem-solving in a range of occupations. It assesses person’s abilities to learn, adapt, solve problems, and understand instructions. Validity and reliability of the instrument compare favourably to other adult intelligence tests (Matarazzo, 1972). The Wechsler Adult Intelligence Scale is another instrument used to look at intelligence, especially through language and vocabulary types of tests (WAIS; Wechsler, 1981). The Position Analysis Questionnaire (PAQ) also focuses on elements of work and the work context and includes almost 200 elements in categories like overall mental difficulty, communicating judgments, verbal aptitude, processing information, making decisions, and using various information sources (Harvey, 1991).

Finally, the National Adult Literacy Survey (NALS) is an assessment focused more on literacy (Kirsch, Jungeblut, Jenkins and Kolstad, 1993). It provides insights not only in literacy, but also in people's general ability regarding information-processing complexity. "Careful analysis of the range of tasks along each scale provides clear evidence of an ordered set of information-processing skills and strategies" (Kirsch et al., 1993: 9). The scale contains five levels, from matching single pieces of information or performing simple operations (level 1) to multiple-feature matches, integration and synthesis of information from complex messages or documents, and use of multiple sequential operations (levels 4 and 5).

## 2.2 Selection of measurement instruments

We have chosen the variables that need to be measured, based on a review of components of ICC within our model of growth of IIC. That means, we need adequate testing instruments to measure: critical cultural awareness, cultural stress tolerance and experimentation with the cultural form of the self. We do so keeping in mind the two dimensions to IIC growth: the intrapersonal development of IIC (adjustment and adaptability traits), and interpersonal development of IIC (dialogue with others). In order to analyse whether learners in the course on IIC go through and get stimulated to use higher level complex cognitive processes (from the dimension of intellectual capabilities), ensuring growth of IIC, we also want to employ instruments that test learners' levels of critical thinking and self-reflection. Also, in order to test how much open and willing to engage the students are during the course, we test their levels of intrinsic motivation.

In selecting the instruments for our research, we were guided by three main decision criteria:

- (1) *Relevance*: the measurement instruments must fit to the theoretical framework and measure the variables that need to be measured. That is, the instruments have to fit and reflect upon the three components of ICC (critical cultural awareness, cultural stress tolerance and willingness to experiment with the cultural self) and the intra- as well as interpersonal dimensions of IIC in the most accurate way.
- (2) *Predictive validity and reliability*: the measurement instruments must have levels of predictive validity and reliability as high as possible, i.e. they test properly what they are supposed to test and different instruments do not test the same constructs.
- (3) *Feasibility*: apart from validity, we are also bound by practicalities in the choice for the measurement instruments. They have to be easy to carry out, clear in form, and written in 'basic' English for the students to fill out and to be properly understood. Moreover, it is important that the instruments can be used several times during the experiment and are suitable for an academic environment. For that reason, we cannot choose to use charts or portfolios, nor internet-based instruments, so as not to be limited by technical constraints.

*Intrapersonal dimension of IIC*

For the intrapersonal dimension of IIC, we have pre-selected five instruments based on the first decision criterion: the intrapersonal approach to development they measure and the fact that they cover most of the ICC components (and related psychological traits) required by the model:

1. The Cross Cultural Adaptability Inventory (CCAI) instrument by Kelly and Meyers (1988) / a commercial project by Grove and Associates;<sup>7</sup>
2. The Bennett (1991, 1993, 1994) and Bennett and Hammer's (1998) Intercultural Development Inventory (IDI) questionnaire;
3. The Intercultural Adaptation Potential Scale questionnaire (ICAPS) by Matsumoto et al. (2001);
4. The commercial TCO international competencies instrument (ICI) (Trickey, 2004);
5. The Wonderlic Personnel Test (WPT) (Wonderlic Personnel Test, 1992).

*Table 3.2 Measurement instrument selection for the intrapersonal dimension of IIC*

<i>Name instrument</i>	<i>Criterion 1: Relevance</i>	<i>Criterion 2: Predictive validity and reliability</i>	<i>Criterion 3: Feasibility</i>	<i>Total number of points</i>
(1)	(2)	(3)	(4)	
1. CCAI (Kelly and Meyers, 1988) / Grove and Associates	2 + 2 + 3 = 7	2 (Kelly and Meyers, 1992; Davis and Finney, 2006)	4	13
2. IDI (Bennett 1991; Bennett and Hammer, 1998)	3 + 2 + 3 = 8	4 (Hammer et al., 2003; Paige, Jacobs-Cassuto, Yershova, DeJaeghere, 2003)	3	15
3. ICAPS (Matsumoto et al., 2001)	4 + 2 + 4 = 10	4 (Matsumoto et al., 2001, 2005)	5	19
4. ICI (TCO international, Trickey, 2004)	2 + 3 + 3 = 8	NA	3	11
5. WPT (WPT, 1992)	2 + 2 + 2 = 6	2 (WPT, 1992)	4	14

<sup>7</sup> Available at: [www.grovetwell.com](http://www.grovetwell.com).

Looking at the other three criteria combined, Table 3.2 shows how we apply the three decision criteria. For criterion 1 – column (1) – we gave one point for each dimensions of IIC (four maximum), component of ICC (three maximum) and related psychological trait (five maximum) in the model that is covered by the measurement instrument. This column is further substantiated in Figure 3.1 where for the chosen measurement instrument, we specify in detail what components of ICC and what psychological traits that facilitate growth in IIC are measured.

For criterion 2 – column (2) – we present the tested levels of predictive validity and reliability and rank the instruments from 4 (highest level) to 1 (lowest level). In this column, we also present the source article where these test results can be found. For criterion 3 – column (3) – we graded the feasibility by giving one point if easy to carry out, one point if clear in form, one point if ‘rewritten’ to basic English, one point if the instrument can be used repeatedly, and one point if the instrument is suitable for an academic environment. This makes a possible total of 5 points for criterion 3. Column (4) shows the total points for each measurement instrument.

In column (1), ICAPS scores ten and ICI six points. ICAPS measures all four dimensions of IIC (4), experimentation with the cultural self and cultural stress tolerance (2), while the ICI measures the cognitive, meta-cognitive dimensions (2), and all three components of ICC (3). However, as specific psychological traits, emotional regulation, openness, flexibility and creativity (4) are measured by ICAPS while the ICI measures openness, flexibility and emotional resilience (3). Testing of reliability and validity, we found that both the IDI and ICAPS instruments had been tested extensively and that both also showed high levels of reliability and validity (Hammer, Bennett and Wiseman, 2003; Paige, Jacobs-Cassuto, Yershova, De-Jaeghere, 2003; Matsumoto et al., 2001, Matsumoto et al., 2005). We therefore have given equal points to both instruments for this criterion. For the third decision criterion, the ICAPS instrument is easiest to administer (repeatedly) and least cost, especially compared to the IDI and ICI instruments and to a lesser extent to the WPT instrument.

From Table 3.2 it becomes clear that we have decided to use the Intercultural Adaptation Potential Scale (ICAPS) by Matsumoto et al. (2001). This instrument focuses on intrapersonal development and contains several of the elements that are important in our model for IIC development: tolerance for ambiguity (cultural stress tolerance of dimension 2 in our model of IIC), openness and flexibility (divergent capabilities – dimension 4) and openness to intercultural information in dimension 2 of our model of IIC), and emotional regulation (applying a cultural filter as in dimension 2 of our model on IIC). Also the questionnaire contains questions to look deeper into the set of personal position and beliefs in relation to intercultural change.

It focuses on psychological skills that are considered to be important in managing intercultural conflict and stress that are inevitable during a sojourn (Matsumoto, 1993). The validity and reliability of the ICAPS instrument have been tested by Matsumoto et al. (2001, 2005) and found more than satisfactory. Also other authors have used the ICAPS instrument and found its reliability and validity to be above standard (Savicki, Downing-Burnette, Heller, Binder, Suntinger, 2004). Another strong point of ICAPS compared to the other measurement instruments is the way the instrument has been constructed, “using earlier personality inventories that have

assessed psychological constructs like emotion regulation, critical thinking, openness and flexibility, interpersonal security, emotional commitment to traditional ways of thinking, tolerance of ambiguity, and empathy” (Matsumoto et al, 2005: 21-22). These personality inventories include the EPI, BDI, STAI, BSRI (Bem Sex Role Inventory in Bem, 1974; and Bem and Watson, 1976), MMPI (Tellegen, Ben-Porath, McNulty, Arbisi, Graham, and Kaemmer, 2003), CPI, NEO-PI-R, BFI, California F-Scale and IRI.<sup>8</sup> This has resulted in an instrument of 193 items that have then been re-arranged to yield the ICAPS-55 (55 items) instrument (Matsumoto et al., 2005). Moreover, the ICAPS questionnaire is readily accessible, unlike the IDI that is more costly and requires following a preparatory course first, before getting access to the questionnaires.

#### *Interpersonal dimension of IIC*

For the interpersonal dimension of IIC, we have pre-selected two instruments based on the first decision criterion: interpersonal approach to development they measure and the fact that they cover several of the components of ICC (and psychological traits) sought after by the model:

- 1) The Behavioral Assessment Scale for Intercultural Communication (BASIC) of Olebe and Koester (1989);
- 2) The Intercultural Competence Assessment (INCA) project elaborated within the Leonardo da Vinci II framework (2007)<sup>9</sup>;

Like with the intrapersonal dimension of IIC, intra-IIC, above, we apply all three decision criteria to make a final selection, using the same scale as in Table 3.2. Again, column (1) is further substantiated in Figure 3.1 where for the chosen measurement instrument, we specify in detail what dimensions of IIC, components of ICC and what psychological traits that facilitate growth in IIC are measured. Only column (2) – because we have pre-selected two measurement instruments – has a maximum of 2 (top rank). Table 3.3 summarises the findings.

In column (1), the relevance of both instruments is analysed. INCA looks at the cognitive and intellectual dimensions of IIC (2), critical cultural awareness as well as at cultural stress tolerance (2) and at (behavioural) flexibility, empathy, tolerance for ambiguity and respect for otherness (4). The BASIC instrument measures the same dimensions of IIC (2), critical cultural awareness and cultural stress tolerance (2) as well as empathy, tolerance for ambiguity, and display of respect (3). In column (2), we have awarded two points to the BASIC instrument as Koester and Olebe (1988) show reliability and validity values that are within accepted parameters for scale construction. INCA has not been extensively tested on validity and reliability and therefore receives no points for this decision criterion. Finally, for feasibility, the INCA instrument gets four points, while BASIC gets three. INCA – being developed in the public domain – is more readily accessible than BASIC, though both are easy to administer and framed in accessible English language.

<sup>8</sup> See the literature review of measurement instruments for the full names of these inventories.

<sup>9</sup> Available at <http://www.incaproject.com>.

*Table 3.3 Measurement instrument selection for the interpersonal dimension of IIC*

	<i>Criterion 1: Relevance</i>	<i>Criterion 2: Predictive validity and reliability</i>	<i>Criterion 3: Feasibility</i>	<i>Total number of points (highest score)</i>
<i>Name instrument</i>	(1)	(2)	(3)	(4)
1. BASIC (Olebe and Koester, 1989)	2 + 2 + 3 = 7	1 (Olebe and Koester, 1989)	3	11
2. INCA (Leonardo da Vinci II framework, 2007)	2 + 2 + 4 = 8	NA	4	12

For measuring the interpersonal dimension of IIC, we have therefore chosen (see Table 3.3) for the Intercultural Competence Assessment (INCA, 2007) elaborated within the Leonardo da Vinci II project. This instrument is based on interpersonal dialogue, but also contains questions that test the development of critical cultural awareness (dimensions 2, 3 and 4 of the model of IIC) and covers tolerance for ambiguity (dimensions 2 and 4 (control of cultural stress and divergent capabilities) in our model of IIC), relatedness to otherness (dimension 3 through intercultural preferences and dimension openness to otherness in dimension 2 in our model of IIC) and intercultural communicative awareness (critical cultural awareness in dimensions 2, 3 and 4 in our IIC model). Moreover, INCA is a questionnaire with open questions – which is what we have been looking for, because it reduces bias in the answers from the IC participants (i.e. giving socially accepted answers), because they do not know how the answers are assessed (Sinicrope, Norris and Watanabe, 2007), even though this makes the work more laborious.

#### *Critical thinking and self-reflection*

Critical thinking and self-reflection are two specific and important complex cognitive processes that stimulate intrapersonal intellectual capabilities. Critical thinking and self-reflection are both outputs of the model on IIC (i.e. present in divergent thinking skills and knowledge perception styles in dimension 4 of our model) as well as two of its drivers. Critical thinking skills are needed to keep the acquisition process of IIC going, like, for example, in the intrapersonal response to created disequilibria stemming from new intercultural information and experiences (dimension 1 of our model on IIC).

For critical thinking, we have pre-selected two instruments based on the fact that they cover different critical thinking items and are both frequently used to measure critical thinking:

- 1) The MSLQ inventory by Pintrich et al. (1991);
- 2) The California Critical Thinking Disposition Inventory (CCTDI) – (Facione et al., 1995);

The results of the selection are presented in Table 3.4. Both are measuring critical thinking skills (decision criterion 1), which is presented in column (1). We note that the CCTDI measures more components of critical thinking overall, but that the MSLQ measures those components that are most relevant for our model of IIC, i.e. it requires IC participants to focus on capabilities and progress in critical thinking. Both cover two dimensions of our model of IIC; the cognitive and intellectual capability dimensions.

*Table 3.4 Measurement instrument selection for the interpersonal dimension of IIC*

	<i>Criterion 1: Relevance</i>	<i>Criterion 2: Predictive validity and reliability</i>	<i>Criterion 3: Feasibility</i>	<i>Total number of points (highest score)</i>
<i>Name instrument</i>	(1)	(2)	(3)	(4)
1. MSLQ inventory (Pintrich et al. 1991)	2 + 1 = 3	2 (Pintrich et al., 1991)	5	10
2. CCTDI (Facione et al., 1995)	2 + 1 = 3	2 (Facione, 1990, 1992; Facione et al. 1995)	3	8

In column (2) we look at predictive validity and reliability of the instruments. The MSLQ instrument scores a Cronbach alpha of .80 (Pintrich et al, 1991) and is known as one of the most reliable instruments to measure critical thinking. However, also the CCTDI scores high on reliability and validity (Facione, 1990, 1992; Facione et al. 1995), has been tested extensively, and focuses on critical thinking skills specifically. We have chosen therefore to give both instruments equal points for this criterion. The feasibility of the measurement instrument for our research (decision criterion 3) is higher for the MSLQ than for the CCTDI for two reasons: first of all the measurement instrument is more easily (repeatedly) and more cheaply available than the CCTDI, and – second – the instrument is easier to carry out and takes less time for the students to fill out. That means that in total, we have opted for the critical

thinking items of the MSLQ instrument (Pintrich et al, 1991) rather than the CCTDI instrument.

For self-reflection, no specific measurement instrument was available in line with our research requirements. Research on self-reflection has been carried out by Gay and Kirkland (2003), Stronge (2002), Holtom and Kenworthy-U'Ren (2006), and Danielewicz (2001), who show that indeed, self-reflection is an important higher order complex cognitive skill that fits to the fourth dimension of our model of IIC. We therefore opted to adapt parts of the MSLQ questionnaire (Pintrich et al., 1991) – especially the subscale of self-regulation – and to develop item questions ourselves in order to create a reliable and valid measure for self-reflection (SR). The details of instrument construction will be explained further below.

#### *Intrinsic Motivation*

With intrinsic motivation being a prerequisite for learning, reflecting the attitude of the students towards the course, it is not directly – but definitely indirectly – linked to the success of the course. Students with higher levels of motivation should be more inclined to be open and engaged in the course, thus positively affecting their levels of IIC. This implies that intrinsic motivation is a variable that should be used to aid course design validation (chapter 4).

For intrinsic motivation, we have pre-selected two instruments based on the fact that they cover different items related to motivation and that they are both frequently used to measure motivation:

- 1) The MSLQ inventory by Pintrich et al. (1991);
- 2) The IMI questionnaire by Ryan (1982) and Ryan and Deci (1992);

The results of the selection are presented in Table 3.5. Both are measuring intrinsic motivation skills (decision criterion 1), but the IMI instrument is specifically focused on measuring intrinsic motivation and covers eight motivational components, while the MSLQ instrument measures three (and is more focused on learning strategies), which is presented in column (1).

In column (2) we look at predictive validity and reliability of the instruments. The MSLQ instrument scores a Cronbach alpha of .80 (Pintrich et al, 1991) and is known as one of the most reliable instruments to measure critical thinking. However, the IMI instrument by Ryan (1982) and Ryan and Deci (1992) has also been extensively tested (McAuley, Duncan and Tammen, 1989; Markland, 1999) and was reported with Cronbach alpha values of .90 and higher. We have chosen therefore to give the IMI instrument one point more for this criterion. The feasibility of the measurement instrument for our research (decision criterion 3) is equally high for the MSLQ and for the IMI instruments. They are both easily accessible and easy to administer. That means that in total, we have opted for the IMI instrument by Ryan and Deci (1992), rather than specific items of the MSLQ instrument (Pintrich et al., 1991).

Table 3.5 Measurement instrument selection for intrinsic motivation

<i>Name instrument</i>	<i>Criterion 1: Relevance</i>	<i>Criterion 2: Predictive validity and reliability</i>	<i>Criterion 3: Feasibility</i>	<i>Total number of points (highest score)</i>
	(1)	(2)	(3)	(4)
1. MSLQ inventory (Pintrich et al. 1991)	3	1 (Pintrich et al., 1991)	5	9
2. IMIQ (Ryan and Deci, 1992)	8	2 (Markland, 1999; McAuley, Duncan and Tammen, 1989; McAuley, Wraith and Duncan, 1991)	5	15

### 2.3 Linking the measurement instruments to the model of IIC and its components of ICC

We have opted for ICAPS, INCA, MSLQ, IMI and the SR instrument as the five measurement instruments for our research. The first three and fifth relate directly to the theoretical model and measure required outputs. The fourth, relates to student attitudes to the course, thus measuring one of the prerequisites for a successful course: student motivations. The ICAPS instrument intends to measure the intrapersonal dimension of IIC with its three components of ICC, and INCA the interpersonal dimension with those same components. MSLQ is chosen to measure critical thinking and – in an adapted and complemented form – also for self-reflection. The IMI instrument measures students' intrinsic motivation levels.

Turning back to the first decision criterion, relevance, Figure 3.1 shows in detail how the measurement instruments relate to the components of ICC and psychological traits that need to be measured. In column (1), the three main measurement instruments are presented.<sup>10</sup> Column (2) shows the psychological traits that are measured and specified for each of the measurement instruments. From the intra- and interpersonal dimensions of IIC in column (6) and the dimensions of intellectual development in column (5) follow – as described in detail in chapter 2 and summarised above – the three main components of ICC we focus on (column 4) as well as

<sup>10</sup> *Intrinsic motivation (IMI measurement) is not presented here, because it is not measuring a direct output required by the theoretical model. Rather it measures an indirect condition that ideally needs to be satisfied to create optimal conditions within which the course is to take place.*

the psychological traits considered favourable to developing intercultural competence (column 3). The essence of Figure 3.1 is the comparison between columns (2) and (3). It is clear that the psychological traits measured via the three chosen measurement instruments (column 2) match the psychological traits and ICC components (columns 3 and 4) that need to be measured in order to be able to measure growth in IIC.

The ICAPS instrument measures emotional regulation (matches emotional resilience), creativity (matches creativity), openness (matches openness) and flexibility (matches openness) as well as approximations of experimentation with the cultural self, cultural stress tolerance, and to a much lesser extent critical cultural awareness through its four factors.

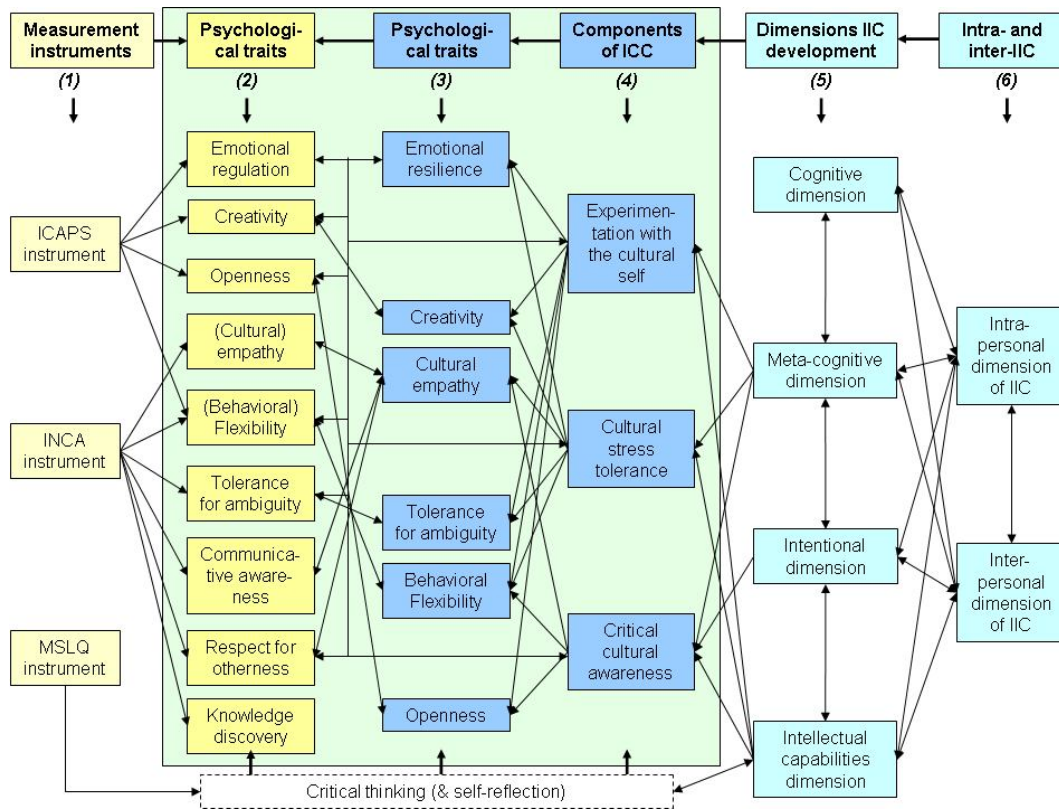


Figure 3.1 Linking measurement instruments to ICC components of our IIC model.

The INCA instrument measures empathy (matches cultural empathy), behavioural flexibility (matches behavioural flexibility), tolerance for ambiguity (matches tolerance for ambiguity), communicative awareness (links to cultural empathy), respect for otherness (links to cultural empathy and respect for otherness), and knowledge

discovery (not directly linked) as well as to critical cultural awareness, and to a lesser extent to cultural stress tolerance. In addition, the MSLQ instrument measures critical thinking and (adapted) self-reflection which – according to Stronge (2002) and Danielewicz (2001) – act as complex cognitive skills that deepen and enhance the effects of the psychological traits and ICC components examined, thus enhancing Intercultural Intellectual Capabilities.

From Figure 3.1, we infer a few conclusions. First, that the ICAPS and INCA instruments – in theory – are well placed to measure the effects on our course on IC that is built on our model of stimulating development in IIC given their match in psychological traits. Second, the ICAPS and INCA instruments appear to overlap in part, but also to measure distinctly different psychological traits, reflecting the intra-IIC and inter-IIC dimensions. Third, the ICAPS and INCA instruments appear to overlap to some extent in the components of ICC they measure: both measure cultural stress tolerance (though from different angles), while ICAPS is also measuring experimentation with the cultural self, and INCA measures more strongly critical cultural awareness.

### 3. AIMS OF THIS CHAPTER

Having selected the measurement instruments ICAPS, INCA and MSLQ to measure intra-IIC, inter-IIC, critical thinking and self-reflection, and IMI to measure intrinsic motivation, the purpose of this chapter is to test these measurement instruments, adapt them if necessary to make them fit our research approach, and ensure sufficiently high levels of reliability and validity of the instruments. Thus the research question of this chapter is: ‘Are the chosen measurement instruments reliable and valid? If not, to what extent can they be adapted to improve reliability and validity?’

### 4. TESTING THE MEASUREMENT INSTRUMENTS

#### 4.1 *The original measurement instruments*

In this section, we explain in more detail how the measurement instruments were constructed, what types of questions were asked, and how we have tested and then – in case needed – adapted the measurement instruments for our research purpose.

#### *ICAPS measurement instrument for measuring intra-IIC growth*

The InterCultural Adjustment Potential Scale (ICAPS) has been developed by Matsumoto et al. (2001) and tested and further refined since (Matsumoto, Walcott & Scherer 2003). The purpose of ICAPS is to predict the intercultural adjustment potential among learners, i.e. predict the degree of difficulty a person would have in adjusting to a new culture and to describe the aspects of their mental processes development of intrapersonal capabilities. “ICAPS is intended to help individuals have the option of choosing to remain the same or to alter their patterns of thinking and interacting so that they may adjust more easily to a new culture” (LeRoux and Matsumoto, 2000: 322).

As in our model of IIC, the focus of ICAPS is on the underlying psychological components that matter for adaptation following cognitive disequilibria resulting in IIC growth. “The identification of several psychological variables as the keys to intercultural adaptation bypasses the problem of culture-specific knowledge, and views the potential for intercultural adjustment as a function of the psychological skills that individuals possess within them. In doing so, it does not rely on knowledge or attitudes [...], or on the specific host culture in which [learners red.] reside, or on language proficiency.” (Matsumoto et al., 2001: 486). Instead of reasoning from theory, ICAPS’ psychological components are the result of empirical testing (factor analysis).

Matsumoto et al. (2001) examined questionnaires from a number of valid and reliable personality inventories, assessing the psychological constructs that are related to emotion regulation, critical thinking, openness/flexibility, interpersonal security, emotional commitment to traditional ways of thinking, tolerance of ambiguity, and empathy. These tests have been mentioned above. 193 items were created at first. Difficulty of wording in English was checked and the questionnaires took into account the potentially limited English language capabilities of the (Japanese) IC participants. Then Matsumoto et al. carried out eight studies with ICAPS to demonstrate the reliability and validity of the instrument and to empirically select the most relevant items of the scale. We will summarise the steps and findings of these studies. For a detailed description of each study and the steps taken, we refer to Matsumoto et al. (2001). At first, ICAPS-193 was reduced to ICAPS-153 by eliminating items with low Pearson correlations. In the second study ICAPS-153 was further reduced to ICAPS-55 and a composite ICAPS score was created by averaging across the 55 items. Cronbach alpha for ICAPS-55 was found to be .78. ICAPS also turned out to be temporally reliable with Cronbach alpha values of .79 at time 1 and .84 at time 2 of an English-English and English-Japanese test-re-test, as well as convergently valid. Further testing revealed that ICAPS-55 was also constructed validly, and has predictive validity of intercultural adjustment – using multiple methods. Savicki et al. (2004) have also tested the validity and reliability of ICAPS-55 and confirm the findings of Matsumoto et al. (2001).

One of the keys, according to Matsumoto et al. (2001), to successful intercultural adjustment – a process that by nature of intercultural differences must be replete with struggles, frustrations and conflicts – is emotion regulation. When (negative) emotions are kept in check, clear thinking is possible and adjustment and adaptability are possible. This factor is measured with 14 items. Two items are for example: “I often worry about things that might go wrong” (factor loading of .571) and “I rarely feel anxious or fearful” (factor loading of -.720) (Ibid: 504). A second factor is openness to experience. This is particularly openness to ideas. It is measured in the instrument with 13 items. An item example is: “I have tried to write poetry” (factor loading of -.546) (Ibid: 504). The third factor within ICAPS-55 is flexibility to traditional ideas and social roles, named flexibility. This factor is measured with 14 items. “Sex education is a good thing” is an item on this scale with a factor loading of .723 (Ibid: 504). The final factor is coming from a desire for self-direction and freedom from arbitrary constraints. Matsumoto et al. (2001) term this creativity or

autonomy. This factor is measured with 14 items. An item example is “Spanking a child is the best way to teach them” (factor loading -.696) (Ibid: 504).

These four psychological factors are presented in Figure 3.1, in column (2) where they turn out to be measuring the psychological traits we are looking for in our research. The students are asked to express their opinions with respect to each of the statements by rating their answers on a 7-point Likert scale from ‘strongly disagree’ (1) to ‘strongly agree’ (7).

*INCA measurement instrument for measuring inter-IIC growth*

The INCA project, financed by Leonardo da Vinci II programme of the EU (2007) has developed a framework to address intercultural competence. During the project, six components were identified as important for ICC: tolerance for ambiguity, behavioural flexibility, communicative awareness, respect for otherness, empathy (coming from Kühlmann and Stahl (1998), and knowledge discovery (Byram, 1997). “An intercultural individual should be willing to engage in intercultural interaction (‘motivation’ – the affective component), should have the necessary skills and knowledge (‘skills/knowledge’ – the cognitive component), and should show those resources in his or her behaviour (‘behaviour’)” (Pechtl and Lund, 2007: 473).

The INCA measurement instrument is designed as follows: communicative awareness includes - 3 items, tolerance for ambiguity - 6 items, behavioural flexibility - 3 items, empathy - 5 items, knowledge discovery - 4 items and relatedness to otherness - 6 items. These factors are thought to be important for developing the interpersonal dimension of IIC (see Figure 3.1). Because the INCA questionnaire is based on open questions, we do not provide examples of each scale, but only of one, and further refer to [www.incaproject.org](http://www.incaproject.org) where all information, questionnaires, assessors’ guides, etc. is readily available. The level of empathy in a learner, for example, is tested through the following situation: “Your supervisor at work has asked you to socialise with a young foreign worker of the same age and gender as yourself, who speaks your language quite well. A. What topics of conversation would you choose? B. What kind of activities would you choose to do and why?” (INCA project, Exercise Intercultural Encounters: 4).

The INCA project produced two types of tests: cognitive/affective-oriented written exercises and behaviour-oriented group exercises. The main topic of questioning in the written exercises part of the INCA questionnaire are Western and Chinese cultures.<sup>11</sup> The student answers’ to the questions referring to China, show what influences their knowledge and perceptions, travels, or more profound personal contacts with representatives of this culture. One of our expectations was that it would not be possible to acquire IIC only as a result of international encounters or travels. Following historical research by Otten (2003), Allport (1954) and Amir (1969), we argue in our model of IIC that intercultural encounters are maybe a necessary but not

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<sup>11</sup> This was especially interesting for Russian students because Russian culture (especially in the Asian part), apart from specific Russian cultural characteristics possesses both Western and Oriental views even though the degree to which these influences matter depends on the school and family education, personal experience, friends and travels.

sufficient condition for acquiring IIC. For IIC to truly develop these encounters must start a process of intrapersonal development (measured by ICAPS).

The second part of the INCA questionnaire contains long scenarios united by one theme, Business trip to China, and requests students to show their reactions to the behaviour of the actors in the scenario and the problems they encounter, as well as the solutions they see in those intercultural situations. The instrument is available in pencil and paper format. Tests and assessment formats were generically constructed to be applicable for each country even though some were tested in a specific culture (e.g. China). Pilot exercises were conducted and modifications were made to all aspects of the INCA products, even though the pilot exercises only offered limited empirical data against which to validate the INCA grid. "From a diagnostic point of view, the INCA products can be seen as a stable, competence-based assessment..." (Precht and Lund, 2007: 473). However, more extensive testing is needed, in particular to further check the validity to intercultural competence and assessment to investigate wider applicability and usefulness of the INCA instrument (Armann, 2004).

*MSLQ measurement instrument for measuring critical thinking and self-reflection*

MSLQ is based on a cognitive approach to motivation scales and learning strategies. The motivation scales tap into expectancy, value and affect (Pintrich, 1988a, 1988b, 1989). The learning strategies are divided into cognitive (rehearsal, elaboration, organisation, critical thinking), meta-cognitive (planning, monitoring and regulating strategies), and resource management strategies (time and study environment, effort management, peer learning, help-seeking). As part of the cognitive strategy scale, MSLQ has a subscale on critical thinking, with two foci: applying previous knowledge to new situations and to make critical evaluations of new ideas.<sup>12</sup> MSLQ also has a subscale on self-regulation – defined as fine-tuning and continuous adjustment of one's cognitive activities reflecting on the self. In 1986, 1987 and 1988 large amounts of data were collected and the MSLQ was subjected to the tests on internal consistency, reliability and validity.

The Cronbach alpha coefficient for critical thinking was found to be .80 when MSLQ was tested by Pintrich et al (1991) and .80 in a sample of 380 Midwestern (US) college students (Pintrich et al., 1993). The critical thinking scale consisted of five items, like "I often find myself questioning things I hear or read in this course to decide if I find them convincing" (item 38) and "I try to play around with ideas of my own related to what I am learning in this course" (item 66) from Pintrich et al. (1991). Correlation among MSLQ scales (Pintrich et al., 1993: 812) show that for critical thinking no other factor measures the same. The highest correlations of the critical thinking scale are with intrinsic goal orientation (.58) and elaboration (.57)

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<sup>12</sup> *These two foci are very relevant for our model on growth in IIC. Applying previous knowledge to new situations falls under 'combinative properties of the intellect' of convergent capabilities, 'originality' of divergent capabilities and learning ability – all components of the fourth dimension of our model on IIC growth, the intellectual capabilities dimension. Making critical evaluations of ideas relates to divergent capabilities (originality) and knowledge perception styles (cognitive styles).*

and the lowest (-.11) is with test anxiety. For the critical thinking subscale, the correlation with the final course grade was .15.

Self-reflection is not a separate scale in the MSLQ instrument, but some of the questions of the MSLQ instrument cover part of the definition of self-reflection as given by Stronge (2002) and Danielowicz (2001). Examples of items that also relate to self-reflection (adapted) are “When studying for this course, I set my own examples to help understand the concepts” (item 9), and “On each major concept from the study material I try to ask myself how I would react in the intercultural situations that illustrate it”. Correlation among MSLQ scales (Pintrich et al., 1993: 812) show that for the subscale of self-regulation, no other factor measures the same.<sup>13</sup> However, we focus only later on self-reflection, when we combine some of the items from Pintrich et al (1991) with items created by ourselves.

Overall, MSLQ shows satisfactory reliability in terms of internal consistency, while also the subscales show a degree of predictive validity since they were related to academic performance in the directions expected.

#### *IMI measurement instrument for measuring intrinsic motivation*

The IMI questionnaire, developed by Ryan and Deci (1992), covers eight clusters of items: relatedness, interest or enjoyment, perceived competence, effort, pressure or tension, perceived choice, value, and motivation (Ryan and Deci, 1992). To Ryan and Deci (1992), the level of interest/enjoyment, for example, is closely related to their intrinsic motivation, because the higher the interest in the course (materials), the more motivated students will be. A question that was put to the students to check students’ levels on intrinsic motivation are: “I think this course is very enjoyable”. Pressure or tension, in Ryan and Deci (1992) are expected to be negatively correlated with intrinsic motivation. We believe – indeed trying to create tensions and pressure purposefully – that it is not the pressure and tension itself, but the lasting negative feelings about them, matter. An example item in this cluster is “I felt very tense while doing this activity”. Effort is tested via items like “I tried very hard on this activity” or “It was important for me to do well at this task”. Perceived competence is measured by items like “I think I am pretty good at this activity” and “I am satisfied with my performance at this task”. A choice item is “I feel like it is my own choice to do this course”. The scale on value (or usefulness) contains the item “I believe doing this activity could be beneficial to me”. Finally, relatedness, that measures interpersonal contact and relationships, contains items like “I felt really distant to this person” and “It is likely that this person and I could become friends if we interacted a lot”.

Cronbach alpha was found to be between .80 and .87 as tested by Markland (1999). McAuley, Wraith and Duncan (1991) found that scale reliability lay between .72 (pressure-tension) and .92 (interest-enjoyment), but that choice, with a Cronbach alpha of .54 stood out as the one negative outlier. Also an earlier test by McAuley,

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<sup>13</sup> We do not report the correlation findings here because they relate to a subscale of self-regulation which is only in part the same as our subscale on self-reflection.

Duncan and Tammen (1989) found that reliability of the items was satisfactory (e.g. competence items showed a reliability of .84).

#### *4.2 First (pre-test) redesign of the measurement instruments*

Upon selecting the measurement instruments, we have studied them and made adaptations prior to the first testing moment (Y1) to make them more suitable for our research purpose.

##### *Changes in the ICAPS-55 instrument*

Before commencing with the test rounds, we changed the semantics in two of the items of the ICAPS-55 instrument to make the items more clear for the participating students in terms of level of English by replacing difficult words or rephrasing sentences. “I rarely feel anxious or fearful” (item 10) has been adapted to “I almost never feel worried, restless, or fearful”, and “Being in tense emotional situations scares me” (item 4) has been adapted to “Being in stressful emotional situations scares me”. We maintained the number of 55 items in ICAPS-55 at the start of the testing. The revised ICAPS-55 instrument is presented in Appendices A-2 and B-2.

##### *Changes in the INCA instrument*

The INCA instrument consists of four parts, which are: biographical and intercultural profile information, intercultural encounters, a business trip to China and a role play. We have reduced the elements from four to two for the first two testing moments (Y1 and Y2), focusing on the intercultural encounters and the business trip to China, because the extra biographical information was not needed in the testing phase and the testing operated under strict time limits because it took place in addition to the ongoing course of the students. During the full course, we added the biographical information, but not the role play. The biosheet was added to look for interaction effects with the IIC variables, and the role play was not added due to time and facility constraints. The role play was not included because of organisational challenges with video equipment that could not be arranged. Also for the INCA instrument, we changed some English language phrases to make them more easily understood for B1-C1 English proficiency students.<sup>14</sup> For example, at the scenario “Feeling Confused (1)”, we have changed the sentence “Therefore you often feel out of your depth and confused” to “Therefore you feel uncomfortable and confused” (INCA project, Exercise Intercultural Encounters: 4). Because the role play was not included, the number of items changed from 27 to 19. Communicative awareness includes - 3 items, tolerance for ambiguity - 4 items, behavioural flexibility - 1 item, empathy - 3 items, knowledge discovery - 4 items, and relatedness to otherness - 4 items.

The original INCA instrument is presented in Appendices A-1 and A-4, and the revised one in Appendices B-1 and B-4. The INCA instrument distinguishes be-

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<sup>14</sup> *Language levels vary between intermediate and pre-advanced and the classification and levels are based on the Common European Framework of Reference for Languages (2004).*

tween three levels of competence among learners for each of the scales (level one, basic competence; level two, intermediate competence; level three, full competence). Coding the student answers to the open questions, would then range between 1 – 3. Because we felt this would not create enough variance in the student answers, we have changed the coding range to 1 – 4, adding an intermediate competence level: basic, lower intermediate, higher intermediate, and full competence.<sup>15</sup>

#### *Changes in the MSLQ instrument – critical thinking*

The MSLQ instrument uses five items for measuring the subscale on critical thinking. First of all, we have adapted the semantics in three out of five items to reflect more closely that we refer to motivation related to teaching, i.e. a course on intercultural communication, and not to motivation in general. For example, “I often find myself questioning things I hear or read in this course to decide if I find them convincing” has been changed into “I often find myself questioning things I hear or read in this course on intercultural communication to decide if I find them convincing”. Also some other textual aspects of the items were changed. For example “When a theory interpretation, or conclusion is presented in class or in the readings, I try to decide if there is good supporting evidence” was changed to “When a theory, interpretation or practical example is presented in class or in the readings, I try to think about other examples from other sources to support what I hear and learn”. In order to strengthen this subscale (since for our research we do not focus on the full instrument, but rather on this part), also in terms of validity and reliability, we enlarged the number of items from five to seven. The two items we added are: “When thinking about the intercultural difficulty, I try to decide what is the difference behind it” and “When thinking about the intercultural difficulty, I try to decide what I am supposed to expect from my partner in communication”. The original and changed MSLQ-CT instrument are presented in Appendices A-5 and B-5.

#### *Changes in the MSLQ instrument – self-reflection*

The instrument designed to measure self-reflection contains 13 items. Seven of these items come in adapted form from the MSLQ instrument. Examples of adapted items are “During class time I often miss important points because I am thinking of other things” and “Before studying the material for each unit of the course, I try to visualize the problem in intercultural communication”. The other six items are added based on the definition of Stronge (2002) to reflect analytical introspection to reconstruct incoming intercultural information continuously. These six questions include items like “If theories are difficult to understand, I try to compare them with my previous similar experiences to understand them better”, and “I try to think of my own practical examples related to what I am learning in the course to be able to get more experience in dealing with intercultural differences”. The Self-reflection instrument is presented in Appendix B-5.

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<sup>15</sup> Later on – as we will describe below, we decided to expand the scale even further to 1 – 5, with level 1 being basic competence and level 5 being fully competent.

*Changes in the IMI instrument*

Before starting the first experiment, we reduced the original IMI questionnaire by five items: three items were removed because they were open questions and two items on relatedness were taken out because the Tomsk students did not understand and were overlapping with other items. This resulted in a 40 item instrument for the first experiment (see Appendix A-3). Also, because we conducted the instrument six times (two times at Y1, one time at Y2, and three times at Y3), whereby at moments 1, the future tense had to be used, and at moments 2 or three the past tense, we changed this as appropriate for the testing moments. Also we changed the word 'activities' for 'course' and 'person' for 'student / other students' to relate the questionnaire to our experiment that is about student-student learning. In the trial course, we continued revising the instrument by removing the factor 'pressure', reducing the number of items of the instrument further from 40 to 35. We did this because reliability of that factor was low (Cronbach alpha of .55) and because in our course on growth of IIC, discomfort, pressure and stress are important elements of the course that are not viewed negatively (as presented by Ryan and Deci, 1992) but as prerequisites to set intrapersonal cognitive processes going. The revised IMI questionnaire is presented in Appendix B-3 and used like that for the full course.

*4.3 Testing design and methodology*

We tested all three measurement instruments three times over a period of one year. In April 2008 (Y1), we organised a first session with 123 students to test the instruments. After this first test, we revised some of the instruments (e.g. changed scales, phrasing of items and scoring procedures) to improve their reliability and validity as well as increase student understanding of the items presented. In September 2008 (Y2), we tested them again while conducting the trial course on a small part of the full new course in IC, this time with 31 students participating. Finally, in the final experiment in March 2009 (Y3) (chapter 5), we established reliability and validity of the measurement instruments for 98 students at three measurement occasions. The results are reported in the remainder of this chapter and in Appendix C.

*Participants*

A total of 252 university students of different ages in their Linguistics and Intercultural Communication studies participated in the data collection to validate the instruments to be used for measuring the effect of the experimental IC course to stimulate IIC (chapter 5). The exact information about numbers of students, their ages and at what time they participated in the testing is provided in Table 3.6.

The Faculty of Foreign Languages at Tomsk State University (TSU) has an ethnically homogeneous population (all students are Russian with a few students from Kazakhstan). All students took an introductory course on Intercultural Communication (the experimental testing took place in April 2008 and the studies started in September 2007 for the second year students). The main criteria for participation in the testing session were sufficient levels of English to fill in the questionnaires and being a student from the Languages Department at TSU. Students would enroll on a

voluntary basis, but could obtain a certificate of successful participation from the University of Amsterdam and course credits at TSU in Tomsk.

*Table 3.6. Student information on those participating in testing measurement instruments*

	<i>Testing instruments (Y1)</i>	<i>Trial course run (Y2)</i>	<i>Full course run (Y3)</i>
Nr of students participating	123	31	98
Average age	17 – 22	19 – 23	17 – 25
% Males / % Females	13% / 87%	3% / 97%	9% / 91%
Language levels*	B1 – C1	B1 – C1	B1 – C1
Year of studies	2 <sup>nd</sup> – 5 <sup>th</sup>	5 <sup>th</sup>	2 <sup>nd</sup> – 5 <sup>th</sup>

\* Language levels vary between intermediate and pre-advanced and the classification and levels are based on the Common European Framework of Reference for Languages (2004).

### *Design*

The participants were offered questionnaires to check their initial levels of IIC (both dimensions), intercultural knowledge and intercultural skills. The questionnaires were prepared in English and handed out to the students present on the day of testing from all (five) courses of the Faculty of Foreign Languages at TSU.<sup>16</sup> The students were offered the following questionnaires in this order:

- Questionnaire 1 to assess their levels of intra-IIC – adapted from Matsumoto et al. (2001) – see Appendix B-2;
- Questionnaire 2 to assess their levels of inter-IIC – adapted from INCA (2007) – see Appendices B-1 and B-4;
- Questionnaire 3 to assess their levels of critical thinking – adapted from Pintrich et al. (1991) – see Appendix B-5; and
- Questionnaire 4 to assess their levels of self-reflection – adapted from Pintrich et al. (1991) – see Appendix B-5.
- Questionnaire 5 to assess their levels of intrinsic motivation – adapted from Ryan and Deci (1992) – see Appendix B-3.

The questionnaires were paper-pencil based and included different types of questions. The ICAPS questionnaire, and MSLQ questionnaire were based on statements that students could rate on a 7-point Likert scale from ‘strongly disagree’ (1) to

<sup>16</sup> Only to those that were selected; i.e. who had shown sufficient levels of English as explained above.

'strongly agree' (7). The INCA questionnaire was designed in the form of open questions which were later coded and graded on a 1-5 point scale.

Before the first testing round in April 2008 (Y1) and in between the other two testing moments in September 2008 (Y2) and March 2009 (Y3), we adapted and improved the questionnaires if needed. The redesign of the questionnaires before starting the first test run in April 2008, is already reported in section 3.5.2 above. We will report in detail on further changes below.

#### *Data Collection Procedures*

For all three testing occasions (Y1, Y2 and Y3), the testing sessions took place on different days; each day for one (sub) group of students. Orally the students were given short instructions on how to fill in the questionnaires. The time for working on each questionnaire was strictly limited and took one class of 1,5 hours long. In the curriculum at TSU related to IC, the students have to take two courses: the Introduction to Intercultural Communication, also named Introduction to Specialisation (obligatory for all students of the faculty in the first semester of their study), and Intercultural Communication (also obligatory for all students of the faculty in the ninth semester of their studies). Only the fifth-year students had already taken the second course on IC with a detailed study of the subject, while the other students in the test group were only familiar with some basics of IC from their introductory course. In spite of the fact that the students had different levels in their competency on IC, the basic knowledge available was more than sufficient to fill in the questionnaires, that were not focused on factual knowledge questions in any case.

We tested whether the measurement instruments are reliable (i.e. they test correctly what they are supposed to test) and whether they are internally valid, i.e. that different scales do not test the same construct. The results reported for reliability (or internal consistency) center around Cronbach alpha. Cronbach alpha is the index commonly used for internal consistency of items in a scale. It indicates the extent to which item responses obtained at the same time also correlate highly with each other (Cronbach, 1951). If the value of Cronbach alpha is higher than .60, the instrument is sufficiently reliable for experimental use (Garson, 1998).<sup>17</sup> To indicate whether the measurement instruments are valid, we calculated Pearson correlations. If the Pearson correlation between two instruments is below .80, we consider that they measure a different construct (even though below but close to .80 suggests a partial overlap in instruments).

#### *4.4 Results of testing the measurement instruments*

Having constructed the measurement instruments, based on the components and psychological traits favourable to development of ICC, and core aspects of our

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<sup>17</sup> The widely-accepted social science cut-off is that CA should be .70 or higher for a set of items to be considered a scale, but some use .75 or .80 while others are as lenient as .60, especially when used for experimental purposes (D. Garson, 1998, 2008). Last updated 9/9/2008. <http://faculty.chass.ncsu.edu/garson/PA765/standard.htm>.

model on IIC (see Table 3.1 and Figure 3.1), that have been selected from a wide range of available measurement instruments, in this section we present:

- Whether the selected (and adapted) items are reliable, i.e. internally consistent and testing what they are supposed to test;
- Whether the selected (and adapted) instruments are valid, i.e. that the different instruments do not test the same construct;
- What further changes we have introduced in the different instruments during and following our testing moments (Y1, the first test moment in April 2008; Y2, the second test moment in September 2008 during the trial course; and Y3, the final test moment during the full course run).

*Intercultural Adaptation Potential Scale (ICAPS)*

At three different moments, we have tested the levels of reliability and internal validity of the items constituting the ICAPS instrument. Table 3.7 shows the reliability results by presenting the different values for Cronbach alpha for the three testing occasions. Table 3.8 shows the internal validity results by presenting Pearson correlations for the subscales of the instrument.

*Table 3.7 Reliability indices for ICAPS (values of Cronbach alpha)*

	<i>Testing of measurement instruments (Y1) ICAPS-55</i>	<i>Trial course run (Y2) ICAPS-46</i>	<i>Full course run (Y3) ICAPS-46</i>
Moment 1	.75 (N=95)	.85 (N=31)	.80 (N=90)
Moment 2	.80 (N=95)		.90 (N=94)
Moment 3			.89 (N=95)

With values of Cronbach alpha of .75 and .80, obtained from two measurement occasions during the first trial, reliability of ICAPS was satisfactory. A total of 123 students participated in this first trial, but not all questionnaires were fully filled out, so there are small differences in the number of questionnaires counted for each of the scales of the measurement instrument. For the total measure 104 questionnaires were fully filled in. When looking at the scales within the ICAPS measure, we found that emotional resilience (Cronbach alpha of .74 with 110 observations) and creativity (Cronbach alpha of .60 with 110 observations) were reliable. The scales of flexibility and openness failed to pass the .60 threshold (with Cronbach alpha's of .47 and .17 respectively).

The Pearson correlations, calculated in order to test whether the different scales really measure something else, for the first test show that all scales are correlated at 1% significance level (except for openness and emotional regulation at the 5% significance level). However, correlations between the concepts were not very high,

indicating that the different scales of ICAPS each measure something different, i.e. are internally valid.

Following the first reliability test, before the trial course run, we decided to adapt the ICAPS-55 by deleting nine items from the scale. ICAPS-55 became ICAPS-46. We did this because student feedback clearly indicated that twelve items were not clear to them, leading them to fill in random answers. We studied each of the twelve items and for three items decided to leave them in. For example, “Some people are just no good” (item 17). The other nine items, items 21, 23, 24, 31, 34, 35, 38, 51 and 53, were removed from the instrument, because we believed they were not clearly phrased, students did not understand them, and they did not add new dimensions to the scales. Item 24, for example, was removed: “I am set in my ways”, and so was item “People who want to get rid of sexy publications are mentally ill”. This meant that the number of items per scale changed as follows: emotional resilience remained with 14 items, flexibility went from 13 to 10 items, openness from 14 to 11 items, and creativity from 14 to 11 items. This makes 46 items in total, but does not change the original Matsumoto et al (2001) scales, just the number of items per scale.

*Table 3.8 Pearson correlations between scales within the ICAPS instrument*

<i>Testing of measurement instruments (Y1 moment 1) (N=118) ICAPS-55</i>			
	<i>Emotional resilience</i>	<i>Flexibility</i>	<i>Creativity</i>
Flexibility	.31**		
Creativity	.32**	.36**	
Openness to experience	.19*	.31**	.07**
<i>Trial course run (Y2) (N=31) ICAPS-46</i>			
	<i>Emotional resilience</i>	<i>Flexibility</i>	<i>Creativity</i>
Flexibility	.20		
Creativity	.22*	.34	
Openness to experience	.34	.37	.31
<i>Full course run (Y3 moment 1) (N=97) ICAPS-46</i>			
	<i>Emotional resilience</i>	<i>Flexibility</i>	<i>Creativity</i>
Flexibility	.31**		
Creativity	.35**	.36**	
Openness to experience	.41**	.33**	.41**

\*\* Correlation is significant at the 0.01 level (2-tailed); \* Correlation is significant at the 0.05 level

ICAPS-46 was tested and reliability as measured by Cronbach alpha increased to .85 (Y2), implying that internal consistency of the items – and thus reliability – increased because of the changes. Reliability of the emotional resilience scale stayed the same with a Cronbach alpha of .74, but reliability of creativity (Cronbach alpha of .65) increased and so did reliability of flexibility (Cronbach alpha of .47) and

openness (Cronbach alpha of .43), even though the last two scales are still below the Cronbach alpha = .60 threshold level. The Pearson correlations show insignificant positive correlations between the scales, confirming that the different scales measure different aspects of ICAPS. Following the trial course run no further changes to ICAPS-46 were made. During the full course run, the same measurement instrument was used as during the trial course run. Reliability of the instruments was high, with values of Cronbach alpha of .80, .90 and .89 for the three moments respectively. The highest Pearson correlation between scales of ICAPS-46 was .41 (between openness and emotional resilience and openness and creativity) while all others were lower, from which we conclude that internal validity is sound. Because of lack of reliability of two individual scales, we have decided to use this measurement as a whole and not with the separate scales. As a whole, for measuring intrapersonal IIC, we conclude to have used a reliable measurement instrument.

*Intercultural Communicative Competence Assessment Questionnaire (INCA)*

Like for ICAPS, we have tested the levels of reliability and internal validity of the items constituting the INCA instrument. Table 3.9 shows the reliability results by presenting the values for Cronbach alpha for the three testing occasions. Table 3.10 shows the Pearson correlations to check for internal validity. During the first testing moment (Y1), we tested for the reliability of INCA and got a level of reliability of the total score, as indicated by Cronbach's alpha, of .73 (see Table 3.9). This is satisfactory, but not too high. Out of the 123 students participating, 110 filled in the INCA questionnaires. We found that reliability of the individual scales was not very high. Only communicative awareness (Cronbach alpha of .62) and tolerance of ambiguity (Cronbach alpha of .60) were above or on the threshold level of Cronbach alpha of .60.

*Table 3.9 Reliability indices for INCA (values of Cronbach alpha)*

	<i>Testing of measurement instruments(Y1)</i>	<i>Trial course run (Y2)</i>	<i>Full course run (Y3)</i>
Moment 1	.73 (N=100)	.71 (N=29)	.66 (N=94)
Moment 2			.96 (N=85)
Moment 3			.82 (N=83)

Table 3.10. Correlations between factors within the INCA instrument

	<i>Knowledge discovery</i>	<i>Relatedness to other- ness</i>	<i>Empathy</i>	<i>Tolerance of ambi- guity</i>
<i>Y1; moment (N=100)</i>				
Relatedness to otherness	.26**			
Empathy	.23**	.15		
Tolerance of ambiguity	.37**	.36**	.21*	
Communicative awareness	.26**	.36**	.33**	.33**
<i>Full course run (Y3 moment 1) (N=83)</i>				
Relatedness to otherness	.21**			
Empathy	.12**	.18*		
Tolerance of ambiguity	.32**	.39**	.15**	
Communicative awareness	.32**	.27**	.43**	.21**

\*\* Correlation is significant at .01 percent level; \* Correlation is significant at .05 percent level.

The other scales were not so reliable (knowledge discovery Cronbach alpha of .47; relatedness to otherness a Cronbach alpha of .37; and empathy a Cronbach alpha of .25).<sup>18</sup> Especially the result on empathy was then investigated further. It turned out that our test panel, the Russian students at TSU, mixed the expression of empathy with traditional Russian hospitality, which led to different answers than envisaged by the instrument designers. Most of the students had the same answers not leaving much variation in the answers. For example, the answer to the open question on the scenario "To invite or not"<sup>19</sup>, most students showed their hospitality and not empathy. Or in the other section of the questionnaire, "Business Trip to China", in an an-

<sup>18</sup> We did not measure behavioural flexibility separately as an individual scale, because we only included one item from INCA related to behavioural flexibility in the total measurement. However, this one item was taken into account in the total scale.

<sup>19</sup> Scenario 'To Invite or Not': A young person from country X comes to work at your firm for 6 months. You are aware that he is rather isolated and you consider the idea of inviting him to join you and your friends. The problem is that your group of friends have known each other for a long time and a stranger would find it difficult to fit in. Write down in a few lines what you think you would do in this situation (and why). (INCA project, available at: <http://www.incaproject.org>).

swer to the question meant to show their empathy, they, again, expressed their thoughtfulness towards the guests instead<sup>20</sup>. Unlike the ICAPS-questionnaire that makes use of a 1 – 7 Likert scale, the INCA questionnaire uses open questions that need to be coded. Inter-coder reliability for the first testing occasion was high with a correlation of .89 between the two coders.<sup>21</sup> Before the first testing moment, we had decided to change the 1 – 3 level of competence scale of INCA to a 1 – 4 scale to create more variance in the answers. This only worked to a limited extent. Pearson correlations of the INCA measurement show that the scales do not measure the same thing within the measurement, i.e. the internal validity of the measurement is demonstrated. We do find significant correlations, but they are not very high.

Following these findings from our first testing of the INCA instrument, we decided to carry through two changes. First of all, we expanded the 1 – 4 coding scale for INCA competences to a 1 – 5 scale. This means we have coded the answers by categorising them as basic – basic/intermediate – intermediate – intermediate/full – and full competence. Second, we adapted the questions regarding the ICC component of empathy to make clear that it is not the same as hospitality, reducing the ambiguity of the questions for the Russian test audience. These changes have resulted in a Cronbach alpha value for the total INCA instrument of .71 during the trial course (29 students filled in the questionnaires). The Cronbach alpha values for the individual scales were as follows: tolerance of ambiguity .62, knowledge discovery .84, communicative awareness .47, empathy .34, and relatedness to otherness .31. This means that reliability of empathy has gone up significantly, but not to the threshold level of .60. Overall reliability has not changed, but some of the scales have become more reliable. The intercoder correlation was .90, showing that both coders of the questionnaires were much aligned in their ways of coding.

Following the trial course run, no further changes to the INCA instrument were made. During the full course run, the same measurement instrument was used as during the trial course run. Reliability of the instruments – measured at three moments during the full course run – was much higher than expected based on the first test and trial run, with values of Cronbach's alpha of .66, .96 and .82 for the three moments respectively. At moment 3, the Cronbach's alpha values for the factors were .66 for tolerance of ambiguity, .49 for communicative awareness, .38 for empathy, .68 for knowledge discovery, and .53 for relatedness to otherness. The highest Pearson correlation between scales of the INCA measurement was .43 (between empathy and critical awareness) while all others were lower, from which we conclude that internal validity is sound. Because of lack of reliability of three (first test) or four (trial run) individual scales, we have decided to use this measurement as a whole and not with the separate scales. As a whole, for measuring interpersonal IIC, we conclude that we used a reliable measurement instrument.

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<sup>20</sup> Scenario 'Business Trip to China', question 1: Mr Parker is interrupted in his description of the problem: Wang: Mr Parker, if you should have any problems whatsoever, please let Mr Wang know. We will do our best. What could Mr Wang mean by this? (INCA project, available at: <http://www.incaproject.org>).

<sup>21</sup> One coder coded a random sample of 72 questionnaires; the other coder a random sample of 38 questionnaires.

Having defined two dimensions of IIC, measured via an adapted INCA questionnaire and an adapted ICAPS questionnaire, we needed to check whether the two questionnaires were not too strongly correlated, i.e. whether INCA and ICAPS measure something different, i.e. whether inter-IIC and intra-IIC were not overlapping too much.

Calculating the correlations, we found that the correlation between the two measurement instruments was low and only in some two out of the three measurement occasions were significant at the 5% level of significance. For the session on testing the measurement instruments, the correlation between INCA and adapted ICAPS-55 was .23, while for the trial course, the correlation between INCA and ICAPS-46 was .10. For the full course run, this correlation was .11. This implies that the two instruments measure two distinctly different aspects of IIC. These results are presented in Table 3.11.

*Table 3.11. Correlations between INCA and ICAPS instruments*

<i>Testing of measurement instruments (Y1 moment 1)</i>		
	<i>INCA</i>	<i>ICAPS (55 items)</i>
<i>ICAPS (55 items)</i>	.24	
<i>Trial course run (Y2) (N=25)</i>		
<i>ICAPS (46 items)</i>	.10**	.98**
<i>Full course run (Y3 moment 1) (N=95)</i>		
<i>ICAPS (46 items)</i>	.11	.97**

\*\* Correlation is significant at the 0.01 level (2-tailed); \* Correlation is significant at the 0.05 level. NA means 'not available' because in the first test run, we only used ICAPS-55, while in the second and third testing occasion, we only used ICAPS-46.

#### *MSLQ instrument – critical thinking*

Critical thinking, a driver for intrapersonal development as explained in chapter 2, is a subscale of the MSLQ instrument developed by Pintrich et al. (1991). At three different measurement moments, we have tested the levels of reliability and internal validity of the MSLQ-CT. The results are presented in Table 3.12 (values for Cronbach alpha).

The levels of reliability showed a high level of internal consistency as is shown in Table 3.11 for all three measurement occasions. Before starting the first test of the MSLQ-CT instrument, we enlarged the number of items from five to seven (see section 3.5.2 for the details). This scale enlargement indeed increased the reliability of the scale compared to the original Pintrich et al. (1991) level of reliability reported in section 3.3.2.

The Cronbach alpha value during the first testing of the instrument was .82, during the trial course it was .72 and during the three moments of the full course run, the Cronbach alpha was .82, .86 and .84 for moments one to three respectively. The questionnaire thus proved to be reliable in the try-out of the instruments, so it has not been changed afterwards. Given these reliability results, we concluded we had chosen and specified a good instrument to measure critical thinking that suits our research purpose.

*Table 3.12 Reliability indices for critical thinking (values of Cronbach alpha)*

	<i>Testing of measurement instruments (Y1)</i>	<i>Trial course run (Y2)</i>	<i>Full course run (Y3)</i>
Moment 1	.82 (N=110)	.72 (N=24)	.81 (N=86)
Moment 2			.88 (N=83)
Moment 3			.85 (N=83)

#### *Self-reflection instrument*

We constructed 13 items on self-reflection. As explained in detail in section 3.5.1, part of the self-reflection scale (seven items) comes from the MSLQ instrument, subscale self-regulation – since Pintrich et al. (1991: 23) define part of this scale as “self-testing and questioning” as well as “fine-tuning and continuous adjustment of one’s cognitive activities”.

*Table 3.13 Reliability indices for self-reflection (values of Cronbach alpha)*

	<i>Testing of measurement instruments (Y1)</i>	<i>Trial course run (Y2)</i>	<i>Full course run (Y3)</i>
Moment 1	.81 (N=96)	.74 (N=24)	.87 (N=86)
Moment 2			.90 (N=82)
Moment 3			.87 (N=83)

We added six items ourselves before starting to test the measurement instrument, to increase the representation of the instrument, and the reliability of the scale, keeping in mind the higher order cognitive skill in dimension four of our model of IIC we want to measure. In Table 3.13 the test results for reliability of the measurement on self-reflection are presented. Through all three testing occasions, as the Table shows,

the value of Cronbach alpha was well above .60, which indicates a high degree of internal consistency, with a value of Cronbach alpha of .81 for the testing of measurement instruments occasion, .74 during the trial course and .81, .76 and .81 for the three moments during the full trial course.

*Table 3.14 Pearson correlations for self-reflection and critical thinking*

	<i>Testing of measurement instruments (Y1)</i>	<i>Trial course run (Y2)</i>	<i>Full course run (Y3)</i>
Moment 1	.72**	.74**	.66**
Moment 2			.75**
Moment 3			.81**

\*\* Correlation is significant at the 0.01 level (2-tailed); \* Correlation is significant at the 0.05 level.

Having defined two higher order complex cognitive skills that are expected to facilitate growth of IIC, critical thinking and self-reflection, and having created two measurement instruments for these skills, we needed to check whether the two instruments were not too strongly correlated, i.e. whether MSLQ-CT and the SR instrument measure something different. We expected a correlation to be on the higher side, because both are related complex cognitive skills.

Calculating the correlation, we found that the correlation between the two measurement instruments was significant and rather high as shown in Table 3.14. For the testing session on measurement instruments we found a correlation between the two instruments of .72, while in the trial course, the correlation was .74 and for the final course run, it was .66, .75 and .81 for different moments. This implies that these measurements share variance but still measure distinct concepts.<sup>22</sup>

#### *Intrinsic Motivation instrument*

Like for the other variables, at three different moments, we tested the levels of reliability and internal validity of the items constituting the IMI instrument. Table 3.15 shows the reliability results by presenting the different values for Cronbach alpha for the three testing occasions. Table 3.16 shows the Pearson correlations to check for internal validity during Y1, Y2 and Y3.

Looking at Cronbach alpha values in Table 3.15, we see that reliability of the total instrument is high at all moments of measurement, with a lowest value of .75 at the first testing moment.

<sup>22</sup> *It is interesting to see that across moments during the full course run, the correlation between the concepts increases as IIC grows. This could mean that when the fourth dimension of intellectual capabilities grows, both skills are more deeply and frequently used, leading to more interaction between the two and thus higher correlations.*

Table 3.15 Reliability indices for IMI (values of Cronbach alpha)

	<i>Testing of measurement instruments (Y1)</i>	<i>Trial course run (Y2)</i>	<i>Full course run (Y3)</i>
Moment 1	.75 (N=95)	.86 (N=31)	.97 (N=95)
Moment 2			.91 (N=95)
Moment 3			.88 (N=95)

Removal of the factor 'pressure' from the instrument following the first test run as described above, increased reliability of the instrument to .86. All factors had Cronbach alpha values of above .60 in this test run, i.e. the changes made to the instrument had improved its internal validity. Without further changes, the adapted IMI questionnaire was used for the full course run, yielding a Cronbach alpha of .88 for the whole instrument and strong values for reliability for the factors. Effort and perceived choice showed the lowest values of Cronbach alpha of .63 and .67 respectively.

Table 3.16. Correlations between factors within the IMI instrument

<i>Testing of measurement instruments (Y3 moment 1) (N=95)</i>							
	<i>Relatedness</i>	<i>Interest</i>	<i>Perceived competence</i>	<i>Effort</i>	<i>Pressure</i>	<i>Perceived choice</i>	<i>Value</i>
Interest	.57**						
Perceived competence	.03	.34**					
Effort	.51**	.77**	.23*				
Pressure	-.04	-.04	-.29**	.08			
Perceived choice	.49**	.64**	.38**	.58**	-		
Value	.49**	.70**	.26**	.67**	.07	.67**	
Motivation	.41**	.48**	.17	.40**	.16	.54**	.62**

\*\* Correlation is significant at .01 percent level; \* Correlation is significant at .05 percent level.

Turning to internal validity of the instrument, the Pearson correlations for the factors of IMI are presented below. Although some of the factors within the IMI instrument were interrelated and significant to some extent, correlations were not that strong that we should combine factors into one score (see Table 3.16). We therefore could have kept the individual factors separately. However, within our research we were not interested in the details of motivation, but only in the total score. Therefore, based on validity, reliability analysis and the fact that we only need the total score, we decided to keep the factors together for the analysis.

*Validity of the measurement instruments*

We have already checked for the internal validity of ICAPS and INCA by comparing Pearson correlations, and concluded that their correlation was low, implying the ICAPS and INCA instruments measure different concepts of IIC. We also checked for internal validity of the measurement instruments of MSLQ-CT and the Self-reflection instrument, and concluded they share variance to a large degree, but also that they still measure distinct concepts.

*Table 3.17 Pearson correlations on measurement instruments (full course run)*

<i>Moment 1</i>				
	ICAPS-46	INCA	MSLQ-CT	Self-reflection
INCA	.11			
MSLQ-CT	.20	.25*		
Self-reflection	.26*	.28**	.66**	
IMI	.23*	.21	.53**	.57**
<i>Moment 3</i>				
	ICAPS-46	INCA	MSLQ-CT	Self-reflection
INCA	-.02			
MSLQ-CT	.40**	.11		
Self-reflection	.42**	.03	.81*	
IMI	.42**	-.09	.56*	.58*

\*\* Correlation is significant at the 0.01 level (2-tailed); \* Correlation is significant at the 0.05 level.

The internal validity of the intrinsic motivation instrument was also tested and found satisfactory. The correlation matrix in Table 3.17 (figures reported are for the full

course run, moment 1 and moment 3) shows that this is also the case for the other measurement instruments.

We found a small but insignificant positive correlation between INCA and ICAPS-46 instruments at moment 1 and virtually no correlation between the two at moment 3. We also found – as already discussed - a large and significant correlation between the MSLQ-CT and Self-reflection instruments.

We found positive and significant correlations between the Self-reflection instrument, the MSLQ-CT instrument and the ICAPS-46 instrument. This correlation increased from moment 1 to 3, suggesting that – as expected from the theoretical model – there is a positive link between higher order cognitive complex processes in the mind (like critical thinking and self-reflection) and intrapersonal development (intra-IIC as measured by ICAPS). Having tested the correlations between the measurement instruments multiple times, we concluded that their use is validated.

## 5. CONCLUSIONS AND DISCUSSION

In this chapter we focused on constructing reliable instruments to measure intra- and inter-IIC and related constructs of critical thinking, self-reflection and intrinsic motivation. The first four variables are relevant to be able to measure growth in IIC along the lines of our model for stimulating IIC of chapter 2, and the last variable matters for course validity and design (chapter 4).

In chapter 2, our model of intra- and inter-IIC resulted in a focus on three components of ICC: critical cultural awareness, cultural stress tolerance and experimentation with the cultural self. These three components have been closely linked in the literature to psychological traits like tolerance of ambiguity, emotional resilience, flexibility, creativity, openness, and cultural empathy. So, in line with our theoretical model, the measurement instruments have to be able to measure intra-IIC and inter-IIC through these clustered components and psychological traits. Because in our model on IIC growth, the higher order cognitive skills of the dimension of intellectual capabilities (dimension four) are at the core of IIC growth, and because – according to Kholodnaya (2002) – a learner has to go through all four dimensions of intellectual development before IIC starts to grow, we decided to measure two of these complex cognitive skills separately. Growth in critical thinking and self-reflection would indicate two things. First of all, that learners are going or have been going through the fourth dimension of our model for intellectual development – having gone through the other three before. Second, that learners are engaging in complex cognitive mental processes as part of their intrapersonal growth.

Many measurement instruments to measure ICC have been developed and used in practical courses on IC over time (Fantini, 2006; Sinicrope, Norris and Watanabe, 2007). Fantini (2006) identifies 87 instruments, but Sinicrope, Norris and Watanabe (2007) find others and our own research has still found many more. Out of these measurement instruments, we have selected and adapted the ICAPS-46, INCA, MSLQ, and IMI instruments to measure intrapersonal development of IIC, interpersonal development of IIC, critical thinking, and intrinsic motivation. We have used a

combination of the MSLQ instrument and items created by ourselves to develop a scale to measure self-reflection, which we name the Self-reflection instrument.

The ICAPS instrument measures the level of emotional regulation, creativity, openness and flexibility of a learner, linking directly to the components of ICC and psychological traits stemming from our model for growth of IIC. The INCA instrument measures the levels of empathy, communicative awareness, tolerance for ambiguity, knowledge discovery and relatedness to otherness, which also links directly to the variables we need to measure coming from our model for growth of IIC. This implies that our measurement instruments are reflective of the theory we have developed in chapter 2, i.e. their theoretical validity is checked and confirmed.

Following the instrument selection, we have tested the five measurement instruments on three different occasions regarding their reliability and internal validity. For each of the measurement instruments we have looked whether to adapt the scales, items or coding ways in order to increase reliability and internal validity. For ICAPS, we reduced the number of items from 55 to 46, based on feedback from the IC participants in the first test run of the instruments. The coding of the open questions of the INCA questionnaire was changed from a 1 – 3 scale as originally envisaged by the project team (INCA, 2007) to a 1 – 5 scale in order to increase variance and allow for a more detailed classification of answers. We increased the number of items of the MSLQ-CT instrument from five to eight in order to strengthen the instrument and increase its reliability and internal validity. We took the original IMI instrument (Ryan and Deci, 1992) and removed five items; three because they were open-ended questions and two because they discussed ‘friends’ which was not relevant in our context. This resulted in a 40-item instrument. We rephrased the questionnaires in the future tense and changed the word ‘activities’ for ‘course’. In the second test, we removed the factor ‘pressure’ (five items) as it was not reliable and was defined opposite our own views on pressure, tension and stress, yielding our final instrument of 35 items. We combined part of the MSLQ scale on self-regulation with our own items to create a new instrument to measure self-reflection, the Self-reflection instrument. Finally, we carefully studied the level of English used in the tests, and based on open feedback from the learners participating, changed and adapted semantics in order to increase understanding of the instruments.

Reliability relates to the internal consistency of the measurement instrument. If internally consistent, the resulting Cronbach alphas should be over .60. Internal validity is tested through Pearson correlation analysis to make sure correlations between measurement instruments are not too high; i.e. the instruments measure different constructs. The ICAPS questionnaire (adapted from Matsumoto et al., 2001) was tested for reliability and the value for Cronbach alpha turned out to be between .75 and .90, which is sufficiently high. We decided to use the instrument as a whole, and not also its individual scales. The INCA instrument (2007) showed an overall level of internal consistency of between .69 and .96. Because of the relatively low levels of reliability for some of the scales within the instrument, we decided to use only the aggregate INCA instrument. Since both the INCA and ICAPS instruments are ways to measure IIC, although different dimensions, we tested whether the two instruments were sufficiently independent from each other. Correlations between the instruments show a highest correlation of .24, with other results showing lower cor-

relations, which is sufficiently low to conclude that they measure something distinctly different; i.e. when measuring intra-IIC and inter-IIC, we are measuring something else.

Our adapted MSLQ-CT instrument for critical thinking was tested for reliability and found reliable (Cronbach alpha between .72 and .86). The Self-reflection instrument was also found highly reliable (Cronbach alpha between .74 and .81), indicating a high degree of internal consistency. When running the correlation analysis, we found that critical thinking and self-reflection had a correlation coefficient of between .66 and .75 (with one reading spiking to .81). This is a rather high level of correlation, but still there is a significant part of unexplained variance to warrant treating the two components separately. Reliability of the IMI instrument was high, with .75 in the first test run being the lowest value. Also the factors constituting the instrument were reliable. Pearson correlations showed that internal validity of the IMI measure was also fine.

Overall Pearson correlations for all five instruments showed no significant correlation, except for – the already explained link between – critical thinking and self-reflection. What is interesting to note is the fact that during the first moment of the full course, critical thinking and self-reflection were not significantly correlated with ICAPS (the measure for intra-IIC), but at moment 3 they are, and significantly so. This could be evidence for the fact that students that gained higher levels of intrinsic motivation as the course progressed, also started to engage at deeper levels, showing a higher correlation between the two instruments. Whether we find an interaction effect between intra-IIC and intrinsic motivation is investigated in chapter 5.

Our reliability and internal validity measurements at three different moments in time - having made some changes to the instruments at various points – show that reliability and validity of the measurement instruments have been established. We are therefore confident that ICAPS-46 instrument, the adapted INCA instrument, as well as the MSLQ-CT instrument, the Self-reflection instrument and intrinsic motivation instrument – in their revised forms – can be used to adequately measure inter- and intra-IIC growth as well as growth of critical thinking and self-reflection skills.



## CHAPTER 4

# COURSE DESIGN AND COURSE SPECIFICATIONS

Design must seduce, shape, and perhaps more importantly, evoke an emotional response.

-- *April Greiman – contemporary designer*

### Abstract

Many courses based on different theoretical models have been created, with different practical approaches that are targeted at the development of IIC (Campbell, 2002; Smart, 2010; Kalkoven, 2010). In this chapter we present and test the course based on course design parameters (CDP) and course design specifications (CDS) that follow from the theoretical model in chapter 2. The theoretical model guides us to focus on a course that needs to include activities to enhance critical cultural awareness among students, stimulate their tolerance to cultural stress and encourage them to be open and willing to experiment with their cultural selves. The course also needs to stimulate development of interpersonal experiences through dialogue with others. CDP are the guidelines along which the course on IC needs to be developed. The CDS then further detail these CDP into the specific course design of the course. These specifications allow materials, course objectives, and teaching methodologies to be segmented and grouped in an organised manner. We designed the course in IC based on the CDP and CDS that are content-related, pedagogical and comprise various teaching formats. We have used different approaches to the process of learning and different types of activities reflected in the trial units and full course that are explained in this chapter.

31 students from Tomsk State University, Russia (age varying from 19 to 23 years old), participated to trial a prototype of the newly designed course in IC in detail. We test whether the CDP and CDS have been applied correctly and are in line with the theoretical model and whether they have been understood correctly by the participating students. The group of students followed an introductory class, followed by two modules of three hours each. One module is on 'Attitude to time' and the other one on 'Relationships and love'. We conclude that overall the CDP and CDS are applied correctly. We also find that the CDP and CDS interact with each other in a synergistic manner, and contribute significantly to the goal of the course: to stimulate IIC. The levels of intrinsic motivation – as measured by IMI (Ryan and Deci,

1992) – increase significantly over the course of the trial, suggesting the students are enthusiastic about the course. Some aspects, like moderation of discussions, the number of simulation games, how to deal with knowledge and course materials, are flagged in the trial course as areas for improvement. So we have shifted the focus more to intra-IIC related activities to further optimise their use in line with the theoretical model and course aims; i.e. we have developed more activities like simulation games to stimulate critical thinking, self-reflection and create disequilibria inside the students to strengthen the intrapersonal learning process. All modifications that are suggested, have been implemented in the full course.

In the full course, 98 students from Tomsk State University participated (age varying from 17 to 25 years old). The full course consists of an introductory class, followed by eight modules of two (academic) hours each. The topics covered relate to: ‘context and uncertainty’, ‘language in IC’, ‘non-verbal communication’, ‘intercultural relationships and love’, ‘intercultural conflicts’, ‘intercultural competence’, ‘adjustment and sensitivity’, ‘intercultural comparisons and working together’, and ‘building a bridge’. A course reader and course workbook have been created to support students with background knowledge and a set of exercises to facilitate the intra- and interpersonal growth processes. Again the CDP and CDS are tested, this time via evaluations with students, learner reports, time-on-task measurements and measurement of intrinsic motivation of the students. The evaluations of the students indicate a close match of the intended and perceived CDP and CDS – with two modules performing slightly below expectations and three modules above that. The learner reports suggest significant focus on critical cultural awareness, cultural stress tolerance and experimentation with the cultural form of the self and a positive attitude of students to the interactive lecture parts of the course. The latter is further corroborated by the levels of intrinsic motivation that had increased significantly and considerably during the full course. These measurements together constitute strong evidence that the course matches the intended course design.

*Key words: intercultural intellectual capabilities, course on intercultural communication, experiential learning, course design parameters, course design specifications*

## 1. INTRODUCTION

As indicated in chapter 2, Fink (1999) presented five design criteria (DC) for a 'good course'. A good course (1) challenges learners to higher levels of learning, (2) uses active forms of learning, (3) uses a structured sequence of different learning activities, (4) gives frequent and immediate feedback to learners on the quality of their learning, and (5) has a fair and transparent system for assessing and grading learners. We added four design criteria we believed also matter for a 'good course'. A good course also (6) is clear upfront about the attainment targets that have to be achieved and has analysed the sub-attainment targets, (7) departs from the learner's current levels of development, (8) motivates and interests learners for the topic and each other's points of view, and (9) emphasises time-on-task. With higher levels of learning, Fink means that a good course goes beyond comprehending and remembering basic information, but rather focuses on higher levels of learning like problem solving, decision making, critical thinking and creative thinking. Active forms of learning are activities like group work and simulations that focus on thinking critically and solving problems (i.e. higher levels of learning), not sticking only to aspects like reading and listening (i.e. passive forms of learning). A structured sequence of different learning activities uses a pre-planned variety of forms of learning to support the aims of the course, while at the same time, ensuring that there is a gradual build-up of learning, with earlier classes laying the foundation for complex and higher level learning tasks later on in the course.

From the theoretical model on growth of IIC, we distilled four course design parameters (CDP) as described in chapter 2:

- CDP 1: Create situations that stimulate critical cultural awareness;
- CDP 2: Create situations that stimulate cultural stress tolerance;
- CDP 3: Create situations that encourage willingness to experiment with the cultural self;
- CDP 4: Create situations that focus on learning in a dialogue with others.

These four CDP provide the starting point for covering these course design criteria for a good course. However, it is not sufficient to develop a model and abstract CDP alone. In this chapter we will present course design specifications that must guide the course design on a more practical level. These course design specifications relate to three clusters of course design specifications:

- Pedagogical course design specifications;
- Content course design specifications, and
- Teaching format course design specifications

In this chapter we also present the initial and revised course modules in detail to show the way the CDP are outlined in the course, and that the designed course on IC is in line with the CDP. We also show how the trialing, testing and adapting of the implementation of the course took place.

### *1.1 Course design parameters (CDP)*

Following from and linked to the theoretical model, four CDP were derived. The function of these CDP is to help 'translate' the theoretical model on growth of IIC into a practical course on IC.

#### *CDP 1: Create situations that stimulate critical cultural awareness*

A course needs to include activities to enhance critical cultural awareness among students. This CDP follows from developing critical perspectives upon new intercultural knowledge of other cultures (meta-cognitive dimension), developing new views and preferences and a new intercultural frame of mind (intentional dimension), and convergent capabilities, especially processual properties of the intellect (intellectual capabilities dimension). This means that the course design needs to allow intercultural learners to engage in activities asking them to be open to acquire new semantic structures and create new meanings. The course must create disequilibria in their minds by confronting them with new and culturally deviating information. Activities must stimulate and test the learner's degree of openness to otherness and willingness to dialogue and to reconsider acquired understandings in an intercultural context. Through specific exercises, both between learners and individually, they must learn to motivate themselves to control and verify all intercultural information they come across against an intercultural filter to pierce through the surface and explore its real meaning and significance. Awareness of interculture also implies that through various activities, IC participants are encouraged to acquire the skill to be continuously critical of one's own thinking, adapt and review thoughts, beliefs and values when engaging in new intercultural experiences. Discussions with others about various intercultural topics facilitate critical cultural awareness and promote the exchange of views, beliefs and insights between learners.

#### *CDP 2: Create situations that stimulate cultural stress tolerance*

The second CDP aims at stimulating students' tolerance to cultural stress. This CDP follows from the meta-cognitive dimension, especially the (voluntary) choice to control cultural stress and develop cultural stress tolerance and tolerance of uncertainty, and from the dimension of intellectual capabilities, more specifically divergent capabilities that allow a student to accept it is not possible to understand everything, and that differences have to be tolerated. In the course, exercises and activities that put learners in uncomfortable and confrontational situations need to be present; activities that make them realise that differences exist, that it is not possible to understand them all, and that they are likely to remain. This may lead to learners starting to accept those differences. Tolerating cultural stress also implies IC participants will be critical of and open-minded towards their own thinking. Exercises that encourage critical thinking and force learners to observe through the eyes of other cultures should be part of the course. Personal values and beliefs should be challenged through activities on a repeated basis.

*CDP 3: Create situations that encourage willingness to experiment with the cultural self*

The third CDP is that the course should encourage students to be open and willing to experiment with their cultural selves. This is a process of self-reflection that follows from being open to otherness and from a willingness to dialogue and reconsider acquired schemata. It also follows from divergent capabilities – allowing the students to process interculture in new ways to reach new and original explanations and conclusions. This involves organising activities that encourage learners to be open to otherness and willingness to dialogue and reconsider their own acquired schemata. Activities to make learners view matters through different cultural lenses or exercises and discussions to make them think whether or not they want to adapt or reconsider information and behaviour hitherto not questioned. Activities can promote dialogue with the self (intrapersonal) or with others (interpersonal). The degree to which new information is analysed through an intercultural filter is also a detailed learning aim, that needs to be incorporated in the course, because it may induce the IC participant to see information in a different light, prompting a hitherto not given response, changing the old boundaries of the cultural self. The same effect is expected if – through interactive and simulating activities – IC participants aim to analyse intercultural experiences in divergent ways, allowing them to potentially process interculture in new and unpredictable ways to come to new and original explanations and conclusions. Discussions during the course also make them aware of their own thinking vis-à-vis other intercultural communicators, allowing for a process of self-reflection.

*CDP 4: Create situations that focus on learning in a dialogue with others*

The fourth CDP is that the course has to stimulate development of interpersonal experiences through dialogue with others. This design parameter stems from the fact that disequilibria in students that set the learning process going are not only intrapersonal in nature but also follow from interpersonal experiences; i.e. interpersonal experiences are intercultural cognitive experiences (dimension 1 of our model on IIC). The course must create experiences and have elements that include learning in a dialogue. Learning in a dialogue is important because the interpersonal insights and exchanges of information contribute to creating intrapersonal disequilibria which set the 4-dimensional intra-personal development process going, maturing a learner interculturally. A more mature intercultural learner, in turn, will use a more elaborate language, be more empathic, and is more aware interculturally, which is manifested in interpersonal engagements.

*1.2 Detailed course design specifications*

To achieve a significant development in both dimensions of IIC, given that a university course has to be delivered over a limited period of time, the main principles on which the course is built need to be very clear. The main principles need to link natural personal growth through cognitive, meta-cognitive, intentional and intellectual development to the attainment of experimentation with the cultural self, cultural

stress tolerance, and critical cultural awareness in order to stimulate IIC. We focus on “how to teach”, “what to teach”, and are given “who to teach”, linked to our theoretical framework.

Specific course design requires that the CDP be transformed into practical exercises and activities that need to be carried out. To structure the practical activities in our course on IC, we employ three clusters of course design specifications (CDS). These clusters relate to: pedagogical CDS, methodological CDS and content CDS. The pedagogical CDS focus on stimulating higher levels of learning, like situation-oriented learning, problem-based learning, and autonomous learning, through appropriate exercises and activities. The methodological CDS cover various teaching formats that support the aim of the course in IC. Finally, the content CDS focus on the types of culture-general information the students can use in support of the other CDS as well as CDP. All three CDS clusters are relevant to create an experimental course in IC that stimulates intra-IIC and inter-IIC, being designed from the perspective of the learner, to stimulate the development of IIC via the three course aims: experimentation with the cultural self, critical cultural awareness, and cultural stress tolerance (see chapter 2 for a full account of this model). Multiple practical classroom activities can constitute each of the CDS clusters, while the number and depth of the activities define the relative importance given to each dimension.

#### *Pedagogical course design specifications*

Course planners could consider three types of higher level cultural learning activities (i.e. complex cognitive mental processes) in order to provide the setting for stimulating the development of intra-IIC and inter-IIC.

*Problem-based learning.* Students must be productive, not reproductive in learning. Intrapersonal growth through a mental process of development, requires students to make decisions from within. Interpersonal problem-based activities contribute by putting a student in the middle of various and different intercultural situations. Problem-based learning creates challenges to a mind hitherto in equilibrium, creating uncomfortable disequilibria that require mental solutions to overcome gaps between cultural settings, experiences, values and beliefs. Students have to make decisions in various intercultural situations, to create solutions to overcome gaps between cultural settings, to predict and foresee consequences of these decisions and to look for solutions. Problem-based learning makes previously unknown experiences more explicit and confronts the students with them directly, forcing them to contemplate and increase their levels of cultural stress tolerance (Palomba, 2006) as well as critical cultural awareness (Byram, 1997). Problem-solving activities also support them to become more open and flexible as well as creative in light of challenges that have to be addressed.

*Situation-oriented learning.* In IC learning, situations can be treated like micro intercultural encounters with others (i.e. dialogue with others) that create disequilibria inside the students' minds, stimulating the process of intrapersonal growth. Situa-

tion-oriented learning – at a meaningful level (Ausubel et al., 1978) – in a dialogic environment helps to create close to real-life experiences that can assist students in setting the intrapersonal development process going. Students – by acquiring new information – come to terms with uncomfortable experiences that – over time and via a process of critical thinking – lead to stimulation of the cognitive dimension of our model of IIC. This leads to intrapersonal adaptation, driven by the desire to create equilibria in student's minds. It also leads, however, to the recognition that not all disequilibria can be equilibrated which in turn facilitates the growth of cultural stress tolerance (dimension 2 of our model on IIC). Situation-oriented learning, also feeds back to the formation of shared meanings in a dialogue (Lustig and Koester, 1998) and encourages students to become more flexible, open and empathic to different views of the world of other students. Situation-oriented learning also stimulates the process of critical cultural awareness (Byram, 1997), which in turn leads to adapted behaviours that match an increased level of IIC. The stimulation of IIC will become even stronger if the activities are also encouraging growth in critical thinking and self-reflection, which affects students' identities.

*Autonomous learning via critical thinking and self-reflection.* While processing and contemplating newly acquired intercultural knowledge and experiences through activities that encourage critical thinking, students develop an open position to new knowledge (dimension 2 of our model of IIC) and become critical in its interpretation and analysis. At the same time, they also engage in cerebral activity to process and interpret this knowledge and experience (dimension 1 of our model of IIC). Moreover, this knowledge may diverge from personal beliefs. In other words, there is a difference between the insights gained and the personal values and beliefs of the students, forcing them to contemplate these divergences (i.e. disequilibria). These disequilibria could be the start of self-reflection – i.e. control information against an intercultural filter (dimension 2), develop new intercultural frames of mind (dimension 3), and make progress in divergent intercultural capabilities (dimension 4 of our model of IIC). This is reflected in higher levels of tolerance for ambiguity and more emotional resilience.

Self-reflection ensures continuous reconstruction of experiences, analytical introspection and the recurring transformation of semantic structures, information coding ways, and cognitive schemes. It puts the learning and developing intercultural knowledge, skills and beliefs on a deeper, more profound level and if carried out consistently ensures higher levels of competency whereby the self is linked to otherness stimulating IIC. The process of self-reflection also aids strengthening emotional resilience, it fosters creativity in looking for mental equilibria, and is expected to make a student more flexible behaviourally.

*Content course design specifications*

Culture is already a 'peculiar property' (Sapir, 1924: 401), but the existence of more than one culture makes it even more difficult to define since different representatives of different cultures problematise different peculiarities and characteristic features (Skopinskaja, 2003). In essence, culture is not fixed, but rather it is manifold, diffi-

cult to explain and always changing. That is why it is important to look at cultures from different points of view, to teach students to think broadly about culture and cultural behaviour, and to develop a flexible attitude to intercultural differences and tolerance to these differences. Even though knowledge is important because it is a vehicle via which our course aims are achieved and IIC grown, acquiring detailed intercultural knowledge is not the goal of this course. Increased levels of knowledge of cultures (in general) rather feed into the cognitive dimension of our model of IIC increasing critical cultural awareness, making students more aware, open and flexible about differences between cultures. Content is therefore chosen to set a learning process going: the student lives a new cognitive experience through being presented with novel information on a culture e.g., and not necessarily with different views of one culture, and from there starts realising that the hitherto assumed correct and stable world view may not be correct anymore and that further action needs to be taken (voluntary control) to acquire additional information. This leads potentially to increases in cultural stress tolerance (tolerance for ambiguity), critical cultural awareness and more willingness to experiment with the cultural self. We suggest contemplation on the following content-related CDS.

*Extending knowledge about the native culture.* With respect to the content for a course on IC, the native culture of the students is important, because it is the intrapersonal frame of reference that is the baseline starting point for IIC growth. Dis-equilibrating activities will only be able to start a process of IIC growth if there is no immediate adaptation of the student to this new information or experience; i.e. increasing cultural awareness develops through a reflection of new experiences and information against the existing frames of mind, cognitive schemes and information coding ways that stem from the native culture (dimension 1 of our IIC model). Knowledge about the native culture is important for a student – when confronted with discomforting intercultural information and differences – to stay emotionally resilient.

*Extending culture-general and culture-specific knowledge.* A course on IC is a special form of a cultural study. The discussion on culture-general (Gudykunst, Ting-Toomey and Wiseman, 1991; Kelley and Meyers, 1995) and culture-specific (Broome, 1986, Schmidt, 2004) approaches to knowledge is important in this respect. Because our model of IIC focuses on intrapersonal growth of IIC, supported by interpersonal experiences, our focus regarding cultural knowledge is culture-general in nature. It is not the intercultural knowledge itself that matters, but the cognitive processes this new intercultural knowledge and experiences set in motion. It does not mean we do not present culture-specific examples and information, but the culture-specific knowledge only has an illustrative purpose and the examples can be picked from any culture. In other words: culture-specific information is used as a means to generate culture-general insights that in turn create new frames of reference, cognitive schemes, information coding ways, conceptual psychic structures or archetypical structures, that may cause the start of IIC growth, both intra- and interpersonally. At the same time, cultural information provides the illustrations for stu-

dents to become more critically aware of differences between cultures, enhancing their levels of openness and flexibility.

*Viewing cultures from different points of view.* Some consider culture as a part of society (societal approach to culture – Varner and Beamer, 1995; Calloway-Thomas, Cooper and Blake, 1999; Hoebel and Frost, 1976), while others consider it as a part of an individual (cognitive approach to culture – Foley, 1997; Goodenough, 1957; Romney and Moore, 1998, etc.) or the result of a dialogue (Vygotsky, 1978; Wierzbicka, 2006). Culture is in any case not static, stable or fixed (Rodriguez, 2002). That's why it is important to look at cultures from different points of view, including the point of view of the native culture (see above). This helps students to look critically across cultures at differences and similarities, reflect upon these differences and – in the process – become more open and flexible and more tolerant to ambiguous cultural situations.

*Teaching format course design specifications*

To increase IIC (both the intrapersonal and the interpersonal dimensions) through increasing critical awareness, cultural stress tolerance and experimentation with the cultural self, various teaching formats – with differing effects – are available to planners to be used for IC course design to allow students to engage in higher levels of learning and get in touch with culture-general content.

*Project (group) work.* Various authors have suggested project work as a recommendable tool to stimulate intercultural communicative competence and intellectual capabilities (for example through problem-based activities, carrying out simple intercultural tasks (Revenko, 2006)). Because project work provides for a lot of space in working with authentic materials and strongly encourages students to engage with each other, it is a format that potentially can create significant levels of disequilibria inside students' minds. Group discussions not only lead to an exchange of information but also to confrontations between students. Critical cultural awareness can be stimulated as part of project assignments and intra-group interactions can enhance cultural stress tolerance and encourage students to experience with the unusual form of the self.<sup>23</sup>

*Simulation games.* Simulations and games have proved to be effective in practicing the target language in comfortable learning environments as well as in raising motivation and interest of the students to the learning process (Walker and Jeurissen, 2003; Hofstede and Pedersen, 1999; Owens Sift and Denton, 2003). Cultural stress is hard to handle in real life situations, but can be accepted more positively and learnt better if looked at from a pre-set perspective or in mitigated simulated form – seeing different cultures not as alien and destructive but just as different and enrich-

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<sup>23</sup> For example, first discussions occur in small groups of 2-3 students whereby the goal is to reach a consensus on a case that is culturally and morally complex. Then the groups meet to discuss and try to reach consensus at a higher level, after which the case is discussed in the whole group.

ing. Simulations put learners in situations where they are challenged to reconsider experiences undergoing attitudinal cognitive change (dimension 1 of our model of IIC), leading to a change in how intercultural encounters are perceived. Simulation games – though based on interaction – lead to strong intrapersonal learning and higher levels of cultural awareness and stress tolerance. First of all, because they stimulate students to control all information against an intercultural filter (dimension 2 of our model of IIC), but also because introspection (self-reflection) can lead to more understanding of the cultural self through divergent and convergent capabilities in the mind (dimension 4 of our model of IIC). Simulation games, in essence, comprise all four levels of development as described in Kholodnaya (2002) as well as the learning tasks and are a key design parameter to achieve higher levels of IIC.

*Video courses and fragments.* Films and specially designed videos have long served as a basis to stimulate listening skills of students or to extend their vocabularies. In Russian teaching experience, a video course developed by Pavlovskaya (2005) called ‘England and the English’ is often used. It is devoted to traditions, customs, manners of the English, but also shows how the English view the Russians. Video courses have to be specifically designed, making use of appropriate fragments, to generate discomfort among students watching the fragments (dimension 1 of our model of IIC). From this discomfort, cultural adaptation and tolerance of discomfort can develop. Moreover, illustrative video fragments, combined with subsequent problem-based learning and discussions can lead to increased critical cultural awareness (dimension 2 of our model of IIC).

*Videoconferencing or Tele-collaboration.* This form of learning is studied and practiced by O’Dowd and Ritter (2006), O’Dowd (2000), Furstenberg, Levet, English, and Maillot (2001), and Hung (2006) and refers to the ‘use of online communication tools to bring together language learners in different countries for the development of collaborative project work and intercultural exchange’ (O’Dowd and Ritter, 2006: 1). This format of teaching has the advantage that it provides real life experiences to the students.

*Email.* Email (O’Dowd 2006) is very popular in language studies as it is a quite cheap, fast and easy way to exchange opinions, and find out new facts and information from the students from all over the world (Levy, 2007). Email is however, like videoconferencing, a long-distance tool and does not allow for explanations alongside the interpersonal communication. It provides only limited space for exploring the cultural self and tolerance of cultural stress as at a distance these processes are often very different from face-to-face communication and interaction. Enhancing critical cultural awareness is possible depending on follow-up activities organised during the course.

*(Interactive) lecturing.* Lecturing is the format of teaching that is most traditional and is still widely used in Russia. Through interactive lecturing, some culture-

general (Fowler and Mumford, 1995; Storti; 1999; Ter-Minasova, 2000, etc.) information can be provided to the students that affect their frames of reference (dimension 1 of our model of IIC). This format is mostly informative in nature (i.e. a lower level of learning according to Fink (1999)) and does not involve student experiences that could lead to interpersonal disequilibria. The element of ‘interactivity’ adds discussions and links the theory to the practice of IC (if done properly by the lecturer), asking for immediate responses from the students on both how they understand theory and how they see it implemented in practice. The latter could – to a limited extent – set an intrapersonal growth in IIC going.

### *1.3 Linking the course design specifications to the course design parameters*

Table 4.1 summarises the considerations for each CDS linked to each of the four CDP. Since our goal is to design a course on IC that stimulates Intercultural Intellectual Capabilities (IIC) through a process of intrapersonal growth, supported by interpersonal learning, it is imperative that the course is designed correctly; i.e. that the course design specifications match the course design parameters and thus the theoretical model on stimulating IIC growth.

To subject students to cultural stress tolerance (one of the CDP), the experimental course on IC must include activities that encourage intrapersonal learning, especially the skills to consciously control cultural stress, and to think in divergent ways. This intrapersonal learning process takes place via critical thinking and self-reflection, which motivates students to keep an open mind while still thinking divergently. This is possible through simulation games and project group work that are problem-based and stimulate intrapersonal autonomous learning. These activities are imperative for encouraging students to experiment with the cultural self. Problem-based activities – to some extent – also encourage students to look inside themselves and experience cultural stress tolerance.

To develop critical cultural awareness among students, course planners may consider inserting situation-oriented and problem-based activities as well as covering some culture-specific information as part of the content-wise CDS. Project (group) work and video fragments can be good teaching formats combined with the pedagogical approach and organisation of activities that generate interpersonal experiences.

Bringing learners to a point where they can reflect on their cultural selves requires engaging in inter- and intra-personal experiences to open up their frames of mind and becoming more culturally aware. There is a native cultural knowledge component involved to determine a learner’s ‘baseline’ knowledge position. From cognitive disequilibria, openness to otherness and openness to intercultural information can stimulate experimentation of the cultural self. On the fourth dimension of the model on IIC growth, divergent capabilities are also encouraging this type of cultural self-exploration. Activities need to focus the students on engaging with new information, allowing themselves to be confronted with new and unfamiliar views, knowledge and references compared to their native culture, which causes a meta-

cognitive development process to experiment with the cultural self, which leads to growth of IIC.

*Table 4.1. Relating the design parameters to the learning aims*

<i>Design parameters</i>	<i>Cultural stress tolerance</i>	<i>Experimentation with the cultural self</i>	<i>Critical cultural awareness</i>	<i>Stimulate interpersonal experiences</i>
<i>Pedagogical course design specifications</i>				
Situation-oriented learning	0	-	+	+
Problem-based learning	0	0	+	0
Autonomous learning (critical thinking, self-reflection)	+	+	0	0
<i>Content course design specifications</i>				
Knowledge of native culture	-	0	0	0
Culture-general (and culture-specific) knowledge	-	-	0	0
Knowledge of different views on culture	0	-	+	0
<i>Teaching format course design specifications</i>				
Project (group) work	+	0	+	+
Simulation games	+	+	0	+
Video courses	-	-	+	-
Video-conferencing & tele-collaboration	-	-	0	0
Email	-	-	0	0
(Interactive) lecturing	-	-	0	0

A “+” signifies a strong positive effect of course design parameters on learning aims, a “0” signifies a small positive effect, and a “-” signifies no effect at all.

Activities that encourage interpersonal exchange of experiences and information need to be included in the course according to the last CDP. This is because those experiences also create disequilibria in a student’s mind, setting the learning process going. Activities that are interpersonal in nature are group project work and snowball discussions (see later in this chapter) as they challenge students to discuss and

interact with each other, especially when related to situations students may find themselves in (i.e. situation-oriented learning).

We think that flexible use of different CDS can be efficient in achieving learning aims and develop student levels of IIC. Clearly, the practical activities like group work or interactive lectures for example, will encourage the exchange of experiences and information among students. This is mainly an interpersonal learning process, but it feeds into the intrapersonal growth of a person through disequilibrating cognitive experiences. It is, however, imperative that the interpersonal learning experiences are complemented and reinforced by intrapersonal learning that is stimulated by other activities (like simulations). Also, from Table 4.1 it becomes clear that through proper use of course design specifications, all CDP and learning aims of the course in IC can be addressed in order to develop students' dimensions of intrapersonal and interpersonal IIC.

The cumulative effect of all these activities, combined in a logical order throughout classes, stimulates the learning process that leads to the creation of higher levels of Intercultural Intellectual Capabilities (dimension 4 in our model on IIC) and thereby completes the learning at the highest level of intellectual development. Convergent capabilities are aimed at operationalising the interculture, developing a critical approach to different cultures and their analysis, while divergent capabilities allow for processing interculture as new, original experiences, contributing to the mechanism of developing skills necessary in dealing with interculture. Knowledge perception styles complement the convergent and divergent capabilities and cover the ways in which learners acquire, process and reflect on new experiences and knowledge, both within and outside the context in which they learn. This also includes developing tolerance of unrealistic experiences, i.e. experimentation with the cultural self, allowing the learner to see and respect other cultures more clearly, broadening their views.

#### *1.4 Aims of the chapter*

In this chapter, we aim to present the essence of how the experimental course on IC has been designed and to show that this design matches the Course Design Parameters (chapter 2) and Course Design Specifications (this chapter above). Course objectives and materials are more transparent and clear when materials are segmented and grouped together in an organised manner, when segments are organised thematically or topically into units or modules, and when the organisation scheme clarifies the progression of concepts and cognitive skills to be learned during the course. An orderly sequencing of materials also helps students understand how course activities contribute to fulfilling specific learning aims: developing critical cultural awareness, cultural stress tolerance and experimentation with the cultural self.

#### *1.5 Structure of the chapter*

In section 4.2, we present the trial course: what the trial course (September 2008) looked like (2 modules), the methodological set-up and test results for checking

whether the trial course fitted the CDP and CDS, and an overview of modifications made. In section 4.3, we present what the full course (March 2009) looked like, as well as the methodological set-up and results for checking whether the full course fitted the CDP and CDS coming from our theoretical framework.

## 2. TRIAL COURSE

### 2.1 *Trial course – the design process*

“The process of formulating a hypothetical learning trajectory that provides an initial orientation for a design experiment involves specifying (a) the significant ideas that constitute the potential developmental endpoints, (b) the anticipated starting points, and (c) the envisioned learning route and means of support” (Cobb, McClain and Gravemeijer, 2003: 9-10).

The course design started with the development of the theoretical model. The implications of the theoretical model were discussed in three 2-hour sessions among researchers; experts at the Graduate School of Teaching and Learning (GSTL) at the University of Amsterdam. Whereas the theoretical model and derived four CDP are the starting points, the intended endpoint is an interactive course curriculum that will significantly develop student levels of IIC through a process of intrapersonal growth and interpersonal learning. To that end various learning materials, including introductory Power Point slides, exercises, and simulation descriptions have been designed. This also involved extensive email correspondence among experts in Amsterdam and Tomsk, and three design meetings with researchers and experts at TSU. Following the trial course run, there was email correspondence with experts at the GSTL and two follow-up and evaluatory sessions with colleagues at TSU to discuss the results – also within the Russian context.

### 2.2 *Trial course – the curriculum*

The trial course was presented in the form of two modules devoted to two subjects: (1) attitude to time in different cultures – polychronic and monochronic cultures; and (2) relationships in different cultures that include relations at work, in society and in romance.

In general, some theoretical material at the outset was presented in the form of interactive lectures (main points of theory shown in a short PowerPoint presentation accompanied by short explanations of the teacher) with parallel discussions on the topics from theory, providing examples, and engaging in different kinds of activities to illustrate and support theoretical material. Discussions were held both in the whole class and in small groups of 2-3 students. Also videos, short simulations and project-based activities were used. Most of the activities were done by the students themselves, in small or bigger groups, or individually, while the teacher guided and moderated the course and time management of the class and evaluations and discussions. The class schedule is presented in Table 4.2 below.

*Table 4.2 Trial course class schedule (1 hour intro + 2 modules x 3 hours each)*

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*Introduction to the trial course (45 minutes)*

1. Short introduction to the trial course, course aims and approach (5')
2. Discussion on what is culture, how the concept can be viewed, its most important characteristics (10')
3. Simulation game Scissors (illustrate miscommunication/highlight differences in communication) (30')

*Module 1: Attitude to time*

*Class 1 (45 minutes)*

1. Short intro to the class (5')
2. Watch culture shock video (2')
3. Short introduction to 'Attitude to time' (5')
4. Watch the video: Belgian/Japanese in the office on time and efficiency (2')
5. Discussion of 'Attitude to time' video (7')
6. How are common theories holding up in reality? (4')
7. Discussion on theory – practice (7')
8. Work on a quiz (5')
9. Analysis of quiz in groups in class (8')

*Class 2 (45 minutes)*

10. Group work on the quiz about time (10')
11. Discussion of quiz results inside groups and then in the class (12')
12. Attitude to time in Russia – reflect own culture – discussion and examples (10')
13. What other cultures think about attitude to time in Russia (13') – true/false statements and discussion
14. Homework for next class: study what's done, do the quiz, link this to personal experiences on attitude to time (1')

*Class 3 (45 minutes)*

1. Home quiz – discussions and solutions (5')
2. Attitude to time in Russia: brainstorming ques-

*Module 2: Relationships in different cultures*

*Class 1 (45 minutes)*

1. Video: Greek wedding movie fragment (3')
2. Sharing impressions and comparing with Russian and foreign experiences (10')
3. Culture shock – What is it? How do you understand it? Did you experience it before? (5')
4. Simulated situations – and immediate reactions from students (in groups) to the situations (5')
5. Discuss and compare with Russia and other cultures (10')
6. Citations on relationship and love – (in 7-8 student groups) compare citations with Russian culture, date the citation (10')

*Class 2 (45 minutes)*

7. Discussion within and between groups (2-3 students) on Abigail story (15')
8. Relationships and personal space – for Russian and other cultures – group work (15')
9. Let the class draw conclusions on differences in approach to relationships and what they imply (10')

*Class 3 (45 minutes)*

1. Presenting situations in class / groups – discuss (10')
2. Stories on relationships – judge people from the

*Table 4.2 Trial course class schedule (1 hour intro + 2 modules x 3 hours each)*

tions (10')	stories (10')
3. Discovering time in other cultures (10')	3. Role-play on German, Russian and Asian views on relationships + discussion (25')
4. Personal contributions to time experiences in other cultures, discussions in groups (20')	

*Introduction class to the trial course (45 minutes)*

A discussion on the concept of culture was carried out to exchange ideas on what is culture according to the group and what were considered the most important aspects of culture. An introductory exercise centering around an iceberg as a metaphor for culture was done by the students.<sup>24</sup> They shared their personal opinions and argued over what is and what is not culture. They were shy at first but became more active as discussion was stimulated. They put values on the 'iceberg' as a metaphor for culture. The students did a simulation game called 'Scissors'. A student had to hold a scissors which could be open or closed. At the same time, however, the position of the student's legs would be what really determined whether – in the game – one would have to say 'open' or 'closed'. Thus with open legs and an open scissors, the teacher would say 'open' and students would think they understood. However, when the next student would hold the scissors open also, but with the legs closed, the teacher would say 'closed'. This created confusion as the students would observe the scissors being open but they realised they missed something; i.e. they were looking at the wrong object (the scissors) for answers. Some of them would discover the code after a while, others not. Students had to write down and reflect upon whether they had an urge to discover the code, how they felt when not being able to break the code, whether they had had such feelings before, and how they then reacted.<sup>25</sup> This simulation game was followed by a discussion on what the lessons learnt from it could be for intercultural, on whether it reflected upon cultural differences in general and whether the students had already experienced similar situations in their own personal lives.

<sup>24</sup> *The iceberg is a metaphor for culture, because most of the aspects of culture are under water and we see only the top, which implies if the sea current pushes the iceberg left, even though the observable winds try to push the iceberg right, the iceberg will go left.*

<sup>25</sup> *This simulation demonstrated in practice different communication codes that participants of the communicative act were consciously and unconsciously exchanging in an intercultural world, which could create discomfort and unease at first but then could lead to new awareness and new revelations hitherto not noticed by the students.*

*Module 1: Attitude to time (3 classes of 45 minutes each)*

The students started off the module on 'attitude to time' with a culture shock video that showed the experiences of students in different countries with respect to time. For example, an Italian student would be late for each and every class by 10 minutes in Britain. The students then received the tasks to discuss whether they thought: (1) She had a responsibility to be punctual; (2) Lecturers should delay the start of their classes; (3) What to say to the Italian student about this; (4) It would be fair to assume that Italians are late in general; (5) Good or bad about the Italian student's lack of punctuality. They also discussed the very American concept of 'time is money' and what this would imply for foreigners in the US and US citizens elsewhere. Students were asked to analyse for themselves both scenarios and the effects. These scenarios were then discussed, first in small groups of 2-3 students, then plenary.

Examples of a monochronic or polychronic approach to time were given by the teacher, followed by a video on differences in the approach to time between Belgium and Japan. Students were asked to note down and discuss the monochronic and polychronic aspects witnessed on the video fragments. Furthermore, different concepts of time were briefly presented in an interactive way by the lecturer, followed by the invitation to the students to identify both the most and least appealing concepts of a range of 10. Students then had to argue why they had chosen these two concepts of time.

They also did a quiz with videos, showing behaviour of people from different cultures regarding time. The students had to guess the nationality belonging to the main actor in each video. A set of true-false statements was given as well as a set of problems that could occur during IC and how each individual student would solve these problems. The students were then asked to discuss the solutions they had found themselves with others in small groups of 2-3 students, trying to reach consensus. Then in the plenary group, again, groups presented their ideas and the whole class would have to reach consensus regarding these solutions.

Finally, students had to discuss with each other about the attitude to time in Russia (reflecting their own native culture) and what other cultures would think about the Russian concept of time. In the final class, the focus was on creating small case-studies on, for example, the US, Western Europe and Greece, that would allow students to get to know different views on the concept of time. The module ended with students providing their personal contributions to experiences with time divergences in other cultures.

*Module 2: Relationships in different cultures (3 classes of 45 minutes each)*

The students watched some fragments from the movie 'My big fat Greek wedding' highlighting differences in the approach to relationships.<sup>26</sup> They were given the task to describe in detail how they felt when watching the various moments where US and Greek cultures clashed. They then had to share their experiences, listen to others and compare their experiences to Russian and other foreign cultural values.

The concept of 'friendship' in different cultures was discussed and the students did an 'Accident exercise' (a friend causes an accident and kills a person – would

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<sup>26</sup> *My big fat Greek wedding*, by Joel Zwick (2002).

you testify against him/her or let him/her get away with it?<sup>27</sup>) in the form of a snowball exercise letting personal beliefs come out first in small groups, then in bigger groups and finally in the whole class. This demonstrated how friendships were valued differently and considered differently across cultures.

In the second class the students were presented with the Abigail story (see Appendix D-3). The students were asked to read the Abigail story and then write down immediately their first reactions. They were asked to think about the role of Abigail, the mother, Sinbad, Tom and Bob and write down what they thought of each respective role. They then were asked to 'snowball' by first discussing their views and beliefs in small 2-3 student-large groups, with the goal of reaching a full group consensus on who was to blame. This consensus was then tested at a higher level in two groups of 7-8 students each, also asking the students to reach a consensus. Finally, in a plenary discussion, the students had to discuss and build consensus altogether. Students were put on edge by having to think whether or not they would give up their personal moral beliefs for the sake of creating consensus – which was the goal to be attained.

The students also had to read through various citations on relationships and love (in groups of 7-8 students) and compare these citations to Russian culture as well as date the citation. They were then asked to split into three groups. One group had to study and prepare as Asians, Asian views on relationships and love, while the second group had to 'remain' Russian in their behaviour in relationships and love, while a third group had to act as Germans in their approach to relationships and love. During a role-play, different simulations were played by small groups while others observed (e.g. approaches to colleagues at work for social activities, male-female relationships at work and in social life, hierarchy at work, expressions and behaviours while in love).

### 2.3 Trial course – Method

#### *Trial course – Participants*

A total of 31 Russian university students (97 % female) of different ages (from 19 up to 23 years old) in their fifth year of study (based on five-year-long Master programme in Linguistics and Intercultural Communication) participated in the trial of the course. The students were following their studies at the English Language Department of the Faculty of Foreign Languages and major in two or more foreign languages and Intercultural Communication. The level of English proficiency varied between intermediate and pre-advanced. Related to the Common European Framework of Reference for Languages (2004), it varied between B1 and C1. All participants had followed the introductory course on IC in their second year and had not yet started the fifth year course on IC. The essential differences between these two courses and the experimental course are threefold. The regular TSU courses focus mainly on familiarising students with (1) theories concerning IC, are taught (2) one-directionally, with low levels of interaction and no group-work, and do not focus on

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<sup>27</sup> *The Accident exercise, as well as the Abigail story, are adapted from 'Mirrors and Windows' by Huber-Kriegler et al., 2003.*

(3) practical use and applicability. The two experimental units are directed towards stimulating IIC and are taught in a student-centered bi-directional way. They focus on creating disequilibria in students minds (cognitive dimension) to get the intrapersonal learning process going. Theories and intercultural knowledge are not relevant as such, but rather are the cognitive processes this new intercultural knowledge and experiences set in motion. The trial course is taught as an additional course to the existing curriculum for the students; i.e. on top of the regular classes.

Students were recruited on a voluntary basis. The main selection principle to include students in the study was sufficient knowledge of English that enabled them to understand the materials dealt with and participate in discussions concerning these materials in the classroom. This way they could participate and benefit from the numerous (group and plenary) discussions envisaged, express their thoughts and understand others.<sup>28</sup> This resulted in the selection of 31 students out of the 38 that applied.

*Trial course – Data collection methodology*

The teacher together with the students wanted to test the design of the course, and the CDP and CDS used.

*Table 4.3 Data sources used for trial course testing and evaluation*

<i>Intended course</i>	<i>Implemented course</i>	<i>Perceived course</i>
Notes on three 2-hour design meetings	Student notes and written work	Transcript evaluation results from participants
Three design meetings with colleagues at TSU and internationally	Lecture notes on student individual and group work	Results of tests on intrinsic motivation (IMI)
Designed learning materials	Researcher observations and notes during the class	Results of a final tips and tops session
Email correspondence with IC experts in Russia and Netherlands		
2 sessions with colleagues at TSU on the Russian context		

Following Yin (1984), we collected data from different sources to cross-validate our findings. In Table 4.3, we show the different data sources used for the three different course representations: the course design (intended course), the implemented course and the perceived course. The trial course was evaluated at the end:

- by tests on intrinsic motivation (IMI instrument);

<sup>28</sup> The course was taught in English and not in Russian because the students are specialising in English as part of their Foreign Language programme they are following at TSU.

- by a ‘tips and tops’ session that included short evaluation questions prepared by the teacher.

#### *Instrument on intrinsic motivation (IMI)*

For intrinsic motivation, we adapted the Intrinsic Motivation Inventory Questionnaire (IMI) of Ryan and Deci (1992) on intrinsic motivation as described in chapter 3. This measure is indirectly part of any of the two dimensions of IIC because it measures the willingness of students to engage in intercultural experiences, both intra- and interpersonal. This instrument is used here, because it shows us the effect of the course on motivation, giving an indication of the quality of the course as perceived by students, to see if the course was successful in this respect. This matters, because motivation is an important variable to measure the willingness of students to engage in intercultural experiences; i.e. their openness to IIC processes and growth. “It is a truism that learning has to be done by the learner. This means that teaching cannot cause or force learning; at best it can encourage and guide learning. The impetus for learning must come from the learner, who must want to learn, either because of a natural human propensity to do so, because of an interest in the material” (Van Lier, 1996: 12). Deci and Ryan (2000: 231) define intrinsic motivation as “a deeply structured effectance-focused motivation – a propensity to have an effect on the environment as well as to attain valued outcomes within it”. The adapted IMI questionnaire was used to evaluate the attitudes of students to the activities connected with learning about IC. For the detailed validity and reliability results, we refer to Appendix C. 31 students took the IMI questionnaire twice (before and after the course) during the trial course.

#### *Tips and tops session*

The ‘tips and tops’ session was organised in the form of an open discussion, and allowed students to express their further opinions on the trial course and make suggestions for improvements of the course. Additionally three teachers commented on the course in the same questionnaires as offered to the students.

Following the tips and tops session, a short evaluation questionnaire was handed out (see Appendix D-1) to the students. The questionnaire contained 8 open and 13 scaled questions in total on evaluation of the trial course regarding:

- The degree to which the CDP were covered by the designed activities;
- The nature of student – student and teacher – student interactions;
- The way the teaching format CDS worked or did not work;
- What was useful knowledge CDS for the purpose of stimulating intrapersonal learning and information that could be omitted;
- The way the pedagogical CDS affected the way the students had to think, contemplate, discuss, learn;
- How much of the trial course – and what parts exactly – were likely to be remembered by the students a year later.

#### 2.4 Trial course – Results

##### *Evaluation of course design in terms of CDP and CDS*

Regarding the use of CDP and CDS that were applied in this course, the question is whether the course was designed in line with these specifications. When we compared the designed curriculum to the implemented and perceived curriculum, we found out which CDP and CDS were covered adequately and which ones not (yet). We looked at the ‘gap’ between intended/implemented activities (based on the CDP and CDS) versus perceived activities. Differences would lead to new theoretical insights and provide us with important information on how the course could be designed differently. This is what we called a ‘gap analysis’, illustrated in Table 4.4.

In this section, in addition to the overall course description outlined above, we present the way the CDP and CDS were perceived in each class. The overall aim of the trial course was to validate the course design by linking it effectively to CDP and CDS.

The participants were divided into two groups of 15 and 16 students each. Each group had a series of three classes (lessons) in total (6 academic hours) preceded by one introductory hour, with time in class being devoted also to filling out the testing questionnaires. After the course and tips and tops session, the students were given a short questionnaire to fill in at home and give back.

Table 4.4. ‘Gap’ analysis regarding course design parameters

		<i>Intended effects of CDP / CDS</i>	
		<i>Yes</i>	<i>No</i>
Implemented/perceived effects of course design parameters	Yes	Validation of CDP / CDS	Additional theoretical insights
	No	Search for explanation: change in theory or practical implementation	

Source: Toorenaar and Rijlaarsdam (forthcoming, 2010).

##### *Introduction to Intercultural Communication*

The students enjoyed the class overall and felt they had learnt already valuable insights into a start of IC. They found the scissors game the most insightful and – at first – also very uncomfortable as long as the code was not broken. It made them realise that good intentions alone are not enough and made them wonder about where else this type of communication could go wrong. They also liked the video – in part because it was seen as relaxing and fun – and subsequent discussions.

The start of the class, with a discussion on what is culture, was felt as not deep enough. They mentioned that the course ‘should have included’ more information about other cultures, they found that knowledge about different traditions and customs as well as stories with predicaments were very interesting and motivating.

They thought sometimes there was not enough knowledge to make conclusions in the discussions, they felt they were lacking specific knowledge and had to make decisions based on the general knowledge about these cultures and general attitudes of being open, flexible and not judgmental about differences between cultures. It worked out in the course but they said it would be more interesting and effective to include more specific examples. The fact they could bring in personal experiences and their own ideas to the class was appreciated, and so was the level of interaction with the teacher and among themselves.

Finally, the students indicated that the email exchange of information, which should have happened before the trial course for preparation, did not take place at all. Internet was not always working and facilities at TSU did not support this kind of preparation.

#### *Module 1: Attitude to time in different cultures*

The theory of monochronic and polychronic cultures and the way this would affect perceptions of time, was appreciated – also in response to the perceived lack of information on cultures in the introduction part of the trial course. The students enjoyed the video which explicitly illustrated the differences between Belgium and Japan, followed by the discussion, even though the discussion did not go on for very long because they still had to get used to the very different way of conducting the course compared to regular courses at TSU, nor did students feel all aspects had been touched upon.

Many students found the quiz confrontational in the sense that they were not expecting certain cultures (they thought they knew) to behave in certain ways. Moreover, two students indicated they found it confrontational to hear how other students thought and felt about Russia and its concept and definition of time (e.g. that Russians had bad time management skills and wanted to talk themselves out of being late all the time). This was an eye-opener for many in the class. The main comment for improvement on module 1 was the lack of variety in tools to make the classes more diverse. More methodological variety would have been appreciated, in particular inclusion of simulation games, for example.

#### *Module 2: Relationships in different cultures: at work and in society*

As asked by the tasks given to the course participants, the students had to and did exchange their opinions and personal views on relationships with each other, relating them also to relationships in different cultures. One observation was, however, that they were too considerate and polite to each other during the discussion, resulting in everyone trying to agree with each other or simply not expressing their views. This is why in second instance, the teacher asked all students to write down on yellow post-its three of their main views on relationships and then try to convince the others of the importance of these views. That worked better.

Theoretical material was presented on relationships in different cultures, followed by a discussion on benefits and challenges of intercultural relationships, where the students – getting used to the interactive nature of the course – engaged with much enthusiasm in the required discussions. As intended (see class schedule

in Table 4.2), most of the time was spent on the Abigail story and the Accident exercise. The students indicated they found them shocking, and many students felt uncomfortable and uneasy discussing and having to compromise on such fundamental ethical issues. One student remarked: ‘This exercise I will remember for the rest of my life whenever I think of intercultural communication’. Indeed 11 students indicated that the Abigail story and the subsequent snowball discussions made them think most and some even went on to discuss this case outside class among themselves and with their families at home.

Compared to these intense experiences, the other parts were perceived positively but less so, especially the more general views of relationships they discussed at the start of the lesson. In general, this module was perceived as the stronger one of the two, though some students noted that this was also because it took them time to get used to the very different – student-centred – way of teaching the class – much more engaging and motivating than most other classes.

The short evaluation form, handed out during the ‘tips and tops’ session, yielded the results as presented in Table 4.5 below. This Table further corroborates the detailed module findings above, even though only 15 out of 31 questionnaires were received back.

*Table 4.5 Evaluation results trial course (on a 1 – 7 Likert scale)*

<i>Nr.</i>	<i>Question</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Number of responses</i>
1	This trial course has made me more aware of other cultures (critical cultural awareness)	5.6	.44	N = 15
2	This trial course has made me more comfortable with differences between cultures (cultural stress tolerance)	5.0	.98	N = 15
3	This trial course got me thinking about my own beliefs and ways of viewing the world (experimentation with the cultural self)	4.8	.91	N = 14
4	This trial course has made me gain important knowledge about my own culture (interpersonal dialogue)	4.5	.55	N = 15
5	This trial course has made me a more critical person culturally (critical cultural awareness)	5.3	.60	N = 15
6	This trial course has helped me to stress out less in difficult intercultural situations (cultural stress tolerance)	4.5	1.12	N = 15
7	This trial course has made me change my personal views on other cultures (experimentation with the cultural self)	5.5	.56	N = 14
8	This trial course has provided me with different views on cultures (interpersonal dialogue)	5.3	.61	N = 14
9	The level of interaction in this trial course between students and teacher was very low (1) –	6.6	.33	N = 15

*Table 4.5 Evaluation results trial course (on a 1 – 7 Likert scale)*

<i>Nr.</i>	<i>Question</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Number of responses</i>
	very high (7)			
10	The level of interaction in this trial course between students among themselves was very low (1) – very high (7)	5.9	.65	N = 15
11	Compared to the regular IC course at TSU, the level of interaction between students and teacher in this trial course was very low (1) – very high (7)	6.8	.22	N = 13
12	Compared to the regular IC course at TSU, the level of interaction between students among themselves in this trial course was very low (1) – very high (7)	6.9	.38	N = 12
15	How effective were the following teaching formats, that were used during the trial course:		1.45	N = 15
	- Interactive lectures	5.5	.44	N = 15
	- Simulations	6.4	.65	N = 15
	- Group discussions	5.7	1.10	N = 14
	- Group work	5.0	.77	N = 15
	- Video fragments and discussion	6.1		

From Table 4.5 it becomes clear that students in general felt that the course had addressed the four CDP (values far above the median of four for the questions one to twelve) with a relative stronger impact on critical cultural awareness (questions one and five) and dialogic learning (questions nine to twelve) than on cultural stress tolerance (questions two and six) and experimentation with the cultural self (questions three and seven).

From the student answers to question 15, it becomes clear that they found the simulations and video fragments and discussion most effective as well as the group discussions, followed by group work and interactive lectures. Figure 4.1 adds to this finding by showing that indeed, the most useful teaching formats were the simulations, followed by group discussions. Least useful was the group work.

Allowing students to openly say which parts of the trial course got them thinking and wondering, made them feel most uncomfortable, were the strongest eye-openers, made them think deepest, and would be remembered best in one year from now, they came up with various (open-ended) answers. For each category, the students could fill in a maximum of three answers. That resulted in the following responses (in alphabetical order): the Abigail story, the Accident exercise, Case studies on time, Feeling bad, Feeling shocked, Group discussions, Group work, Iceberg exercise, Interactive lecturing, Italian student exercise, My big fat Greek wedding

video, role-plays on relationships and love, the Scissors exercise, Simulations, Thinking, Video fragments and discussions, Video quiz on time, and Views on time.

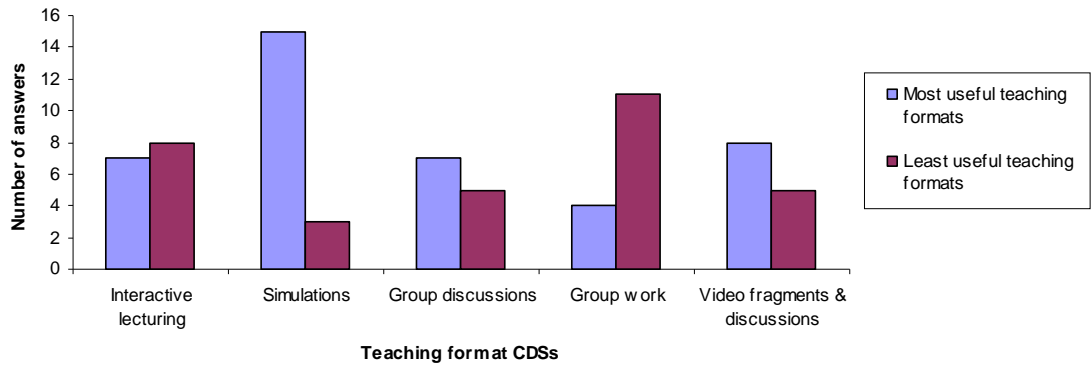


Figure 4.1 Most and least suitable teaching formats for a course in IC.

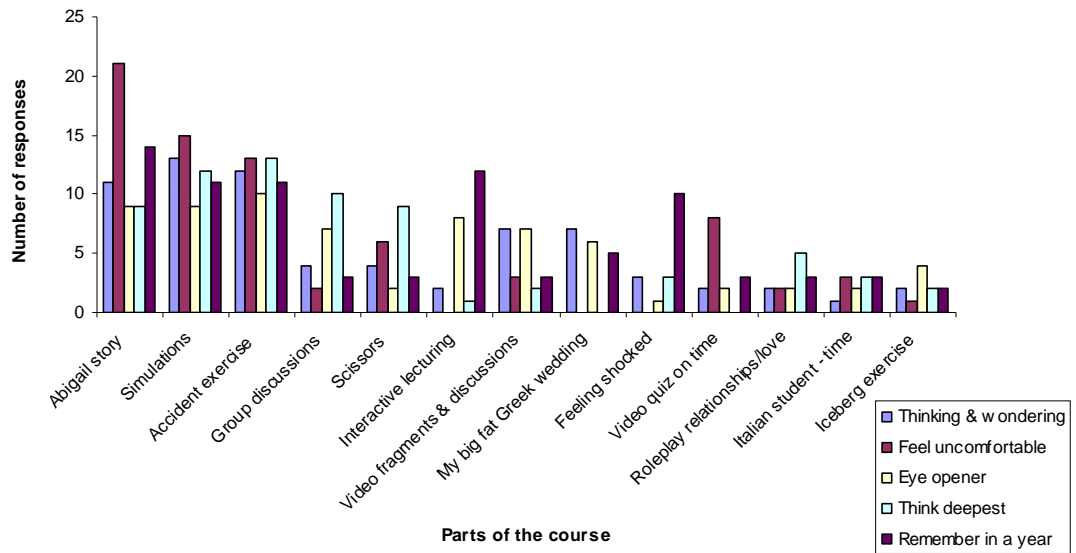


Figure 4.2 Student responses on parts of the course that stood out most per category.

Figure 4.2 summarises the student responses for those parts that got mentioned at least ten times by the students. The top-5 of most frequently mentioned parts (total scores) are the Abigail story, Simulations in general, the Accident exercise, Group discussions and the Scissors exercise. Those parts that made students think and wonder (i.e. think critically and self-reflect) most were the activities related to the Abigail story, the Accident exercise (both simulations) and My big fat Greek wedding (video fragment).

Clearly the Abigail story, Accident exercise and video quiz on time made the students feel most uncomfortable, testing their cultural stress tolerance (and tolerance for ambiguity). The biggest eye openers were again the simulations, but also the snowball discussions (following the Abigail story), the way the interactive lecturing was shaped by the teacher and the use of video fragments (e.g. My big fat Greek wedding) were seen as remarkable.

The Accident exercise, group discussions and Scissors game made most students think deeply about what was confronting them. While also the role-play on relations and love mattered in this respect. The latter could imply that students had to think carefully to put themselves in the shoes of other persons from different cultures (i.e. empathy), but these parts of the course also stimulated critical thinking and awareness of differences in intercultural. Finally, which parts of the course made the biggest impression and would be remembered in a year: the Abigail story, the Accident exercise, the interactive way of lecturing, and the inner feeling of being shocked.

#### *Gap analysis: intended versus perceived CDP*

Looking at the intended use of CDP and CDS versus their perceived use, we find two important differences. First, the intention was to use pedagogical activities, but the students indicated they did not perceive they had had a lot of situation-oriented or problem-solving activities in the trial course, though critical thinking exercises were clearly present. Second, they felt the focus was more strongly directed towards content than intended (though not during the introduction class). In module two, the aim was to focus on pedagogical and teaching format CDS, which was indeed how the students perceived the class. They, however, felt uncomfortable not having sufficient information and knowledge for discussions at some points.

Table 4.6 shows in a summarised form the comparison between intended and perceived course design. A cross ('x') indicates what was the intended CDP to be covered in the modules, while on the right a cross indicates how it was perceived by the students.

If a cross is on both intended and perceived course, the CDP was intentionally covered in a module and this was also perceived this way by the students. If a cross is only present in the intended course part of the table but not in the perceived course part, it was the intention to cover a CDP, but the students did not think it was. The latter can also happen the other way around (i.e. students perceive a CDP is covered while it was not meant to). The last two examples – as we will see below – prompted adaptations in the course.

When comparing the intended course design with the perceived one by the students and teacher, we found that overall the course had been well designed. In case

the perceived course has exceeded expectations of the course designers (i.e. the number of crosses is higher in the perceived course columns than in the intended ones), we have coloured the cells green. In case of the perceived course did not meet expectations, we coloured the cells orange.

However, there were two aspects that we perceived differently than planned. First of all, the goal of the introduction was to create cultural stress via the ‘Scissors’ simulation and – through interpersonal dialogue – start the process of critical cultural awareness. The students observed the interpersonal CDP, but did not yet link this to increased levels of critical cultural awareness. The 1-hour introduction may have been too short for that or they may not yet have realised a process of critical thinking and cultural awareness was starting up inside their minds. Second, in Module 1, the goal was to further stimulate critical cultural awareness through a multitude of discussions, but also to further push the students into situations where their cultural stress tolerance would be tested. The first objective was confirmed by the students, the second one was not. The students did not feel their tolerance to stress had been pushed enough; i.e. they did not experience enough or deep enough situations that made them really feel at unease or uncomfortable in the created intercultural settings of the module.

Table 4.6 Summary of intended vs. perceived use of Course Design Parameters\*

		<i>Course Design Parameters</i>							
		<i>Intended course</i>				<i>Perceived course</i>			
<i>Module</i>	<i>Description</i>	<i>CCA</i>	<i>CST</i>	<i>ECS</i>	<i>IIED</i>	<i>CCA</i>	<i>CST</i>	<i>ECS</i>	<i>IIED</i>
	Introduction to IC	x	x		x		x		x
1	Attitude to time	x	x			x			
2	Relationship differences		x	x	x		x	x	x

\* CCA = critical cultural awareness; CST = cultural stress tolerance; ECS = experimentation with the cultural self; IIED = interpersonal intercultural experiences in a dialogue

Module 2 set out to work with students on their levels of cultural stress tolerance, encourage openness to experiment with their cultural selves, and do so via interpersonal exchanges of information and experiences. All CDP intended were also covered according to the students – especially the Abigail story and following snowball discussions were seen as covering these three and as a very powerful tool (as was also indicated in the overall evaluation as presented in Figure 4.1 and Figure 4.2).

*Gap analysis: intended versus perceived CDS*

In Table 4.7 below, exactly the same is done as above for the CDP, but now instead for the Course Design Specifications (CDS). When attention was paid to pedagogical CDS or content CDS in the module a ‘x’ was put. For teaching formats, a ‘x’

was put when the formats were chosen efficiently to address the CDP that were stimulated in that module.

Pedagogical CDS introduced activities that stimulated autonomous learning (critical thinking) like the Abigail story (Module 2) and the Scissors case (Introduction) which asked also for problem-solving skills, as indicated by the students and noted down by the teacher. The students also indicated, however, that the teaching formats for Module 1, attitude to time, were not diverse enough and should include simulation work in order to have a stronger pedagogical focus to stimulate tolerance to cultural stress and critical cultural awareness. The students pointed out that working in groups on solving problems and engaging in confrontational discussion was hard for them (e.g. as indicated by the students regarding the fact that they felt they were trying to be too nice to each other, which had a negative impact on the depth of the discussion) and not done a lot, but they realised that working in teams and groups in the end made them think about much more details and touch upon much more facets than they would do on their own otherwise. They also mentioned that these interpersonal experiences – through situation-oriented activities – caused them to think further even outside the classroom.

Of the three classes, the students indicated that they felt pedagogical CDS were covered in the Introduction and Module 2, but not so in Module 1. Initially the students after Module 1 gave feedback to insert more information and knowledge, which – when picked up in part by the teacher – led to less focus on the pedagogical side. “I feel happy to see the deep engagement into the topic of the course, the stress it is causing and the determination of the students to try to come to grips with the story” (quote from teacher notes on Module 2 when observing the students during the Abigail story and subsequent snowball discussions). The teacher also noted that in a 7-hour trial course, it was not possible to stimulate openness to explore the cultural self sufficiently, unless more course activities with this purpose would be introduced. The students also felt they did not have enough time to go through activities that would teach them how to adapt their cultural and personal views in different situations.

The content design parameters were used, not for the purpose of generating specific knowledge on cultures for students to learn, but for the purpose of creating cognitive development by allowing new intercultural information to confront existing frames of mind and cognitive schemes inside the students. In the introduction, little knowledge was provided. Rather students had to develop this knowledge by sharing insights and develop their own interpretations – especially on culture-general and culture-specific ideas regarding culture. They found this difficult, mostly because ‘we are used to get all the information we need provided to us by the teachers’ (student evaluation response). So, even though students felt uncomfortable, this was intentional and therefore would warrant no change in the course, despite student complaints. In Module 1, maybe too much information was provided (e.g. culture-specific information on attitudes to time), which led to less focus on the pedagogical design parameters that were supposed to be covered. There were good discussions based on information of the native culture, that forced the students into comparing this information with approaches to time elsewhere. The content course design specification of ‘viewing cultures from different points of view’ was very

well covered in Module 1 through at least four of the activities organised. There was some confusion among students as to whether they should use the culture-specific knowledge factually or as an illustration of a more general example. Intentionally, the latter is clearly what the course planners had foreseen. In Module 1, the intention was to work through simulations and discussions with culture-general information as an illustration (e.g. the various citations on relationships). To the surprise of the teacher and evaluators, the students did perceive this module as also adding content knowledge to the course. Upon closer inspection this – the students indicated – followed from a discussion on cultures from different points of view following the Abigail story.

Table 4.7 Summary of intended vs. perceived use of Course Design Specifications

Module	Description	Course design specifications					
		Intended course			Perceived course		
		Pedagogy	Content	Teaching format	Pedagogy	Content	Teaching format
	Introduction to IC	x		x	x		x
1	Attitude to time	x	x	x		x	
2	Relationship differences	x		x	x	x	x

The students pointed out that they experienced the simulation exercises as the teaching format most contributing to the goals set for the trial course. Some students dubbed them ‘unusual experiences’. This is also what the teacher of the trial course had observed, while only a limited number of simulations was included in the trial course design. The interactive lectures were useful and much more interactive than the students were used to, so it was perceived, but would need to be kept to a minimum; enough to provide some basic inputs and set the context. The use of this basic information through discussions (e.g. the snowball method) as a follow up to the simple act of providing the information was seen as most important. Some remarks were made with respect to the technical facilities of the class. It was difficult to play videos because the image would not appear on the big screen in front of the class and it was not handy to use one computer screen to watch the video with such a big group (15 and 16 students in the two groups respectively). They thought that the technical facilities should definitely improve to provide for this course. Twelve students concluded that – overall – the used formats of teaching ‘definitely opened a new world of learning about intercultural communication’ to them. Also, as said before, an additional challenge for both the trial course and (later) the full course, was that it was an additional course on top of the regular curriculum for the students. Individual writing project and assignments were therefore challenging, since they already had a regular workload based on their regular courses.

*Results for Intrinsic Motivation*

An important indicator as to whether the course fulfilled its aim of getting students more interested in and aware of issues related to IC is intrinsic motivation. In Table 4.8, mean and standard deviation of IMI questionnaire at the pre- and post-test are reported.

*Table 4.8 Mean and standard deviation of IMI instrument (N = 21)*

	<i>Min – max values</i>	<i>Mean</i>	<i>Standard deviation</i>
Pre-test IMI	1 – 7	4.21	.85
Post-test IMI	1 – 7	5.64	.22

Clearly the levels of motivation between pre- and post-test have increased. Indeed, running a repeated measures ANOVA, we found a significant effect of time on the level of student motivation,  $F(1,20) = 59.18$ ,  $p = .00$ ,  $\eta^2 = .74$ . This implies that intrinsic motivation went up significantly (statistically) during the trial course. Because the instrument is an indication of the quality of the course as perceived by students, the trial course was perceived well from an overall motivational quality perspective.

### *2.5 Trial course – Modifications in the course design*

Looking at the gap analysis based on the intended, implemented and perceived CDP and CDS, we can draw some main lessons for an improved use of CDP and CDS. Overall, we can conclude that the course design has been validated and that – in most cases – the intended use of CDP and CDS were perceived as such by the students (information obtained from the questionnaire and the tips and tops session).

Some areas where the intended course design was adapted based on the gaps analyses above, are:

- During the introductory class the link to critical cultural awareness following intercultural experiences was strengthened by stronger group facilitation and stimulation of more provocative discussions following the exercises;
- In Module 1 (attitude to time), the teaching formats and pedagogical CDS were focused more on developing tolerance to stress and uncertainty among students than was the case in the trial course, by inserting provocative cultural statements into the case of the Italian student being late, and into how foreign nationals see Russian time-management;
- In Module 1, the teaching formats were made more diversified – e.g. after the redesign, this module included a simulation game – to strengthen the intrapersonal follow up from a lot of interpersonal experiences and information;
- In Module 1, stronger facilitation of the group process and redesigning the tasks were carried through in such a way as to make discussions more confrontational in order to help deepen the experiences of the students during this type of activity, avoiding them being too nice to each other;

- In order to further stimulate willingness among students to experiment with the cultural self, more time would be needed – time that was not available in the trial course, but should be available if properly designed in the full course on IC;
- Prior to the start of the course, students should receive the reader and be asked to work through some of the materials provided. This would mean there would be less focus on providing new intercultural knowledge in the classes (e.g. during Module 1), allowing for more focus on students working with existing knowledge and deepening their experiences within themselves and with each other;
- The use of interactive lectures was perceived useful and refreshing compared to other courses taught at TSU, but should still be kept to a minimum. Again, the creation of a workbook and reader for background information and stimulating cases, group work, simulations and exercises, for the students was suggested for the full experimental course;
- During the introduction to the course, it should be made more clear to the students what is the role of culture-specific information; i.e. that it serves as the purpose of providing illustrations, and is not intended to serve as factual knowledge to be learnt by heart;
- The simulation exercises and follow-up discussions were seen by the large majority of the students as most useful and as having the most profound impact on each individual participant. A larger role for this teaching format should therefore be considered for the full experimental course;
- Technical facilities in class should improve to further facilitate the course (e.g. video facilities, internet availability). Lack of facilities was also the reason why email and videoconferencing – two teaching formats mentioned – were not employed in the trial course.

### 3. FULL COURSE

#### 3.1 Full course – the design process

Following the design process for the trial course (see section 4.2.1)<sup>29</sup>, we implemented the modifications to the course design that followed from the observations during and feedback from the students after the trial course. The proposed changes were discussed with a group of experts at GSTL in an interactive discussion before implementing them. Most of the proposed amendments to the course design referred directly to the introduction, module 1 and module 2. However, we interpreted some changes also in a broader sense. For example, because the simulation exercises and follow-up discussions were so successful from the perspective of the students and from the perspective of attaining the course goals, we tried not only to add a simulation exercise in module 1, but monitored inclusion also in other (not trial-tested)

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<sup>29</sup> The trial course design process included three 2-hour sessions among GSTL researchers to discuss CDP and CDS applied to the course, email correspondence, and three design meetings with researchers and experts at TSU.

parts of the full course. In line with the recommendation from the trial course regarding provision of knowledge, we developed a reader and workbook to support the course. The content page of the reader and some excerpts of the workbook are presented in Appendices D-2 and D-3.

### 3.2 Full course – the curriculum

The full course, taught in March and April 2009, consisted of an introduction followed by eight modules. The overall course structure looked as follows:

- Introductory course
- Module 1: Context and uncertainty; (new)
- Module 2: Language in intercultural communication; (new)
- Module 3: Non-verbal communication; (in part formerly module 1, in part new)
- Module 4: Intercultural relationships & love; in part formerly module 2, in part new)
- Module 5: Intercultural conflicts; (new)
- Module 6: Intercultural competence, adjustment and sensitivity; (new)
- Module 7: Intercultural comparisons, working together and knowledge test; (new)
- Module 8: Building a bridge. (new)

The amendments coming from the trial course testing were included into parts of the Modules three (time) and four (relationships) in particular, but also – as explained above – to some extent in the other Modules. We used the same CDP and CDS, but changed relative weights among the exercises to better address them (for example, we increased the emphasis on simulations and moderated more strictly the plenary group discussions to force students more strongly out of their ‘comfort zones’). Together with TSU staff, technical facilities and needs were better taken care of. The class schedule is presented in a summarised way in Table 4.9 below.

*Table 4.9 Full course schedule (1 hour intro + 8 modules x 1,5 hours each)*

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#### *Pre-course testing (2 x 45 minutes)*

- Pre-course tests on intra-IIC, inter-IIC, critical thinking, self-reflection, and intrinsic motivation (full group) three days before start of the course (90')

#### *Introduction to the course (60 minutes)*

- Introduction to the course, course aims, approach, what is expected of the students (10')
- Discussion on what is culture, how the concept can be viewed, as an iceberg most important characteristics (15')
- Scissors simulation game - miscommunication and differences in communication) (35')

#### *Module 1: Context and uncertainty (2 x 45 minutes)*

- Working on the link between values and behaviour – what is visible and what is not (10')
- Discussions about power distance – individual exercises asking for personal answers and contemplation (10')
- Presentation on Hofstede (1990) Individualist or collectivist cultures (5')
- Exercise about ‘concept of the self’ – including a group discussion on differences in

*Table 4.9 Full course schedule (1 hour intro + 8 modules x 1,5 hours each)*

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<ul style="list-style-type: none"> <li>values and ways the selfs are viewed (15')</li> <li>• Uncertainty – group exercise called BlueLand-Yellowland (50')</li> </ul> <p><i>Module 2: Language in Intercultural Communication (2 x 45 minutes)</i></p> <ul style="list-style-type: none"> <li>• Problems in communication: difference between language and intercultural competence – studying and discussing case examples (10')</li> <li>• Presentation on language and perception (5')</li> <li>• Discussion about high and low context societies and where Russia fits in (10')</li> <li>• Playing 'stickers' simulation game – to emphasise how differences are treated by others – checking for intrapersonal feelings and levels of emotional resilience (25')</li> <li>• First individual reflective then interpersonal group exercises on conversation and silence: what is OK to ask or discuss in a culture and what not (e.g. religion, age, politics); what is the role of silence in cultures (20')</li> <li>• Short cases and role-plays on religion, volume of speaking, non-verbal communication, men touching, etc. to emphasise differences and create understanding (20')</li> </ul> <p><i>Module 3: Non-verbal communication and time management (2 x 45 minutes)</i></p> <ul style="list-style-type: none"> <li>• Read, explore intrapersonally, and then discuss various cultural incidents related to non-verbal communication and time management (10')</li> <li>• Watch culture shock video (5')</li> <li>• Short introduction to 'Attitude to time' – monochronic and polychronic cultures(5')</li> <li>• Discussion of the 'Attitude to time' video (5')</li> <li>• Simulation 'the Time Race' – to have two groups with one focusing on speed, the other on accuracy (10')</li> <li>• Discussion about feelings, reactions and evaluation of differences in attitude to time (10')</li> <li>• Work on a quiz (5')</li> <li>• Analysis of quizzes in groups in class (5')</li> <li>• Attitude to time in Russia – reflect own culture – discussion and examples (10')</li> <li>• What other cultures think about attitude to time in Russia (10') – true/false statements</li> <li>• Group discussion about the concept of 'cultural space' and differences across cultures (15')</li> </ul> <p><i>Module 4: Intercultural relationships and love (2 x 45 minutes)</i></p> <ul style="list-style-type: none"> <li>• Video: fragment from My big fat Greek wedding (5')</li> <li>• Sharing impressions, and comparing video with Russian and foreign experiences (10')</li> <li>• Culture shock: what is it? How is it understood? Reading and discussion more intercultural incidents (15')</li> <li>• Simulated situations to intercultural challenges to relations (15')</li> <li>• The Accident Story – read, interpret personally first, then snowball: from small to plenary group discussions (25')</li> <li>• Discussion on roles of men and women in an intercultural marriage (5')</li> <li>• Role plays on German, Russian and Asian views on relationships + discussion (15')</li> </ul> <p><i>Module 5: Intercultural conflicts (2 x 45 minutes)</i></p>
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*Table 4.9 Full course schedule (1 hour intro + 8 modules x 1,5 hours each)*

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- Presentation on conflicts between and within cultures (10')
  - Discussion on what causes interpersonal and intrapersonal conflicts (10')
  - Case: Saree of the Gods – analysing each step of the internal conflict (15')
  - The Abigail Story – read, interpret personally first, then snowball: from small to plenary group discussions (25')
  - Types of conflicts and interpersonal approaches to them (10')
  - Discussions of simulated situations on intercultural conflicts (20')

*Module 6: Intercultural competence, adjustment and sensitivity (2 x 45 minutes)*

- What is intercultural competence and what are its components? (10')
- Intercultural Intellectual development – describe 3 intra- and 3 interpersonal experiences during this course and what have you done with them? Discussion (10')
- Video on culture shock (Temple of Doom and New York) + discussion (10')
- Attitudes to food (10')
- Simulation on cultural clashes and adaptation (45')

*Module 7: Intercultural comparisons and working together (2 x 45 minutes)*

- Attitudes to age, destiny, human nature, risk, misfortune, change, honesty, self-esteem and equality – discussions, confrontations, and role-plays (15')
- Workbook exercises on attitudes (15')
- Linking behaviour to values (15')
- Knowledge test (45')

*Module 8: Simulation synthesis and evaluation (2 x 45 minutes)*

- Simulation: Building a bridge 'The Derdians' (90')

*Post-course testing (2 x 45 minutes)*

- Post-course tests on intra-IIC, inter-IIC, critical thinking, self-reflection, and intrinsic motivation one day after conclusions of the course for both conditions (90')
- 

*Introduction class to the full course (60 minutes)*

Compared to the trial course, the introductory hour was adapted in a few places. More time was spent on introducing the course, explaining the purpose of it, and explaining in detail what was expected from the students; i.e. expectations were managed and set. Then – like in the trial course - a discussion on the concept of culture was carried out to exchange ideas on what is culture according to the group and what were considered the most important aspects of culture. The iceberg metaphor was used to discuss differences between visible and invisible aspects of cultures; i.e. 90% is 'under' water. Again, the students were shy at first but became more active when the discussion was purposefully stimulated. The students did the simulation game called 'Scissors' (see section 4.2.2 for a description) and faced either their

own feelings of discomfort and stress (for those that did not figure out the clue of the simulation) or frustration (for those that did figure it out but could not get it across to those that did not). The class was concluded by a reflective discussion on how this simulation would translate to intercultural and their own personal lives.

*Module 1: Context and uncertainty*

Students were presented with a list of behaviours that they had to link to underlying values. This exercise emphasised how the visible is usually a manifestation of the invisible that lies underneath. There was a short presentation of the work of Hofstede and Trompenaars – especially on power distance. Through individual exercises, students were asked to go through ideas and statements and think about individualism versus collectivism, and power distance. The ‘concept of the self’ was explored through statements and a group discussion that brought out different values among the students and different ways the selfs were viewed. Most of the time was spent on a simulation game called *Blueland-Yellowland*, where clearly two cultures had different rules of engagement and communication. The exercise consisted of placing some people of one culture inside the other to watch and analyse the elements of (mis)communication, feelings of discomfort, uncertainty, and even anger.

*Module 2: Language in Intercultural Communication*

What are the differences and similarities between intercultural communication and language communication? Language is important, but cultural loadings are also. Students have to study the difference and discuss case examples. There is a short presentation by the teacher on language and perception – differences in language value. For example ‘normalno’ in Russian and ‘normal’ in English are the same words, but mean something very different in an intercultural communicative setting. If asked ‘how are you’ (‘kak dela’ in Russian) answering ‘normalno’ is very common in Russia and means sort of ‘ok’. However, if one would say ‘normal’ in English, the counterpart would assume something is wrong, because an answer like ‘good’ or ‘great’ would be expected. Linked to this is a discussion of differences between high and low context societies – through role plays, students were encouraged to experiment, place themselves in other shoes, and go through feelings of joy as well as discomfort and stress. The ‘stickers on the back’ simulation game emphasised how differences were treated by others – analysing different intrapersonal feelings and levels of emotional resilience among students participating. There was a discussion about ‘conversation and silence’ and the interpersonal communicative aspects of these concepts. What is the role of silence in cultures; what are acceptable topics for discussion with strangers? This exercise focuses on interpersonal engagement. Short cases and role-plays regarding ‘volumes of speaking’, ‘religion’, ‘men touching’ and other cases, allowed students to place themselves as foreigners in other cultures and describe what feelings and mental processes they went through.<sup>30</sup>

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<sup>30</sup> These exercises were adapted from Huber-Kriegler et al., 2003.

*Module 3: Non-verbal communication and time management*

Students were confronted with various 'cultural incidents' related to time management and non-verbal communication (e.g. the case of Michael Jackson touching his nose multiple times when visiting Ivory Coast in 1992) and asked their opinions and likely own responses. They then watched two culture shock videos regarding time. One about Belgian and Japanese attitudes to time, and one about an Italian student being late all the time (see trial course description). The teacher provided a short introduction to 'attitude to time' differences (i.e. monochronic and polychronic cultures). After this, the students discussed the video. A short game was played, called 'the time race', where the group was split into two, one group getting an assignment to get a cup of water to the other side of the room as quickly as possible, while the other group got the instructions to get as much water to the other side of the room as possible. Students took a quiz on time attitudes and subsequently discussed the quiz in class. With the Russian (and few Kazakh) students, the attitude to time in Russia was discussed via specific examples. True-false statements were used to express how other cultures thought about the Russian attitude to time (working with the native culture). These examples and statements were followed by a group discussion where also further provocative statements were presented to the students.

*Module 4: Intercultural relationships and love*

As described in detail in the trial course, the class started by watching a video fragment of 'My big fat Greek wedding' highlighting differences in the approach to relationships, whereby the students had to watch and take notes of their impressions, analyse moments of discomfort and conflict, comparing the video with personal (intercultural) experiences. There was a discussion about what constituted a culture shock, and how it was understood. More intercultural incidents were presented to and discussed with the students. The 'Accident story' was read (a friend causes an accident and kills a person – would you testify against him/her or let him/her get away with it?), after which students first had to interpret it personally, before discussing it in groups of 2-3 students, before it was discussed in the plenary group. The purpose of the exercise was to exchange views and try to reach consensus at the different personal and group levels. This demonstrated how friendships were valued differently and considered differently across cultures. The students also had to read through various citations on relationships and love (in groups of 7-8 students) and compare these citations to Russian culture as well as date the citation. The roles of relationships between men and women in an intercultural marriage were discussed and role plays on German, Russian and Asian views on relationships were played out and discussed (e.g. approaches to colleagues at work for social activities, male-female relationships at work and in social life, hierarchy at work, expressions and behaviours while in love).

*Module 5: Intercultural conflicts*

First, there was a presentation on conflicts between and within cultures. Though the focus of the course is on intercultural communication and thus on avoiding or at least better understanding conflicts between cultures (e.g. between Russian and

South-African students), it should be noted that also within cultures, individuals are different with their own values and beliefs (e.g. students from Moscow versus students from Tomsk). There was a discussion on the causes for conflicts, both inter- and intrapersonal. The story 'Saree of the Gods' was analysed and each step of the internal conflict and discomfort of the main character in the story noted down and analysed. Most time was spent on the Abigail story (see section 4.2.2) as a snowball-discussion exercise that students had to first read, then write down their first impressions immediately. They were asked to think about the roles of Abigail, the mother, Sinbad, Tom and Bob, first individually, then in small groups, where the story was discussed and opinions were formed, and then at the plenary level. Different types of conflict were discussed and interpersonal approaches to address or approach them. Finally, the discussions of simulated situations on intercultural conflicts were presented as illustrations of yet other sources of intercultural conflict – also providing insights into the differences and increasing possibilities for a broader responsive repertoire.

*Module 6: Intercultural competence, adjustment and flexibility*

The class starts with a discussion of 'intercultural competence', 'intellectual development' and components of these concepts. This discussion was theoretical but could be followed easily by the students since they recognised many of the aspects they had been going through in the course so far. Students were then asked to describe three intra- and three interpersonal experiences they had encountered during this course on IC previously and describe what they had done with those experiences (so far). Two video fragments were shown (Indiana Jones, 'Temple of Doom' and New York) to show culture shocks and have the students think about how to solve or address these culture shocks. Several exercises related to the examples of different attitudes to food were made by the students. These exercises focused on becoming aware of how different cultures are with respect to food, and how difficult it may be to adjust; i.e. Would you eat snails in France? Or have dinner at 11pm in Spain? Finally, a significant amount of time was spent on cultural clashes and adaptation – a simulation whereby students were playing various card games with slightly different rules to only find that out as the simulation was unfolding, deep feelings of frustration and stress were felt, and even a major fight erupted between two frustrated students, over what were the correct rules to play the game(s).

*Module 7: Intercultural comparisons and working together*

In this class, the focus was on creating further overview by looking at attitudes to different aspects and values in life. This was done through exercises, small role plays and acting by the teacher. For example, attitudes to age were shown via two small video fragments (one on an 'old peoples' home' in Europe, one on a family of four generations living together in a small house). Another attitude, the attitude to change, was extensively discussed and self-researched by the students. Groups of 3 students got the homework (one class earlier) to prepare a half-page summary of the main aspects regarding the attitude to change of a country they could choose (but had to be approved by the teacher to avoid overlap and students picking their native

countries). They were then presented with statements regarding change, like ‘Frequently changing jobs is good because it keeps one sharp’ and ‘Growing up and living in one place is better for one’s cultural roots’. From the perspective of the country prepared they had to then react and answer these questions in the group. Students would discuss the answers and have to guess what country a group was representing. Also, again, following Module 1, students were presented with lists of behaviours and this time should not link them to pre-given underlying values, but identify the related underlying values themselves. Now the students had to discuss and conclude for themselves how the underlying invisible values could manifest themselves in intercultural interpersonal communication. In the second class, the students had to complete a formal knowledge test (a requirement from TSU to allow the course to be officially counted as part of the curriculum) even though this was not the focus of or a tested part of our experimental design.

#### *Module 8: Simulation synthesis and evaluation*

The final module was spent – with the exception of a short 10 minute tips and tops session – on the simulation game called ‘The Derdians’. The students were split into two groups, one representing the inhabitants of Dardia, the Derdians, and one group representing a group of engineers from Earth. The engineers were invited to Dardia to help build a bridge the Derdians were in dire need of but could not build themselves. Both groups however, operated according to completely different sets of cultural rules and ways of communication. As the simulation unfolded, the – at first – confident engineers, got more and more frustrated by the lack of communication and progress regarding the bridge they knew how to build very well, technically. The Derdians would get more and more upset by the rude and impolite engineers that were so warmly welcomed at first. In the end the bridge was not built, both groups were reluctant to communicate at all, and resentments on both sides had peaked. However, several students also clearly tried to be patient, keep an open mind, and showed a willingness to try to communicate better than in previous games. The simulation was carefully analysed, feelings described, uncertainties and expectations analysed, levels of awareness from one group about the other’s habits checked, and questions asked on what they would have to do better themselves as individuals in order to smooth similar processes in the future – i.e. what had the intra-person learnt and how would the intra-person change next time.

### *3.3 Full course – Method*

#### *Full course – Participants*

98 university students (91% female) of different ages (from 17 up to 25 years old) from the Faculty of Foreign Languages at Tomsk State University (TSU), Russia, participated in the course: 69 students from the English Language Department, 13 students from the Translation Department, 5 students from the International Relations Department, and 11 students from the Chinese Language Department. Their levels of English proficiency varied between intermediate and pre-advanced. Related to the Common European Framework of Reference for Languages (2004), they var-

ied between B1 and C1.<sup>31</sup> 46 students had international experience and 52 students did not<sup>32</sup>. All participants followed the introductory course on IC in their second year and 13 of them the fifth year course on IC.

Students were recruited on a voluntary basis to participate in the course organised by the University of Amsterdam and were given a Certificate of Participation at the end of the course.<sup>33</sup> The main selection principle to include students in the study was sufficient knowledge of English that would enable them to understand the materials dealt with and participate in discussions concerning these materials in the classroom. This way they could participate and benefit from the numerous (group and plenary) discussions envisaged, express their thoughts and understand others.<sup>34</sup>

#### *Full course – Data collection methodology*

Like in the trial course, we wanted to test the design of the course, and how well it fit the CDP and CDS used. Following the trial course that focused on collecting evidence to revise and improve the two tested Modules, revisions were implemented in the full 8-Module course described above. Evaluation of the full course focuses on collecting information that answers the question whether the quality of implementation of the course was high:

- Evaluation on whether the suggested course modifications following from the trial course were implemented;
- Evaluation of course design in terms of CDP and CDS, including an analysis of the course workbooks, going through a sample of student answers to analyse whether their answers reflect the desired aspects from the perspective of the course design;
- Learner reports on the full course were collected from students that participated in the full course;
- A check on intrinsic motivation (IMI instrument) as a measure of how much they enjoyed and were willing to engage in the course;
- Detailed time-on-task measurements to show how much the students were on-task as intended by the designed course curriculum. The higher time-on-task, and the more time was spent on the intended activities, the more the students engaged in what the course designers had in mind *ex ante*.

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<sup>31</sup> C1 level – 31,6% of students; B2 level – 26,5% of students; B1/B2 – 41,8% of students, based on their academic records in all English courses combined.

<sup>32</sup> Based on the Biosheet data filled in by the students, that is part of the INCA instrument, and contains information regarding long- or short-stays abroad, dealings with foreigners, number of friends abroad, purpose of travels abroad, number of countries visited, number of foreign languages that can be read, work in groups with foreigners, and the number of languages spoken.

<sup>33</sup> No credits were granted to the students by Tomsk State University for participating in the new course because it is not a part of the curriculum approved by the Ministry of Education of the Russian Federation.

<sup>34</sup> The course was taught in English and not in Russian because the students are specialising in English as part of their Foreign Language programme they are following at TSU.

*Evaluation on implementation of trial course modifications*

Each of the above-mentioned suggestions for modification stemming from the trial course, was carefully implemented and checked in the full course. This way the full course benefitted from the lessons learnt before.

*Evaluation of the course design in terms of CDP and CDS*

Each of the modules was evaluated against the background of the CDP and CDS in order to see if the intended curriculum was also the implemented one. To that aim, teacher notes from each class as well as student reactions were combined to provide an evaluative picture.

*Learner reports of the course*<sup>35</sup>

The Learner report (De Groot, 1978, 1980) is an instrument used to identify the educational objectives that resist obvious measurement. It counts on the individual learning experiences of the students as they describe them in questionnaires – what they indicate they gained as a result of the course. It is aimed at the personal learning experiences and the learning effects experienced by the students themselves. In Marum (1996, Ch. 4 and Ch. 5), Janssen and Rijlaarsdam look at the effects of different styles of teaching techniques in literature teaching in The Netherlands (Janssen and Rijlaarsdam, 1990a, 1990b, 1992; Rijlaarsdam, 1992). They look at the Learner Report technique and answer – among others – the question whether learner reports can be a valid instrument for evaluating learning outcomes, i.e. whether this tool is sufficiently reliable to be employed in evaluation of curricula. Their main conclusion is that that is indeed the case.

Using learner reports, the self-directed and both intra- and interpersonal learning experiences of students that followed the full course on Intercultural Communication were tested against the background of the intended course design as presented by the CDP. The students were asked to evaluate their intra- and interpersonal learning processes themselves. This was in order to demonstrate their ‘capacity for self-assessment to become self-reflective and self-managing’ and their ability to develop intellectual capabilities as well as learn from participation in a dialogue with others. The student learner reports would then provide an indication, within the social context of the course, of the match between intended curriculum and how students experienced it.

To evaluate the full course on Intercultural Communication, the Learner Report was taken by the students that participated in the full course. They were asked to finish the semi-structured sentences on what they felt they had learnt during the course and how it has reflected on them personally (see Appendix E-1 for the Learner Report and E-3 for their coding). In general (see De Groot (1978; 1980) for more details), four types of sentences were offered to the students:

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<sup>35</sup> *Even though the Learner Report is a useful tool for analysing complex educational objectives that are difficult to measure straightforwardly, and academic research shows its robustness as a tool (Janssen & Rijlaarsdam 1990a, 1990b; Marum, 1996), the use of the measure is not completely uncontested (Marum, 1996).*

- (1) I have learnt that....
- (2) I now know that in reality/ in fact/ it's not true... that....
- (3) I found out that I am....
- (4) I found out that I am not....

These sentences represented the four domains of learning experiences De Groot (1978, 1980) identified: rules concerning the world, exceptions concerning the world, rules concerning the self, and exceptions concerning the self.

#### *Learner questionnaires*

In addition to the Learner Report, that consisted of open-ended answers, we also distributed a Learner Questionnaire (see Appendix E-2 for the Learner Questionnaire) to get a better idea of how the students had experienced the course and what they had learnt. The Learner questionnaire consisted of 10 scaled questions (Likert scale of 1 – 7) and one final open question. The statements reflected the learning effects from the course and were aimed at the personal assessment of the students: whether they had really learnt from the course and what they had learnt to a larger and to a lesser extent. Reliability proved to be satisfactory for research purposes (Cronbach  $\alpha = .81$ ). The questionnaire was not distributed at the end (like during the trial course), asking students to bring it back after the end of the course, but it was done during the last session of the course. This was done in order to avoid a sharp drop in response rates experienced with the small questionnaire during the trial course.

#### *Instrument on intrinsic motivation (IMI questionnaire)*

The IMI instrument (Ryan and Deci, 1992) has been explained above in section 4.2.3. We used it also in the full course run to test student level growth in intrinsic motivation. During the full course – in line with the swapping panel course design explained in detail in chapter five – we measured the levels of intrinsic motivation three times: at moment 1 (before the start of the course), moment 2 (after condition 1 had finished taking the course, and condition 2 was about to start), and moment 3 (after also condition 2 had finished the course). In condition 1, 59 students filled in the questionnaire, in condition 2 the number of students was 30.

#### *Time-on-task measurements during the full IC course*

In the final course, unlike in the trial course, we measured time-on-task behaviour of the two student groups. Time-on-task behaviour was measured to look at how much of the allotted time was really spent on learning tasks that were part of the course design, and at how time was spent by the students during the class, including listening to the instructions of the teacher and the activities carried out in class. Through the time-on-task observations, we observed how much time the students spent on each type of activity and CDP during the course.<sup>36</sup> The time-on-task measurements

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<sup>36</sup> Six types of activities were defined and carried out by the students in the class taking into account both the instructional and working moments during the class: (1) listening, (2) speak-

indicate the level, length and type of student engagement in the course. We measured the following aspects of time-on task:

- Time spent ‘on-task’, ‘off-task’ and ‘waiting while done with the task’;
- Time spent on types of tasks: taking notes, listening and analysing, reading, observing, speaking and discussing, writing;
- Time spent on types of activities: classical activities, group activities, group/individual activities, and individual activities;
- Time spent on each of the CDP: critical cultural awareness, cultural stress tolerance, experimentation with the cultural self, and interpersonal dialogue.

The observation forms (for 2 classes) are presented in Appendix F.

A representative sample of classes was taken for time-on-task measurement. Each selected lesson was observed twice in different conditions. Eight lessons were observed by two observers; inter-observer reliability proved to be high. On/off task observer agreement was .98 for on-task activities and for .91 for off-task activities.<sup>37</sup> For classical and group activities the observer agreement was .99 and .99 respectively. For listening and analysing tasks the observer agreement .98, for making notes .81, for reading .99, for observing .99, for speaking and discussing .98. For critical cultural awareness, the correlation between observer notes was .92, for cultural stress tolerance, .86, for experimentation with the cultural self .88 and for interpersonal dialogue, .93.

The results of the pre- and post-course testing of intra-IIC, inter-IIC, critical thinking and self-reflection are not presented in this chapter, but analysed in the next one.

### 3.4 Full course – Results

#### *Evaluation of implemented modifications from the trial course in the full course*

Prior to the start of the course, the course reader was made available and students were asked to start studying the materials provided. In the introductory class, more attention was paid to the purpose of the course and what would be expected – and what would not be expected – from the students. For example the role of culture-specific information as only serving the purpose of illustrating more fundamental points, not as having to learn it by heart, was emphasised. Also during the first class, the course workbook was handed out.

Group facilitation and moderation were further strengthened to ensure stronger and more provocative discussions that would focus more on the course aims like stimulating critical cultural awareness. For example, during the discussion following the culture shock video of the Italian exchange student being late all the time, students would first discuss a related question (e.g. What should the Italians student be told?) but then also had to react to and comment on potential responses that were given, like ‘We think your behaviour is unacceptable and we want you to leave the

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*ing, (3) making notes, (4) observing, (5) writing, and (6) reading. Three possible types of task involvement are defined: (1) on task, (2) off-task, (3) done.*

<sup>37</sup> *On-task is defined as the students being engaged in any type of class activities, while off-task is defined as them doing nothing.*

course' or 'Don't worry, you are just an exchange student'. Another example is that before group discussions students had to write down for themselves what views they would have on the approach to time in Greece, and what would – for them – be the view that is most 'opposite' and 'contradictory' to their own, and present these to the group, before starting the group discussion.

In general more simulation games and role plays were added to the different Modules. This was done, first of all, to diversify teaching formats. Second, and more importantly, to strengthen the intrapersonal follow up following a lot of interpersonal experiences and information – increasing the perceived 'profound impact' this type of teaching format was having on the students.

Technical facilities in class were checked prior to the start of the course. This meant the video facilities were checked and improved compared to the trial course. Email and videoconferencing were still not possible, so also not employed in the full course.

#### *Evaluation of course design in terms of CDP and CDS*

The students found the scissors game the most insightful as during the trial course, and – at first – also very uncomfortable. They realised that even with large efforts to try to understand, miscommunications and lack of understanding were present. The uncertainty for those not finding out the communication increased when more others found out. The discussion on culture, with preparations from the reader, and stricter moderation, set the tone for the course, and made the students realise the focus was on their work and involvement. The discussion created new directions and became open and honest quickly. The fact that personal experiences and views were brought in by the majority of students, widened and deepened the discussion, which was generally appreciated.

The exercise linking behaviour to values, combined with the iceberg metaphor of the introductory class, made students aware that intercultural behaviour is driven by underlying invisible factors. They were encouraged to see these in others (empathy and cultural awareness) and explore these within themselves (experimentation with the cultural self, cognitive experiences). The 'concept of the self' was further developed through statements and a group discussion that made students aware of differences in the groups, and what it did to their own beliefs and feelings, seeing others differently. The simulation game, Blueland-Yellowland, caused a lot of stress among the students and even led to two angry outbursts of frustration. These outbursts were later extensively analysed in terms of why they occurred, what triggered them, what those that burst out were thinking, and what those that watched it were thinking. Again the students were frustrated that even in a simulated setting, where they tried hard consciously to engage and understand, these feeling of discomfort overwhelmed them.

The difference between language and intercultural communication was made clear and awareness of what different sentences mean in different cultures were emphasised. Others may mean well, but it is simply not perceived that way by other cultures. The examples of high and low context societies further enforced the image that so many cultures are different and that an open mind and flexibility are required

though not always sufficient in intercultural encounters. The role plays significantly increased the empathy and understanding of students for others. 'Stickers on the forehead' was a game that caused shocks for some of the participants, testing their stress tolerance at first, and providing useful awareness insights later. One person was labeled 'sex addict' and another 'cocaine addict' and they found the way they were being treated by the others abysmal and reacted negatively to their counterparts in the game. Focusing on intercultural dialogue with others, the concepts of conversation and silence were covered in short role plays. Some were evaluated as funny (e.g. volumes of speaking), but also insightful (e.g. religion) and a bit shocking (e.g. men touching) by the students.

The two culture shock videos regarding time, were positively evaluated. Especially the video and following discussions about an Italian student being late all the time (see trial course description). The more provocatively moderated discussion did cause deeper engagement and more profound thinking of how a Russian student (i.e. looking inside themselves) would be viewed in other countries like the US, Argentina, Tanzania or Vietnam. The 'time race' was seen as fun and during the game, the opposing teams were watching each other in amazement, not directly realising the assignments given to the two groups were different – not knowing but developing respect for how the other group was doing things. The students felt they were confronted with a mirror, looking at themselves, Russians, and their attitudes to time being judged and evaluated. This created some reflections and discomfort among some of the students.

The video 'My big fat Greek wedding' was a light, but not too deep, way of highlighting differences in the approach to relationships. In a funny way, students were made more interculturally aware, just by watching these differences. The more theoretical discussion of a culture shock had less of an impact, though provided useful knowledge that students applied during later parts of the course. As emphasised during the trial course, the simulations caused the largest effects among the students. The Accident story was no exception, as the students reacted strongly and differently. The exchange of ideas was felt at a deep level and created cognitive experiences as well as meta-cognitive ones, where students were trying to filter the incoming information of both the case and the opinions of others. The other parts of the class on relationships and love, further developed the students' levels of intercultural awareness.

The class on conflicts was an important one, because the conflicts simulated, presented, worked on in groups and discussed left lasting impressions on the students, changing their intrapersonal ideas and interpersonal manifestations of these beliefs in intercultural conflict situations. Most impact was created by the Abigail story (see section 4.2.2). Students – having been pushed by other games and experiences in the course so far – had to read and study the story, make up their own minds on who they would be inclined to look at favourably in the story, and then – faced with the uncomfortable story – try to discuss and reach consensus, first in a group of 2-3 students, then in groups of 7-8 students and then in the plenary group as a whole. This exercise pushes students' to explore themselves, and the resilience of their personal beliefs, forces them to compromise and test the boundaries of what

is acceptable for them. It puts empathy against tolerance of ambiguity and creates significant intrapersonal disequilibria that create cognitive experiences.

The concepts that also underlie this full course in IC were introduced to the students: ICC and IIC, as well as various components. Most of the students recognised the components and linked them to what they had been going through so far, without being asked. The reflection on themselves and the course by linking the concepts to practical personal experiences gained in the Modules so far, created a strong awareness and realisation of the process and development they had gone through so far.

The video fragments of Temple of Doom (Indiana Jones) and New York both added new intercultural insights and a dimension to interpersonal intercultural encounters.

The playing card simulation was used to put students on the wrong footing, the more they rotated, the more confusing the game became, leading to the awareness among students that chaos could result in the absence of rules that were mutually understood. "I realise that any culture, no matter how different, is better than this chaos", one student replied, manifesting the important realisation of several students, that a different culture, with all the discomfort, conflicts and stress differences cause, is much better than no rules at all. The deep feelings of frustration and stress were felt, and even spun temporarily out of control, before the game was ended and evaluated. One student remarked "It is so much easier to read and talk about miscommunication, intercultural differences and different cultures than to have to go through this!"

The different attitudes within different cultures, worked on by the students through exercises, small role plays and reading, showed them more intercultural habits and traits that increased their critical cultural awareness. The group preparations on different cultures added to this course aim. Nearing the end of the course, students were again asked to think of behaviours (like at the beginning) but search for underlying explanations and values themselves. Some showed great affect in doing so, others found it hard – indicating that some students had developed intrapersonally faster than others. The Dardians game of building a bridge, illustrated the friction between technical competence but not having the intercultural understanding to get to results. Again, the frustrations and attempts to control them were observed – where, it must be said, students tried hard to implement all that was learnt previously. Applying cultural filters, trying to find divergent ways of thinking to come to solutions and creative ways of thinking were observed by the teacher. During the analysis, focus on critical thinking and creativity gave students the satisfying feeling that they had learnt and developed and – though the bridge was not built – the process attempts had been better than in any other previous simulation game during the course.

*Gap analysis: intended versus perceived CDP*

Looking at the intended use of CDP and CDS versus their perceived use during the final course, we found that overall, all CDP have been covered in a satisfactory manner. Critical cultural awareness was raised as expected, the emphasis on cultural stress tolerance as mentioned by the students, exceeded course designer intentions.

However, experimentation with the cultural self – though picking up towards the end of the course, stayed just below what was intended. Perceived interpersonal experiences matched designer expectations. Even though the total picture of the evaluation supports the course design, there were accentuated differences between the modules regarding the four CDP that we will explain below in more detail.

Table 4.10 shows in a summarised form the comparison between intended and perceived course design – as was done in Table 4.6 for the trial course.

*Table 4.10 Summary of intended vs. perceived use of Course Design Parameters\**

<i>Module</i>	<i>Description</i>	<i>Course Design Parameters</i>							
		<i>Intended course</i>				<i>Perceived course</i>			
		<i>CCA</i>	<i>CST</i>	<i>ECS</i>	<i>IIED</i>	<i>CCA</i>	<i>CST</i>	<i>ECS</i>	<i>IIED</i>
	Introduction to IC	x	x		xx	x	x		x
1	Context and uncertainty	x	x	x		x	x	x	
2	Language in IC	xx			x	x			xx
3	Non-verbal communication	x	x		xx	x			x
4	Relationships and love	x	x	x	x	x	x		x
5	Intercultural conflicts		xx	x			xx	x	x
6	IC, adjustment and adaptability		x	x			xx	x	
7	Intercultural comparisons	xx			xx	xx			xx
8	Building a bridge		x	x			xx	x	
<i>Total x</i>	<i>Full course</i>	8	8	5	8	7	9	4	8

\* CCA = critical cultural awareness; CST = cultural stress tolerance; ECS = experimentation with the cultural self; IIED = interpersonal intercultural experiences in a dialogue

The difference between Tables 4.6 and 4.10 is the number of modules and the fact that instead of only one 'x', in this table we can put one or two 'x' to show relative stronger emphasis. One or two crosses ('x') indicated what was the intended CDP to be covered in the modules, while on the right hand side of the table, one or two crosses indicated how it was perceived by the students. If a cross on both intended and perceived course, the CDP was intentionally covered in a module and this was also perceived this way by the students. If a cross is only present in the intended course part of the table but not in the perceived course part, it was the intention to cover a CDP, but the students did not think it was. The latter can also happen the other way around (i.e. students perceive a CDP is covered while it was not meant to). In case the perceived course has not achieved the intended design (i.e. the number of crosses is lower in the perceived course than in the intended course columns), we have coloured the cells orange. In case the perceived course has exceeded expectations of the course designers (i.e. the number of crosses is higher in the perceived course columns than in the intended ones), we have coloured the cells green. This way it becomes clear instantly, which modules have exceeded course designer ex-

pectations and which ones underperformed. It also becomes clear which CDP have – overall – been covered in the different modules and which ones have not.

When comparing the intended course design with the perceived one by the students, teacher and observers, we found that overall the course had been well designed and implemented.

The introduction course intended to introduce aspects of critical cultural awareness, cultural stress tolerance (the scissors game) and ensure communication between students got underway strongly and immediately. The student and staff feedback showed that this was also how the introductory hour had been perceived, though the intercultural dialogue component was not perceived as strong as intended by the course designers. The 1-hour introduction may have been too short for that. In the first module on context and uncertainty, the purpose of the course designers was to get students to start experimenting with their cultural selves. The students felt that there was sufficient discussion about the idea but that is was the *Blueland-Yellowland* simulation that got them into experiencing things themselves. The second module on language in IC was evaluated in line with how the course designers had intended the module, even though emphasis – because of the discussions on Russian versus English word use, was seen more as dialogue with the other students than as raising critical cultural awareness. The model on non-verbal communication did not meet expectations in that the students did perceive that the exercise with stickers on the forehead and the cultural incidents covered critical cultural awareness, but not so much cultural stress tolerance, and the role plays and cases on different attitudes forced them into acquiring interpersonal experiences, but to a lesser degree than anticipated. The module on intercultural relationships and love was the broadest in CDP coverage. It intended to cover all four CDP. Cultural stress tolerance and experimentation with the cultural self through the accident story, interpersonal intercultural experiences through the video on ‘My big fat Greek wedding’ and critical cultural awareness through discussions on German, Russian and Asian views on relationships, and through discussing intercultural marriages. The students indicated that this aim was met for three out of four CDP. The accident story did create cultural stress, but not (yet) to the degree – for the majority of students – that it created a process of self-reflection to experiment with the cultural self in shifting beliefs. The module on intercultural conflicts compensated for the previous module in terms of experimentation with the cultural self. Whereas during the accident game (module 5) this course aim was not fully explored, students realised what the exercise was driving at, from which the *Abigail* story in module 6 benefitted. Students felt they had to compromise and give up their own values – trying to set limits to how much they were willing to ‘give up’. This also affected their approach to cultural stress tolerance. Unintended, students felt that through the presentation and discussion on conflicts between cultures, also their intercultural interpersonal experiences benefitted. Module 7 was intended to strengthen considerably critical cultural awareness and increase interpersonal experiences by capitalising on the past modules, analysing lessons learnt, and discussing viewpoints of different cultures on various issues. The behaviours-values linking exercise from the beginning of the course was repeated, which significantly increased awareness among the students. The final module was spent playing a large and important simulation game, called

‘The Dardians’. The intention of the course designers was to end on a high note with a last check of the students’ cultural stress tolerance and a last encouragement to have them experiment with their cultural selves. The results – as indicated by the students – were beyond expectations – they tried to apply all that was learnt, and still were put off so strongly, that both course aims were thoroughly deepened – as also became obvious from some quotes collected from the students and already presented above.

*Gap analysis: intended versus perceived CDS*

In Table 4.11 below, in the same way as done above for the CDP, we present the comparative analysis between intended and perceived Course Design Specifications (CDS). When attention was paid to pedagogical CDS or content CDS in the module a ‘x’ was put. For teaching formats, a ‘xx’ was put when the formats were chosen fully optimally to address the CDP that were stimulated in that module. This was ambitious – also in light of the student responses – as we will see. As above in Table 4.10 for CDP, we have coloured the cells in the CDS Table below. In case the perceived course has not achieved the intended design (i.e. the number of crosses is lower in the perceived course than in the intended course columns), we have coloured the cells orange. In case the perceived course has exceeded expectations of the course designers (i.e. the number of crosses is higher in the perceived course columns than in the intended ones), we have coloured the cells green. This way it becomes clear instantly, which modules have exceeded course designer expectations and which ones underperformed. It also becomes clear which CDS have – overall – been covered in the different modules and which ones have not.

Overall, the CDS were correctly specified though they diverged per module in the degree of successfulness. In total all three types of CDS were perceived as the designers had intended. In more detail: the modules on intercultural conflicts, adjustment and adaptability and relationships and love exceeded expectations, while language in IC and non-verbal communication did not match expectations fully.

The introduction was perceived by the students as the course designers had hoped. The scissors simulation game introduced the need for autonomous learning as well as problem-solving skills; i.e. pedagogical CDS, while the discussions on what constitutes culture covered both native culture and viewing cultures from different points of view. The teaching formats of simulation, short presentations and discussion were appropriately chosen.

In the module on context and uncertainty, again, the students perceived the CDS as the course designers had intended. The Blue-land-Yellow-land simulation stimulated critical thinking and self-reflection (autonomous thinking) while the presentation conveyed culture-general information and the exercise on values and behaviour made students link their existing knowledge to underlying feelings. Module 2 on language in IC, was slightly below what was expected. The designers intended to spread a lot of native cultural information as well as insights into looking at cultures from different points of view. This happened to some extent, but not as much as the designers had wished for. The module on non-verbal communication – though improved in part from the trial course – also did not reach its full potential. The content

part was sufficiently covered, but activities to stimulate autonomous learning were not included. First, because this module was not intended to stimulate autonomous learning too much, and second, because preference was given to discussions on the native culture.

The next three modules matched or exceeded designers’ expectations. The simulation games and snowball discussions were strong elements (Accident, Abigail, cultural clashes) that set students to think critically and learn autonomously. These three modules were not strongly focused on content, even though in module 4, video fragments and discussions added new views to looking at different cultures. These activities – in line with the CDP – were focused not only on critical thinking but also on self-reflection – to stimulate experimentation with the cultural self. The students felt that though time was tight, they did have some time to go through activities that would teach them how to adapt their cultural and personal views in different situations and reflect upon them.

Table 4.11 Summary of intended vs. perceived use of Course Design Specifications

Module	Description	Course design specifications					
		Intended course			Perceived course		
		Pedagogy	Content	Teaching format	Pedagogy	Content	Teaching format
	Introduction to IC	x	x	x	x	x	x
1	Context and uncertainty	x	x	x	x	x	x
2	Language in IC		xx	x		x	
3	Non-verbal communication		x	x		x	
4	Relationships and love	x	x	x	x	x	x
5	Intercultural conflicts	xx		x	xx		xx
6	IC, adjustment & adaptability	xx		x	xx		xx
7	Intercultural comparisons		xx	x		xx	x
8	Building a bridge	x		x	x		xx
Total x	Full course	9	8	9	8	7	10

Like other students during the trial course, some students found modules 4, 5 and 6 difficult, because they did not get clear and prepared chunks of knowledge. They found this difficult, mostly because ‘we get our books and readers and teachers that tell us what to learn’. So, even though students felt uncomfortable, this was intentional. The confusion from the trial course about culture-specific information – especially provided in modules 2 and 7 – did not occur in the full course, in part due to the clear explanations in the introduction on how to deal with knowledge and what purposes it had to serve. Module 7, furthermore, was seen as strong on knowledge increase through content CDS. The final module, module 8, was intended to focus

purely on autonomous learning, critical thinking and self-reflection – and it did so. Some students did not fill in a positive evaluation on this module because they found it too shocking. This is why only one ‘x’ was coming out of the student evaluations, while two ‘xx’ were intended and also likely the depth of experience for the majority of the class. In general the interactive lectures for short moments of time across the modules were seen as useful and supporting both the content and the pedagogical CDS when needed. Because of the focus of our course on IC – i.e. on growth of IIC, not on knowledge development – this format was still kept to a minimum.

#### *Learner report results for the full course*

In order to analyse the learner reports, we adapted the classification scheme (original from Purves (1971)) by Janssen and Rijlaarsdam (1990b) for the objective of analysing teaching of intercultural communication (see Appendix E-1). Coding of the student answers was performed on the basis of the concepts of content, behavior and the type of knowledge students demonstrated in their responses. The analysis of the Learner Report is based on 15 categories for content of the statements (C1 – C15), 4 for behavior expressed in the statements (B1 – B4) and 3 types of knowledge demonstrated (B1). The categories and approach to coding are presented in Appendix E-3, including a short description of the categories.

The results of the learner report answers provided by the sampled students are summarised in Table 4.12 and Table 4.13 below. The Tables show the learning categories and variables and the most frequent learning sentence responses (up to 96 percent) provided (Table 4.12 in percentage terms, and Table 4.13 in terms of total numbers of observations).

From Table 4.12 and Table 4.13, we can draw some important conclusions. First of all, the students frequently cite the four CDP as important in their learner reports (C2, C3, C4, C7 and C13). Second, they also cite several higher order complex cognitive skills (e.g. self-reflection in C12, and problem solving skills in C15) as being covered or important during the course. Third, for the CDP that are more intrapersonal (e.g. willingness to experiment with the cultural self and cultural stress tolerance), we see that the share of ‘skills’ related comments is higher relative to the ‘knowledge’ category – which is what we had hoped to find. For the CDP that are more interpersonal in nature (e.g. critical cultural awareness, interpersonal dialogue), we see the knowledge component dominate relatively more. Attitudes to the various categories were mainly positive, with a very small number of negative attitudes.

Table 4.12 Learner report results (% of total learning sentences)

<i>Content</i>	<i>Nr</i>	<i>Behaviour</i>			<i>Total</i>
		<i>Knowledge (1)</i>	<i>Skill (2)</i>	<i>Positive attitude (3)</i>	
General	C1	.03		.01	.04
Cultural stress tolerance	C2	.04	.10		.14
Experimentation with the cultural form of the self	C3	.05	.05		.10
Critical cultural awareness	C4	.07	.03		.10
Knowledge about other cultures	C5	.06	.02		.08
Experience	C6	.01			.01
Interaction	C7				
Background information	C8	.03			.03
Non IC comments	C9				
Analysis and interpretation	C10	.01	.08		.09
Looking at cultures from different points of view	C11	.04	.05		.09
Self-reflection	C12	.04	.11	.02	.17
Classes (teaching / learning experience)	C13	.01	.01	.02	.04
Specific comments	C14	.05			.05
Problem solving	C15	.03			.03
<i>Total</i>		.46	.45	.05	.96

Table 4.13 Learner report results (number of learning sentences)

Content	Nr	Behaviour				Total
		Knowledge (1)	Skill (2)	Positive attitude (3)	Negative attitude (4)	
General	C1	26	4	5		35
Cultural stress tolerance	C2	40	89			129
Experimentation of the unusual form of the self	C3	41	45	4	2	92
Critical cultural awareness	C4	61	28	2		91
Knowledge about other cultures	C5	54	16			70
Experience	C6	6	3	1	1	11
Interaction	C7	1	2	4		7
Background information	C8	25	1			26
Non IC comments	C9	2		4		6
Analysis and interpreta- tion	C10	11	71			82
Looking at cultures from different points of view	C11	34	45	1		80
Self-reflection	C12	34	100	14	3	151
Interactive classes (teach- ing / learning experience)	C13	9	8	21		38
Specific comments	C14	46	4			50
Problem solving	C15	26		2		28
<i>Total</i>		<i>416</i>	<i>416</i>	<i>58</i>	<i>6</i>	<i>896</i>

#### Learner questionnaire

The students – at the end of the full course – also filled in the short Learner Questionnaire (Appendix D-2).

For the Learner Questionnaire, the validity was tested and found satisfactory with a value of Cronbach alpha value of .81. The results of the questionnaire are presented in Table 4.14 below. The answers ranged from ‘yes, substantially’ (value of 7) to ‘No, completely not’ (value of 1).

From Table 4.14, we conclude that in line with the other measurements taken during the full course, the students were satisfied with the course and evaluated their gains regarding the CDP with values of 5.8 and higher. We note that willingness to experiment with the cultural self (6.4), critical cultural awareness (5.8) and cultural

stress tolerance (5.8) were perceived to have grown during the course. Also the usefulness of the course for outside the classroom was confirmed (6.7).

*Table 4.14 Evaluation results Learner questionnaire (on a 1 – 7 Likert scale): Means and standard deviations*

<i>Nr.</i>	<i>Question</i>	<i>M</i>	<i>Sd</i>	<i>N</i>
1	Do you think you have become more interculturally aware after this course?	6.6	.75	98
2	Do you think your level of intercultural communicative competence increased after this course?	6.4	.78	98
3	Did working in groups help you to learn more during the course?	6.4	.87	98
4	Do you think that in this course you have learnt how to deal with the unusual to your cultural way of thinking and behaviour?	6.4	.80	98
5	Do you think that during this course you have learnt more about other cultures?	6.6	.72	98
6	Do you think that in this course you have learnt to approach other cultures critically?	5.8	1.30	98
7	Do you think that during this course you have learnt how to deal with cultural stress?	5.8	1.09	98
8	Do you think this course has given you enough experience to use the intercultural skills in the future?	6.0	1.07	98
9	Do you think you will be able to use the skills you got in this course in the future?	6.4	.87	98
10	Do you think these skills are necessary for you to use in the future?	6.7	.63	98

*Check on intrinsic motivation of the students before, during and after the full course*

The details of the full experiment and its swapping panel design will be explained in chapter 5. However, for the purpose of guiding the reader through our measurements on intrinsic motivation, we briefly explain the idea already in this section. The experiment was set up as a pre-test post-test design with switching replications. This means that we split the student group for the final experiment into two. The first group (condition 1) would follow the newly designed course, while the second group would not (functioning as a control group). Half way through the experiment, the groups would switch, so condition 1 would not follow the course, but condition 2 would. At three moments levels of intrinsic motivation were measured: before the experiment, half-way the experiment and right after the experiment.

We checked for differences in initial levels of intrinsic motivation between the two conditions. Since the two conditions were assigned randomly, we did not expect to find statistically significant difference in starting levels of motivation. A univari-

ate analysis shows indeed no significant difference between initial levels of intrinsic motivation,  $F(1,89) = .68, p = .41, \eta^2 = .01$ .

The results for the measurements on the levels of intrinsic motivation are presented in Table 4.15 and Table 4.16. Table 4.15 shows the means and standard deviations for each condition.

*Table 4.15. Mean, standard deviation (between brackets) and range of IMI (1-7 scale) for the two conditions*

<i>Measurement</i>	<i>Condition 1 (N=59)</i>	<i>Condition 2 (N=30)</i>
Moment 1	5.37 (1.11) 2.08 - 5.89	5.16 (1.18) 2.08 - 6.04
Moment 2	6.18 (.56) 4.11 - 6.91	5.32 (.86) 1.89 - 6.11
Moment 3	6.25 (.43) 4.23 - 6.88	6.31 (.38) 4.98 - 6.92

In Table 4.16, the mixed model results for intrinsic motivation are presented. We use a mixed model analysis (Quené and Van den Bergh, 2004, 2008) with condition (two levels) and measurement occasions (three levels) as fixed factors and individuals as the random factor. Condition effect moment 1 shows – as already mentioned above – that there is no significant difference between the two conditions in terms of intrinsic motivation at the outset of the course.

Condition effect moment 2 shows that there is a significant difference in levels of motivation between conditions, which is due to the fact that condition 1 has followed the course and condition 2 not yet. Condition effect at moment 3 again shows that the differences are not significant anymore between conditions. This can be explained by the fact that now also condition 2 has followed the course and for both conditions motivation has risen significantly (see also Table 4.14). The effect moment measurements show that for condition 1 between moment 1 and moment 3 (M1-M3) intrinsic motivation has gone up significantly, with an effect size of 1.46 (which is ‘large’ according to Cohen, 1988). For condition 2, between moments 2 and 3 (M2-M3) intrinsic motivation has gone up significantly, with a size effect – again ‘large’ – of 1.40.

From the results below, we can conclude that the course has significantly increased student levels of intrinsic motivation. This implies that the course on IC, as it has been taught, has fulfilled its aim of getting students more interested in and aware of issues related to IC. This is an important prerequisite for willingness to engage, be open, change and learn, and – in the case of our course on IC – indicates the willingness of students to go for intercultural experiences and be open to IIC growth. These findings, therefore, also provide an indication that the quality of the course as perceived by students, was satisfactory, and a pre-requisite for the course to have a “propensity to have an effect on the environment as well as to attain valued outcomes within it” (Deci and Ryan, 2000: 231) is met.

Table 4.16. Mixed model results for intrinsic motivation

	<i>df</i>	<i>Coefficient</i>	<i>Effect size</i>	<i>p-value</i>
Condition effect moment 1	164	.27	.26	.214
Condition effect moment 2	197	.28	1.24	.001
Condition effect moment 3	237	.06	-.07	.716
Effect moment condition 2 (M1-M3)	169	-1.15	1.46	.001
Effect moment condition 2 (M2-M3)	207	-1.10	1.40	.001

*Time-on-task measurements for the full course*

Table 4.17 shows the data collected during the course based on the time-on-task observations forms shown in Appendix F. On-task refers to students working on the assignments given. Off-task refers to students not working on the assignments given, and 'done' is about students that are finished with their assignments.

When applying a multivariate analysis of variance, no significant differences between the conditions were observed in terms of types of action,  $F(3,12) = .56$ ,  $p = .65$ ,  $\eta^2 = .12$ , see Table 4.17 for descriptives; types of tasks,  $F(5,10) = .93$ ,  $p = .50$ ,  $\eta^2 = .32$  (Table 4.18 for descriptives); types of activity,  $F(4,11) = .48$ ,  $p = .75$ ,  $\eta^2 = .15$  (Table 4.19 for descriptives); or in terms of types of course design parameters,  $F(4,11) = .66$ ,  $p = .48$ ,  $\eta^2 = .36$  (Table 4.20 for descriptives). Subsequent univariate analyses of variance for each of the types of action, tasks and activities individually do not alter this conclusion.

Table 4.17. Types of actions: time-on-task in percentage of total time\*

<i>Types of tasks</i>	<i>Condition 1 (N=59)</i>	<i>Condition 2 (N=39)</i>
On-task	97	97
Off-task	2	1
Done	2	1

\* The totals are adding up to 100 (rounded off).

*Table 4.18. Types of tasks: time-on-task in percentage of total time*

<i>Types of tasks</i>	<i>Condition 1 (N=59)</i>	<i>Condition 2 (N=39)</i>
Taking notes	9	12
Listening and analysing	44	44
Reading	12	9
Observing	5	9
Speaking and discussing	26	23
Writing	4	3

*Table 4.19. Types of activities: time-on-task in percentage of total time*

<i>Types of activities</i>	<i>Condition 1 (N=59)</i>	<i>Condition 2 (N=39)</i>
Classical activity	35	42
Group activity	40	34
Group / individual activity	4	3
Individual activity	21	21

*Table 4.20 Types of CDP: time-on-task in percentage of total time*

<i>Types of tasks</i>	<i>Condition 1 (N=59)</i>	<i>Condition 2 (N=39)</i>
Critical cultural awareness	34	30
Cultural stress tolerance	22	24
Experimentation with cultural self	11	13
Interpersonal dialogue	33	33

Our time-on-task measurements lead us to three important conclusions. First of all, the results of our measurements indicated that participation of the students in the full course was satisfactory; that is: they had high levels of on-task, they engaged in a broad range of types of tasks as intended and they engaged in a broad range of types of activities, as intended, and they engaged with all the course design parameters as

intended. Secondly, these results showed that, in this particular research design, for the two times the course was taught (conditions 1 and 2), the course was similar (i.e. not statistically different) in implementation for both runs of the full course experiment.

#### 4. CONCLUSIONS AND DISCUSSION

In this chapter the experimental course on IIC is tested two times in terms of course design validity. It is the combination of insights from the theoretical framework, related CDP and CDS that should lead to a well-designed course. For the first trial testing, we run one introductory hour and two modules of three hours each (in total seven classes), while for the full course we give one introductory hour and then eight modules of two hours each (in total 17 classes). The purpose of these trials is to verify that the course on IC given is designed based on the CDP and CDS stemming from the theoretical framework; i.e. that the course is validated in terms of design.

The theoretical model that lies behind the design of this course focuses on stimulating intellectual intercultural capabilities (IIC). From chapter 2, we take that critical cultural awareness, cultural stress tolerance, willingness to experiment with the cultural self and generating interpersonal experiences through dialogue with others are the four Course Design Parameters (CDP). These CDP are further worked out into three Course Design Specifications (CDS) that guide our choices for pedagogical, content, and teaching formats. The CDP and CDS are employed in the practical course design of activities to develop IIC.

Based on our testing results from the trial course and the full course we find that the course on IC is designed in line with the specified CDP and CDS. The course is designed in line with the requirement to stimulate critical cultural awareness, cultural stress tolerance, experimentation with the cultural self, and it encourages and facilitates interpersonal dialogue.

##### *The trial course: two module prototypes*

During the trial course, 31 students followed the seven classes on 'Attitude to time' and 'Relationships and love'. The trial course was short but still aimed to cover the CDP and CDS. In the module 'Attitude to time' the focus was not on experimentation with the cultural form of the self, but rather on critical cultural awareness and cultural stress tolerance. The module on 'Relationships and love' was more aimed at cultural stress tolerance and experimentation with the cultural form of the self and interpersonal dialogue. The specific exercises reflected these aims, since based on Table 4.1, we employed a simulation game and pedagogical activities in the second module, and much more the interactive lecture and discussion-type of activities in module 1.

Students were asked to evaluate each class and the trial course as a whole through a short survey and through a tips and tops session. From those evaluations, several conclusions can be drawn. Email and videoconferencing were two teaching formats that were not used, due to technical and financial limitations. In order to

develop intra-ICC more, more problem-solving activities and exercises that stimulated critical thinking and self-reflection were incorporated in the full course. This also included more simulations and more project (group) work. Given the positive feedback from the students and comments on the deep impact they have made, problem-solving activities – in line with the theoretical model – seemed to reverberate at a deeper level of learning. Explicitly, the students asked for more exercises on cultural stress tolerance through specific simulations. The main argument given for that was that the students wanted to become more personally involved in these experiences and not only discuss them in groups or see the experience of others in a video fragment. The exploration of the cultural self, could be more strongly represented in the course activities. The students felt they did not have enough experience and activities that would teach them how to adapt their cultural and personal views in different situations. With respect to CDP, in the full course it had to become more clear that the culture-specific information provided was for illustrative purposes only; i.e. to explain culture-general ideas and concepts and not to increase factual knowledge about specific example cultures. Moreover, a good way to compensate for an intentional lack of focus on knowledge transfer during the lessons was to provide the learners with a reader for self-study that included lots of relevant materials. Finally, we also found that the CDP interacted well together. For example, teaching formats support problem-based learning and culture-specific examples illustrate discussions following situation-oriented activities. Using the IMI instrument (Ryan and Deci, 1992) to measure intrinsic motivation, we found significant and large increases in motivation occurred among the participants of the IC course.

*The full course: eight modules*

The full course on IC was designed with eight modules to cover the four CDP and three clustered CDS. The topics of the modules were not the focus of the course, but rather we paid attention to the types of learning experiences and ways to go through them. Not each module was intended to cover all, but rather some modules were focused on cultural stress tolerance and experimentation with the cultural self, while other modules were focusing on critical cultural awareness and dialogue. For the modules focusing more on the first two CDP, teaching formats like simulations, role plays and group assignments dominate, while in modules focus more on the latter two CDP, discussions, interactive lectures and video fragments have been used more. Gradually, the requirements of the course went up – as practice and experience increased – ending with the last simulation game, where students had to go in fully, apply what they had understood, and still be faced by all kinds of uncomfortable and stressful feelings.

During the full course various measurements were taken to measure the validity of the full course design, which led us to reconfirm the positive outcome of the trial course: our course design is in line with the CDP and CDS that follow from the theoretical model on growth of IIC.

The evaluation of implementation of the trial course modifications was done by the teacher, and in the evaluation on specific modifications, students were asked how they had experienced them (without informing them these were modifications from the trial course). All modifications had been implemented, but mostly the

simulation games and stricter moderation of discussions were viewed as strong points. The more general evaluation of course design revealed that though overall CDP and CDS were covered, some classes were viewed as meeting the design requirements and going beyond (e.g. the class with the Abigail story, Derdian bridge building game) and some stayed a little below expectations from the course designers (e.g. course on non-verbal communication). The learner reports and learner questionnaire results of the course further emphasised that – overall – the students felt (judging from their answers) that the CDP and most of the CDS are covered multiple times. They also indicated that they were positive about various elements in the course, especially about the level of interaction and the degree to which they were to self-reflect on what has been covered. The levels of intrinsic motivation were measured and showed significant and large increases for both groups in the full course. We used the instrument, because it showed us the effect of the course on motivation, but it also gave us an indication of the quality of the course as perceived by students, to see if the course was successful in this respect. The student inputs mattered, because motivation is an important variable to measure the willingness of students to engage in intercultural experiences; i.e. their openness to IIC processes and growth. Finally, time-on-task showed us that when measuring how the students spent time during the class, the share of on-task work was very high, and the shares of time spent on types of activities and types of tasks very balanced. The time spent on specific CDP – derived from the activities and tasks – was balanced, though – in line with the intention and evaluation from the students – some more time was spent on critical cultural awareness and gaining interpersonal experiences. The most challenging CDP to encourage in the course was willingness to experiment with the cultural self, but our results show that also this CDP was covered in a satisfactory manner.



## CHAPTER 5

# EFFECTS OF A DESIGNED COURSE ON IIC

“When we see men of a contrary character, we should turn  
inwards and examine ourselves”

-- *K'ung Fu Tzu, Chinese philosopher & reformer*

### Abstract

The requirement to act competently intercultural has gained substantial importance in our globalising world. Therefore, Intercultural Communicative Competence (ICC) is taught at many universities. In this chapter we test a theoretical model for courses in – what we have called – IIC that is based on the combination of a model that focuses on growth of intercultural intellectual capabilities (IIC) and learning during and from a dialogue.

As explained in chapter 2, the model on developing IIC suggests that cognitive experiences that cause a certain disequilibrium in the individual student's current understanding of the world, create opportunities for learning – i.e. create the potential for intrapersonal growth. From these learning opportunities, both through intrapersonal and interpersonal experiences, the student may construct (more) intercultural oriented frames of reference at the cognitive, meta-cognitive and intentional dimensions of the model, which together feed into a person's intellectual capabilities. These intercultural capabilities “under construction” may allow the student to be more adapted to approach and process intercultural experiences. Next to intrapersonal growth, the student can also learn from interpersonal experiences that follow from learning in a dialogue, and that stimulate the intrapersonal dimension further, thus leading to increases in IIC. We ‘translated’ this model into course guidelines, by looking at: intrapersonal growth (through critical cultural awareness, cultural stress tolerance and willingness to experiment with the cultural self, dialogue with the self), and interpersonal growth (through critical cultural awareness and dialogue with others).

The theory was tested in an experiment with switching panels for its effect on the two dimensions of IIC: intra-IIC and inter-IIC, and on critical thinking and self-reflection as intellectual drivers. The new course was taught two times over a period of four weeks each at Tomsk State University in Russia. 98 Students participated. No initial differences between conditions were observed for the relevant variables. No differences were found in the levels of student participation in both runs of the course, indicating that both runs were identical in

this respect. The results of the experiment indicate significant and very large positive effects of the course on both dimensions of IIC as well as on critical thinking and self-reflection. The degree to which inter-IIC is influenced is much higher than intra-IIC. Moreover, we found prolonged effects for the inter-IIC dimension but not for the intra-IIC dimension. Looking at potential interaction effects, our main find was that there was an interaction effect between the level of intrinsic motivation and level of growth of intra-IIC, which suggests that students that were more motivated – or got more motivated during the course – would go more deeply through the cognitive, meta-cognitive, intentional and intellectual capabilities dimensions leading to higher levels of intra-IIC.

*Key words: intercultural communication, intercultural intellectual capabilities, intercultural communicative competence, critical thinking, self-reflection*

## 1. INTRODUCTION

Promoting Intercultural Communicative Competence (ICC) – or – if we focus on the intellectual and intrapersonal development angle of ICC, Intercultural Intellectual Capabilities (IIC) – in education has become increasingly important in a world that is opening up (Byram, 1997:15; Lustig and Koester, 1996; Sercu, 2000). Educators have also recognised this fact, aiming to prepare their students for living and interacting in a new world.

In Russia intercultural language education was introduced in the nineties (Safonova, 1991; 1992; 1996) after the fall of Communism in 1989, and was then called ‘the socio-cultural approach to language learning’ (Safonova, 1991: 3). Many foreign language curricula were redesigned to fit the communicative language teaching framework. Tomsk State University (TSU), the university where we have carried out the experiment, has included courses on Intercultural Communication (IC) in its curricula for almost 9 years. They have been taught since 2000 as compulsory courses in the second and last (fifth) years. Both courses aim to enlarge students' understanding of theories of intercultural communication, study different approaches to IC, both in international and Russian theoretical research. The common teaching format is through lectures and self-study. The credit requirements include knowledge of IC theories and approaches to the study of IC<sup>38</sup>.

During the last years, more research has gone into the link between teaching and the intercultural requirements of a globalising world, measuring the effectiveness of course designs in general (Yore, Bisanz and Hand, 2003), and on the development of ICC in particular (Sercu, 2002; Byram, 1997; 2002). This chapter focuses on measuring the effects of a new course in IC that includes the latest insights into the effects of intellectual growth on participants' levels of IIC. In addition to previous research that focused on development of ICC through learning in dialogue with others (Sysoev, 2001; Kramsch, 2006; Ter-Minasova, 2000) or also with the self (Byram 1997; Sercu, 2002), our multi-faceted model of intercultural intellectual capability development, looks at the hitherto ‘black box’ of what happens inside the mind of the student that engages in different types of dialogue. This intrapersonal process is combined with learning in a dialogue. A course in IC that is based on this multi-faceted model expects students to grow intrapersonally and interpersonally. Going through an internal process of self-reflection and critical thinking, combined with experiences that stem from interpersonal encounters, students become more critically aware of differences in cultures, build up tolerance to cultural stress and may become more open to experimenting with the cultural self, challenging themselves and reflecting themselves against others and society around them.

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<sup>38</sup> Based on the latest version of the Working course programme of June 5, 2005 of Faculty of Foreign Languages, Tomsk State University.

### 1.1 Theoretical framework

In instructional models used to teach IC in the past, the main focus was placed on content-based learning characterised by “one-way communication in which the teacher was king”, “compliance by the learner”, “centralised control by the teacher” and “standardisation in what constitutes knowledge”. Indeed, in the past, learners were mostly seen as individual outsiders to a foreign culture developing an interest in understanding it. This is no longer the case today.

The theoretical model for growth of IIC, from which general learning goals (course aims), course design parameters (CDP), course content, and assessment formats can be derived, is explained in detail in chapter 2 and is graphically represented in Figure 5.1.

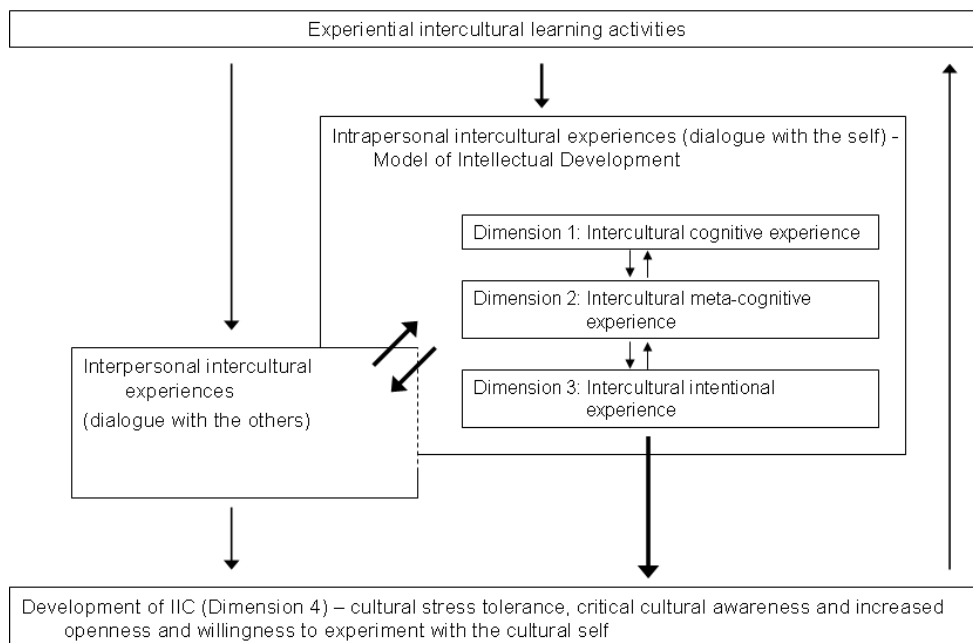


Figure 5.1. Theoretical model for IIC development.

Our theoretical model is embedded in and starts from the model for intellectual development of Kholodnaya (2002), adapted to focus on stimulating intercultural intellectual capabilities. As explained above, Kholodnaya (2002) distinguishes between cognitive, meta-cognitive, intentional and intellectual capabilities. These lead to intra-IIC growth, in combination with inter-IIC growth through a dialogue with the self as well as with others.

Experiential intercultural activities form the basis of our model of stimulating IIC. These activities provide students with the opportunities to stimulate their IIC

that consist of critical cultural awareness, cultural stress tolerance and experimentation with the cultural self in an intercultural context. These are the three main components of IIC that students need to develop to become interculturally competent.

Learning from experiences is important for intercultural to grow inside a student, because these experiential intercultural learning activities can create disequilibria inside students – either directly inside the self from participating in those activities or indirectly through dialogue with others. In fact, the interpersonal dimension consists of participating in a dialogue and thus gaining experiences (i.e. being involved in a dialogue) and in participating in a dialogue about experiences (i.e. reflecting on experiences). The disequilibria experienced may start a process of learning that may stimulate critical cultural awareness, cultural stress tolerance and/or willingness to experiment with the cultural self. Experiential learning, as the starting point for stimulating IIC, is in line with developments in modern instructional design theory and insights from experiential psychology, where intercultural language learning is viewed as two-way communication in the process of community building, and learning through participation and networking (Sercu, 2009: 15; Sfard, 1998; Kholodnaya, 2002).

The starting point of intrapersonal growth is ‘dimension 1’ in Kholodnaya’s model where cognitive experiences are related to intercultural, which help to create new information coding ways and new semantic structures and schemes. These schemes are considered as generalised and stereotyped forms of storing the existing experiences, knowledge (Byram, 1997) and schemata in a certain subject area.<sup>39</sup> Meta-cognitive experiences (‘dimension 2’) related to intercultural help to stimulate emotional and intellectual control vis-à-vis new knowledge concerning intercultural and understanding of intercultural at the meta-cognitive level. Intentional experiences (‘dimension 3’) help to foster and further new views and preferences and new frames of mind as far as intentional experiencing of intercultural is concerned. Intercultural intellectual capabilities (dimension 4) include convergent and divergent capabilities, learning ability, and knowledge perception styles. Convergent capabilities are aimed at operationalizing the intercultural, developing a critical approach to different cultures and their analysis, while divergent capabilities allow for processing intercultural as new, original experiences, contributing to the mechanism of developing skills necessary in dealing with intercultural, allowing students to experiment with their cultural selves. Knowledge perception styles complement the convergent and divergent capabilities and guide the ways in which students acquire, process and reflect on new experiences and knowledge, both within and outside the context in which they learn. This also includes encouraging tolerance for unrealistic experiences, i.e. experimentation with the cultural self, allowing the learner to see and respect other cultures more clearly, broadening their views.

In participatory – dialogic – learning, the learner is seen as a participant in intercultural communities, learning through interacting with other members, undergoing

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<sup>39</sup> *Situation-oriented learning assists in transforming a socially mediated activity into a mental activity (Galperin, 1969; Vygotsky, 1983). And is facilitated by the provision of real-life experience and bridges the gap between classroom learning and real-life experiences by enabling students to learn in a simulated situation similar to the real situation.*

new experiences and finding assistance in a teacher-coach who helps to clarify learning and stimulates the practice of learning to achieve the attainment target set (Sercu, 2009). The instructor can coach students, teaching them to think along with the topics, encouraging them to form their own opinions and views concerning the subject matter, and relating it to established convictions, opinions, ideas. Even if this learning takes place through dialogue with others, the learning is situated at the individual level: it is the individual student who is supposed to learn through dialogue.

Participating in a cooperative learning dialogue creates both interpersonal and intrapersonal learning experiences. Intra- and interpersonal experiences are linked in two ways. First of all, interpersonal behaviour and experiences can be seen as the manifestation of intrapersonal intercultural development, because a student that has become more intercultural competent, will also show this in dialogue with the others. Secondly, interpersonal experiences contribute to intrapersonal learning, for it is also from the dialogue that learning experiences – and thus disequilibria that cause cognitive development – originate. This is why we have decided to measure IIC in two dimensions: the intrapersonal and interpersonal dimensions, which we term intra-IIC and inter-IIC.

Through the dialogue with the self and dialogue with the others, triggered by experiential intercultural learning activities, different characteristics of the intercultural student are stimulated; i.e. critical cultural awareness is raised in experiences meta-cognitively when a cultural filter needs to be applied, the levels of cultural stress tolerance are tested by staying open and consciously trying to control unease stemming from intercultural encounters, and – both during and following the encounter – the student can experiment with and test the cultural self following the development of divergent capabilities. Willingness to experiment with the cultural self also follows from knowledge perception styles in that they cover the way in which students engage and go through new intercultural experiences.

Once a student has gone through the full process of intellectual growth, new shared meanings have been created, the disequilibria are addressed or get tolerated more, and new intercultural frames of mind may have unfolded inside, as well as new semantic structures, new schemata, new ways of thinking, new epistemological styles and new ways of coding information. In other words: the student has grown to a higher level of IIC.

For a course designer, the goal is to construct an interesting and challenging course for students to develop IIC. The designer must make choices about the content of the course, and how to stimulate students to develop intra-IIC as well as inter-IIC. There are different types of course design parameters (CDP) that can help shape a course in IC based on the idea of stimulating IIC, by covering the three components of ICC; i.e. the three course aims. The course has to create activities to develop critical cultural awareness, put students at unease to develop their cultural stress tolerance and arrange methods to increase their willingness and openness to experiment with the cultural self. The course also has to stimulate both intrapersonal thinking and development (dialogue with the self) and aims to create interpersonal experiences between students (dialogue with others).

Practicing with the course aims leads to development of the two dimensions of IIC: intra-IIC and inter-IIC. Intra-ICC refers to a person's cultural adaptability, tol-

erance to stress, flexibility and confronts personal values with intercultural situations and problems. Intrapersonal development is mainly about communication with the self, and developing through critical thinking and self-reflection (see chapter 2). Inter-IIC, on the other hand, is focused on the ability of analyzing and solving problems in specific practical situations and is directed towards maintaining communication with others with unknown cultural backgrounds.

For a group of Russian students from TSU, we have examined whether this instructional strategy based on Kholodnaya (2002) and on dialogic learning contributes to an effective learning environment, i.e. leads to significant growth of the two dimensions of IIC. The learning tasks are characteristics that may help students to engage in 'intercultural experiences' (Palomba, 2006) and become 'intercultural speakers' (Byram, Nichols, and Stevens, 2001: 5), determined to understand other cultures, get inside views on them, and to understand their own culture from the point of view of representatives of other cultures.

### *1.2 Aims and hypotheses*

In this study we measure the effects of a self-designed IC course on stimulating Intercultural Intellectual Capabilities (IIC). Through intra- and interpersonal experiences and learning, encouraging students to dialogue with themselves and each other in order to generate disequilibrating experiences, rooted in experiential psychology (Kholodnaya, 2002), we foster intra- and interpersonal intellectual growth. The following hypotheses guided this research:

- (1) The IC course significantly and positively affects participants' intra-IIC.
- (2) The IC course significantly and positively affects participants' inter-IIC.

Intrapersonal growth of IIC – supported by interpersonal experiences – is expected to be triggered by experiences that create disequilibria inside the students. Because the course on IC provides ample tools, exercises and interactions in a simulated setting to create disequilibria, we expect the course to set the intellectual development process going. Combined with learning in a dialogue, we believe that both intra- and interpersonal levels of IIC should be affected positively and significantly by the course on IC.

- (3) Inter-IIC development is affected more strongly than intra-IIC development.

Intrapersonal development and interpersonal experiences are nested in that the interpersonal dialogue is a manifestation of intrapersonal development and interpersonal experiences feed into disequilibria for intrapersonal development. Inter-IIC is a manifestation and more directed towards practical skills in intercultural encounters that can have a repetitive character, while the intra-IIC dimension is about intrapersonal growth, including changing personal beliefs and values following a process of

critically adjusting to disequilibria caused by new intercultural experiences and information. Because stimulating the intra-IIC dimension is a much deeper and profound personal process than stimulating inter-IIC, we expect that inter-IIC will be affected to a larger extent by a 1-month course than intra-IIC.

(4) There is a significant prolonged effect of the designed 1-month IC course on the inter-IIC dimension, but not on the intra-IIC dimension.

Because the inter-IIC dimension is much more focused on practical skills in intercultural encounters, being the manifestation of intrapersonal growth, the interpersonal dimension of IIC is more open to automated reactions of students as they learn how to react to certain intercultural situations. We expect this dimension of IIC to develop further, even after the course has finished, because understanding of new but similar intercultural experiences will require similar attitudes to solve them, convergent ways of thinking, given a certain level of intrapersonal development. Also, students will – after the course – perceive more specific information in interaction with others which is new input for learning. However, more fundamental changes in personal values and beliefs as in the intrapersonal dimension of IIC are not expected to develop further after the 1-month course, because after the course disequilibria – caused purposefully and in a focused manner during the course – will not be generated so frequently anymore.

(5) The IC course significantly affects participants' levels of critical thinking and self-reflection regarding interculture.

With a strong focus on the intra-IIC dimension, we expect the new course in IC to have a significant impact through and therefore also on critical thinking about cultures and self-reflection, two complex cognitive processes that underlie intrapersonal growth through cultural stress tolerance and willingness to experiment with the cultural self in the fourth dimension of our model of IIC.

## 2. METHOD

### 2.1 Participants

As mentioned in chapter 4, in detail, a total of 98 university students (91% female) of different ages (from 17 up to 25 years old) from the Faculty of Foreign Languages at Tomsk State University (TSU), Russia, participated in the course. The level of English proficiency varied between intermediate and pre-advanced. Related to the Common European Framework of Reference for Languages (2004), it varied between B1 and C1.<sup>40</sup> Somewhat less than half the students (46) had international experiences and the rest (52 students) did not. All participants followed the introductory course on IC in their second year and 13 of them the fifth year course on IC.

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<sup>40</sup> C1 level – 31,6% of students; B2 level – 26,5% of students; B1/B2 – 41,8% of students, based on their academic records in all English courses combined.

There are essential differences between these two courses and the newly designed course. The ongoing TSU courses focus mainly on familiarising students with theories concerning IC, are taught one-directionally, with low levels of interaction and no group-work, and do not focus on practical use and applicability. The new course is directed towards the development of two dimensions of IIC and is taught in a student-centred bi-directional way. That means it is focused on stimulating intrapersonal characteristics and creating interpersonal learning experiences through learning in a dialogue with the self and with others, with a strong focus on practical use and applicability of what is learnt in real life situations.

Students were recruited on a voluntary basis to participate in the course organised by the University of Amsterdam and were given a Certificate of Participation at the end of the course.<sup>41</sup> The main selection principle to include students in the study was sufficient knowledge of English that would enable them to understand the materials dealt with and participate in discussions concerning these materials in the classroom. This way they could participate and benefit from the numerous (group and plenary) discussions envisaged, express their thoughts and understand others.<sup>42</sup>

## 2.2 *Development and design of the course*

### *Course development*

To relate course development to the two dimensions of IIC is not common in university courses on IC. Therefore, it was not possible to base the course directly on a single published textbook or an existing set of materials for designing the intellectual approach in a dialogue needed (chapter 2). In designing the course we benefited from various important sources of information on content and design. First, we drew on previous experiences in IC teaching and literature available on course design, on IIC, and learning in a dialogue (Reigeluth and Carr-Chellman, 2009; Fowler and Mumford, 1999; Renshaw, 2004; Matsumoto et al., 2001, 2005; Gudykunst and Kim, 1984; Gudykunst et al., 1991; Byram, 1997; Byram et al., 2002 and others). Second, we investigated the availability of parts of teaching materials on IC and IIC (Martin and Nakayama, 2003; Seelye, 1996; Huijser, 2006; Wiertzema and Jansen, 2006; Peterson, 2004; Storti, 1999; Huber-Kriegler et al., 2003; and others). Third, we carried out a trial of measurement instruments in 2008 at TSU to assess the reliability of measurement instruments, the way they affected student perceptions and the ways in which they would need to be adapted to meet the specific research requirements (chapter 3). Fourth, the validity of instruments was tested in terms of discriminant validity. Fifth, a design experiment (one unit of a course) was trialed in 2008 (where the adapted measurement instruments were also re-tested), focusing on the types of learning activities to be included to stimulate IIC through intra- and interpersonal growth processes, facilitated by learning in a dialogue (chapter 4). The

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<sup>41</sup> No credits were granted to the students by Tomsk State University for participating in the new course because it is not a part of the curriculum approved by the Ministry of Education of the Russian Federation.

<sup>42</sup> The course was taught in English and not in Russian because the students are specializing in English as part of their Foreign Language programme they are following at TSU.

course design and testing process has taken two years, from developing the theoretical framework on IIC and learning in a dialogue to the creation of course design parameters and measurement instruments, and from developing the materials, test running of one module and trial running of the full course.

### *Measurements*

To measure the effects of the course, we have selected, piloted and revised four instruments on the basis of data gained from a pilot study: the ICAPS-46 instrument to measure intra-IIC growth, the INCA instrument to measure inter-IIC growth, the MSLQ-CT instrument to measure changes in critical thinking, and the Self-reflection instrument to measure growth in self-reflective skills. The results of selection, piloting and revisions are presented in chapter 3. The Intercultural Competence Assessment (INCA) instrument was developed within the framework of the Leonardo da Vinci project (2007)<sup>43</sup> and the Intercultural Adaptation Potential Scale (ICAPS-46) instrument by Matsumoto et al. (2001). Both instruments were adapted (for more information on the changes, see chapter 3) to measure the two dimensions of IIC. Both instruments represent the three IIC components we identified. ICAPS-46 instrument aims to tap into a person's cultural adaptability, flexibility and personal values of intrapersonal learning, while the INCA instrument leans more towards interpersonal learning, being a more 'external' measure of IIC as a manifestation of intrapersonal developments.

Critical thinking, a cognitive process that acts as a driver for intra-personal growth in the fourth dimension of our model of IIC as explained in chapter 2, is indicated by one of the components from the MSLQ instrument, adapted to add two more items. See chapter 3 for the details. Extended from part of the MSLQ instrument, we have constructed thirteen items on self-reflection consisting of seven items adapted from the MSLQ scale on self-regulation and six additional items. See chapter 3 for the details. The correlation between self-reflection and critical thinking varied from .66, .71 to .81 which implies that these measurements share variance but still measure distinct concepts.

### *Time-on-task measurements*

As mentioned in chapter 4, time-on-task measurements were implemented to look at how much of the allotted time was really spent on learning tasks, and at how time was spent by the students during the class, including listening to the instructions of the teacher and the different activities carried out in class. The measurements indicated that participation was satisfactory, that the CDP were covered to a large degree as intended, and that, in this particular research design, the course implementations in two runs of the experiment were similar.

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<sup>43</sup> Available at: <http://www.incaproject.com>.

*Research design*

We implemented a pre-test post-test design with switching replications to test the five research hypotheses.<sup>44</sup> Because the research design was a double experimental design, the effect of the course was tested twice and we were able to test the durability of the effect for the first experiment (Shadish, Cook and Campbell, 2002: 146) (see Table 5.1). The effect of the course was tested on four variables (1) intra-IIC, measured by the intercultural adaptation potential scale (ICAPS-46); (2) inter-IIC, focusing on acquiring situation-oriented and problem-solving skills, measured by the Intercultural Competence Assessment instrument (INCA); (3) critical thinking, adapted from the MSLQ-CT instrument; and (4) self-reflection, partially adapted from the MSLQ-SR instrument and in part constructed for the purpose of this research, each measured at three occasions (see Table 5.1). For condition 1, the third measurement moment provided information about a possible delayed effect.

The participants were randomly assigned to two conditions except for the fact that 20 more participants were assigned to condition 1 than condition 2 because of course schedule limitations at TSU. Female/male ratios appeared not to differ across conditions. Within conditions, participants were randomly assigned to one out of three groups so that each group had about 16 students. Table 5.1 summarises the design.

*Table 5.1. Research design*

	<i>Pre-test</i>	<i>Experiment 1 / Phase 1</i>		<i>Experiment 2 / Phase 2</i>	
Condition 1 (groups 1-3)	O <sub>1</sub>	X <sub>1</sub>	O <sub>2</sub>		O <sub>3</sub>
Condition 2 (groups 4-6)	O <sub>1</sub>		O <sub>2</sub>	X <sub>2</sub>	O <sub>3</sub>

Note: X = treatment / course, in which X<sub>1</sub> = X<sub>2</sub>, which implies that the courses taught for conditions 1 and 2 were identical; O = Occasion of measurement (1-2-3)

All students were required to participate in the complete set of pre-test sessions where all instruments were taken (O<sub>1</sub> in Table 5.1). After the pre-test session, the first three subgroups (constituting condition 1) participated in the course (X<sub>1</sub> in Table 5.1), while the other three groups (constituting condition 2) did not. After the first course (that took about four weeks) all students from both conditions were tested via the same instruments as during the pre-test (O<sub>2</sub> in Table 5.1). Then, the conditions were swapped: the experimental condition was not taught after the instrumental tests (control condition in experiment 2), while the control condition from experiment 1 became the experimental condition in experiment 2 and were

<sup>44</sup> Due to the design specifications, the prolonged effect was only measured for condition 1 since condition 2 served as the control group.

taught the identical course ( $X_2$  in Table 5.1). Finally, all students participated in a third test session where the instruments were taken ( $O_3$  in Table 5.1).

The course was taught by the author, who has teaching qualifications and 9 years of teaching experience. Three research assistants – all lecturers in English with teaching experiences ranging from 2 to 15 years – assisted in the data collection and in time-on-task observations of the students (see Section 2.3).

#### *Testing procedures*

The students were tested at pre-defined intervals in line with the research design. The first testing session took place two days before the first run of the new course started. The second testing (post-test for the students from experiment 1) took place one day after the first condition had finished taking the course. The third testing session (post-test for the students from experiment 2) took place one day after also students from condition 2 had finalised the course. All tests were combined into one set and each testing session took about 1 – 1½ hours, normal for Russian standards. The teacher and assistants monitored levels of concentration and looked for signs of distraction and fatigue among the test takers, but no evidence was found, though some test takers were – on average – much faster than others in completing the tests. For the second and third testing sessions the tests as well as the individual testing items were shuffled to avoid recognition of the questions and order by the test takers and improve validity of the testing by avoiding the students being able to memorise the series of questions.

### 3. RESULTS

#### *3.1 Testing initial differences between conditions*

Table 5.2 presents the means and standard deviations of all the measures in the pre-test.

*Table 5.2. Means, standard deviations (between brackets) and ranges of pre-test measures for the two conditions*

<i>Variable</i>	<i>Condition 1 (N=59)</i>	<i>Condition 2 (N=39)</i>
Intra-IIC (ICAPS-46 1-7 scale)	4.92 ( .64) 2.41 - 6.00	5.07 ( .41) 4.33 - 6.09
Inter-IIC (INCA 1-5 scale)	2.31 ( .31) 1.59 - 3.05	2.21 ( .30) 1.50 - 2.73
Critical thinking (MSLQ-CT 1-7 scale)	5.75 ( .74) 3.13 - 6.63	5.53 ( .85) 4.00 - 7.00
Self reflection (1-7 scale)	5.73 ( .75) 3.92 - 7.00	5.53 ( .89) 4.00 - .00

It is important to check that at the outset of the experiment the two conditions are not statistically different from each other. Multivariate analysis shows no difference

between conditions, Pillai's trace = .07,  $F(5,83) = 1.18$ ,  $p = .32$ ,  $\eta^2 = .07$ .<sup>45</sup> Subsequent univariate analyses of variance did not reveal any statistically significant differences between the two conditions with respect to initial intra-IIC (ICAPS),  $F(1,96) = 1.78$ ,  $p = .19$ ,  $\eta^2 = .02$ . initial inter-IIC (INCA),  $F(1,96) = 2.54$ ,  $p = .11$ ,  $\eta^2 = .03$ , initial levels of critical thinking,  $F(1,87) = 1.53$ ,  $p = .22$ ,  $\eta^2 = .02$ , and initial levels of self-reflection,  $F(1,87) = 1.28$ ,  $p = .26$ ,  $\eta^2 = .02$ .

In Table 5.3, the means and standard deviations of other important variables used in this study are presented. The distribution of male/female was not significantly different over conditions,  $\chi^2 = 3.37$ ,  $p = .07$ , nor was the level of English ( $F(1,96) = .29$ ,  $p = .59$ ,  $\eta^2 = .00$ ), nor the initial level of International Experience, measured by the IE-index for each student ( $F(1,96) = .81$ ,  $p = .37$ ,  $\eta^2 = .01$ ).

Table 5.3. Means, standard deviations (between brackets) and ranges of pre-test measures for the two conditions

Variable	Condition 1 (N=59)	Condition 2 (N=39)
Gender* (percentage female)	90%	92%
Level of English** (mean + standard deviation) – 1-7 scale	4.71 (1.40) Min: 3.00; Max: 7.00	4.87 (1.49) Min: 3.00; Max: 7.00
International experience*** (mean + standard deviation) – 0-1 scale	.33 (.24) Min: .13; Max: 1.00	.37 (.27) Min: .13; Max: .88
Percentage students that has taken 5 <sup>th</sup> year course on IC****	12%	15%

\* Value of 1 for women and 2 for men; \*\* Values ranging from 3 (minimal but satisfactory level of English) to 7 (very high level of English) linked to the Common European Framework of Reference for Languages (3 was equivalent to B1 and 7 to C1/C2); \*\*\* International Experience index (see footnote below); \*\*\*\* Value of 1 for those having taken the 5<sup>th</sup> year course, value of 0 for the others.

As described before, all students took the Introduction to IC course at TSU and 13 students also took the fifth year course. Following random assignment of the students into two conditions, no significant differences between the conditions in following the fifth year course were observed ( $F(1,96) = .25$ ,  $p = .62$ ,  $\eta^2 = .00$ ).

### 3.2 Validity of implementation

No significant differences in implementation between the two conditions were expected, because all participants in both conditions followed the same course, were taught by the same lecturer, in the same way, only at different points in time. In

<sup>45</sup> Dependent variables included in this multivariate analysis are INCA, ICAPS, critical thinking and self-reflection all for moment 1.

chapter 4, we showed that multivariate analysis proved that no significant differences between the conditions were observed in terms of types of action,  $F(3,12) = .56$ ,  $p = .65$ ,  $\eta^2 = .12$ ; types of tasks,  $F(5,10) = .93$ ,  $p = .50$ ,  $\eta^2 = .32$ ; in terms of types of activity,  $F(4,11) = .48$ ,  $p = .75$ ,  $\eta^2 = .15$ , or in terms of course design parameters,  $F(4,11) = .66$ ,  $p = .48$ ,  $\eta^2 = .36$ . Subsequent univariate analyses of variance for each of the types of action, tasks and activities individually did not alter this conclusion.

### 3.3 *Effects of the course experiment*

In Table 5.4, the means and standard deviations for the four measures are presented for pre-test (O1 – before the course), experiment 1 (O2 – when condition 1 followed the course, but condition 2 not yet), experiment 2 (O3 – when both conditions followed the course). To test the effects of the new course on the two dimensions of IIC, motivation, self-reflection and critical thinking, a mixed model analysis was carried out, with condition (two levels) and measurement occasions (three levels) as fixed factors and individuals as random factor. We use a mixed model analysis instead of the more traditional ANOVA approach because it provides a superior method for analyzing the data we have collected (Quené and Van den Bergh, 2004; 2008). The results are presented in Tables 5.5a and 5.5b. In the Tables we present the number of degrees of freedom, variable coefficients (to show whether effects are positive or negative), effect sizes (based on Cohen, 1988 – the ratio of differences of means by the standard deviation), and p-values (to show the level of statistical significance).<sup>46</sup> The variable coefficients show the differences between conditions (condition effect at different occasions) as well as the differences between conditions at different effect moments (e.g. moment1 minus moment 3).

For all four variables, at the start both groups scored similar (no effect of condition on moment 1; first row of Table 5.5a and 5.5b). This is in line with the results presented in section 5.3.1 above.

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<sup>46</sup> An effect size lower than .30 is small, an effect size larger than .80 is called a large effect, and sizes in between are medium effect sizes – based on Cohen's (1988) formulation of rules for interpretation of the size of the effects.

Table 5.4. Mean and standard deviation of measures for the two experimental conditions

Variable	Scale	Pre-test (O1)		Experiment 1 (O2)		Experiment 2 (O3)		
		Min – Max values	Condition 1 N=59	Condition 2 N=39	(Condition 1) N=59 Experimental group	(Condition 2) N=39 Control group	(Condition 1) N=59 Control group	(Condition 2) N=39 Experimental group
Intra-IIC – (ICAPS)	1 – 7		4.92 (.64)	5.07 (.41)	5.89 (.35)	4.94 (.48)	5.52 (.62)	5.72 (.53)
Inter-IIC – (INCA)	1 – 5		2.31 (.31)	2.21 (.30)	3.80 (.39)	2.18 (.36)	4.04 (.33)	3.86 (.29)
Critical thinking	1 – 7		5.75 (.74)	5.53 (.85) <sup>\$\$</sup>	6.36 (.51)	6.01 (.75) <sup>++</sup>	6.38 (.50)	6.47 (.42) <sup>£</sup>
Self-reflection	1 – 7		5.73 (.75)	5.53 (.89) <sup>\$\$</sup>	6.33 (.56)	5.71 (.70) <sup>++</sup>	6.39 (.48)	6.44 (.44) <sup>£</sup>

<sup>\$\$</sup>Number of observations is 30; <sup>++</sup> Number of observations is 23. <sup>£</sup> Number of observations is 35<sup>47</sup>.

Table 5.5a. Mixed model results for intrapersonal and interpersonal dimensions of IIC

	<i>Interpersonal dimension of IIC</i>				<i>Intrapersonal dimension of IIC</i>			
	<i>Df</i>	<i>Coefficient</i>	<i>effect size</i>	<i>p-value</i>	<i>Df</i>	<i>Coefficient</i>	<i>effect size</i>	<i>p-value</i>
Condition effect occasion 1	192	-.08	.30	.232	192	.05	-.29	.667
Condition effect occasion 2	192	1.45	4.85	.001	192	1.15	1.80	.001
Condition effect occasion 3	174	.18	.53	.011	202	-.20	-.39	.063
Effect moment condition 2 (M1-M3)	192	-1.65	4.91	.001	192	-.66	1.25	.001
Effect moment condition 2 (M2-M3)	192	-1.68	5.02	.001	192	-.78	1.49	.001

<sup>47</sup> The number of observations for moment 2 condition 2 are more limited because several students – having the impression the questions were the same without having done anything (but wait for their turn to participate in the new course on IC, did not fully fill in the questionnaires, leading to a lower number of questionnaires filled, also because partial responses are not included.

*Table 5.5b. Mixed model results for critical thinking and self-reflection*

	<i>Critical thinking</i>				<i>Self-reflection</i>			
	<i>Df</i>	<i>Coefficient</i>	<i>effect size</i>	<i>p-value</i>	<i>df</i>	<i>Coefficient</i>	<i>effect size</i>	<i>p-value</i>
Condition effect occasion 1	174	.29	.34	.054	175	.26	.34	.086
Condition effect occasion 2	180	.47	.63	.003	181	.73	1.08	.001
Condition effect occasion 3	196	-.07	-.12	.585	202	-.05	-.08	.718
Effect moment condition 2 (M1-M3)	179	-.92	1.47	.001	181	-.93	1.46	.001
Effect moment condition 2 (M2-M3)	187	-.49	.78	.001	189	-.79	1.25	.001

Looking at the effect of instruction overall (i.e. when we compared the group of students before any class and after all have followed the course on IC), we found a significant main effect as well as a significant interaction effect between condition and time, as is shown in the second last row in Tables 5.5a and 5.5b. The level of significance is .001 for all four variables, indicating significant changes in levels of both dimensions of IIC, levels of critical thinking and self-reflection. After instruction in condition 1, at measurement occasion 2, there was a highly significant difference between conditions as a result of instruction for all four variables (shown in the second rows of Tables 5.5a and 5.5b). The levels of significance were all at .001 (except for critical thinking where it was .003). The effect of the second phase of instruction, when condition 2 was assigned to the experimental instruction, was significant for all four variables; i.e. there was a significant interaction effect between condition and time between moments 2 and 3 – as the last rows in Tables 5.5a and 5.5b show. This implies that the first two hypotheses of this chapter have been confirmed: the course has stimulated growth of both intra-IIC and inter-IIC significantly.

Both groups function on the same level at occasion 3 but for INCA; a prolonged effect was observed on measurement occasion 3. At moment 3, we observed for intra-IIC, self-reflection, and critical thinking no significant difference between conditions. However, for inter-IIC a statistically significant difference between conditions was observed ( $p = .011$ ). With the research design used, this implies a prolonged effect of the interpersonal dimension of IIC. Therefore, the fourth hypothesis has been confirmed.

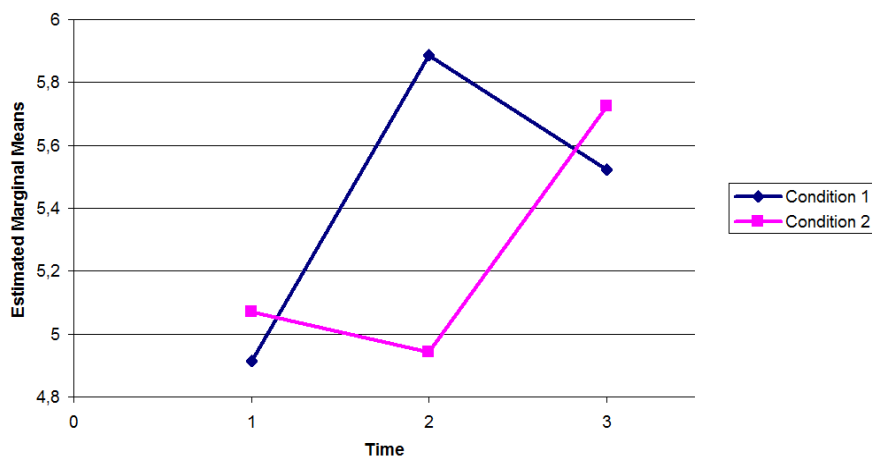


Figure 5.2a Effects on the levels of IIC: intra-IIC.

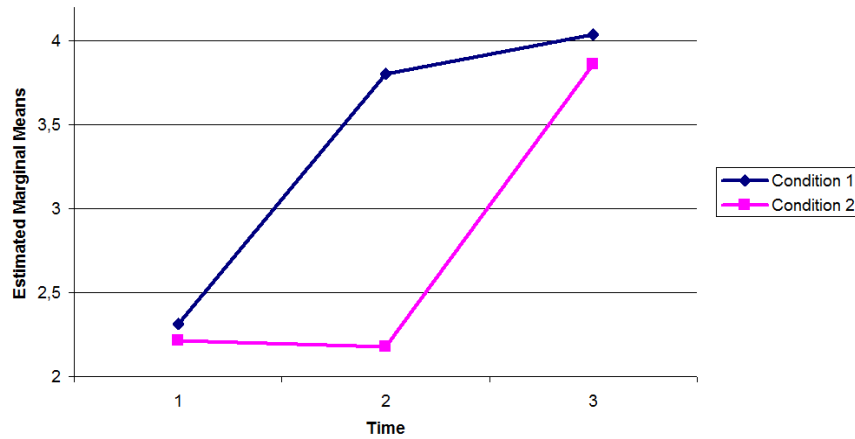


Figure 5.2b Effects on the levels of IIC: inter-IIC.

A plot of estimated marginal means over time, as shown in Figure 5.2a, shows the interaction between condition and time for intrapersonal IIC development.<sup>48</sup> After being taught for three weeks, students in condition 1 score significantly higher than students in condition 2, who had not (yet) taken the course. Students in condition 2 then scored significantly higher when they were taught in period 2. Looking at interpersonal IIC development in Figure 5.2b, after condition 1 had participated in the new course, the level of inter-IIC of those students increased significantly while the level of inter-IIC of the other condition remained the same. After condition 2 also followed the course, the level of inter-IIC of participating students in condition 2 increased significantly. Between moments 2 and 3, we see the increase in inter-IIC which is statistically significant; i.e. there is a pro-longed effect of the course.

The third hypothesis postulates that intra-IIC is affected less strongly by the IC course than inter-IIC, because the former involves fundamental changes in intrapersonal development regarding intercultural frames of mind, semantic schemes, values, etc., while the latter represent the much more practical manifestation of intrapersonal development in dialogue with the others, that – when practiced regularly – can develop into automated responses in intercultural situations. When looking at Table 5.5a, comparing size effects of the intrapersonal dimension of IIC versus the interpersonal IIC dimension, we see that the effect size in the latter is much larger (4.85) than in the former (1.80), confirming our hypothesis.

<sup>48</sup> Estimated marginal means are defined as the mean value averaged over all cells generated by the rest of the factors in the model.

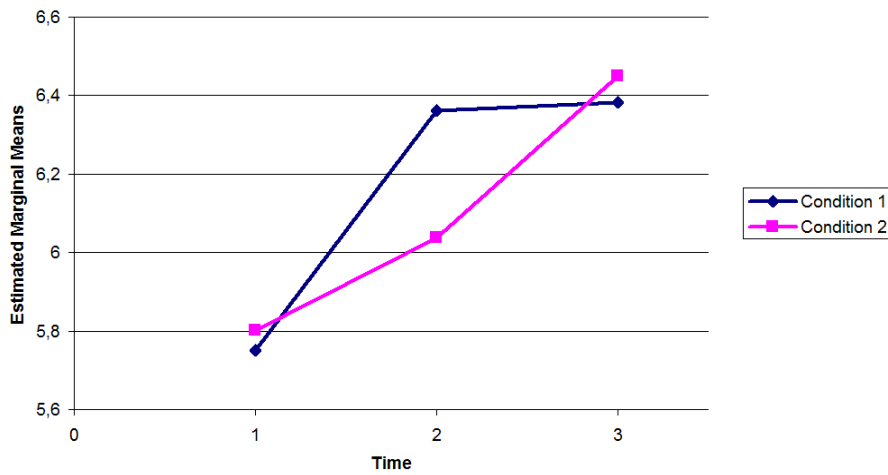


Figure 5.3. Effects on the levels of critical thinking.

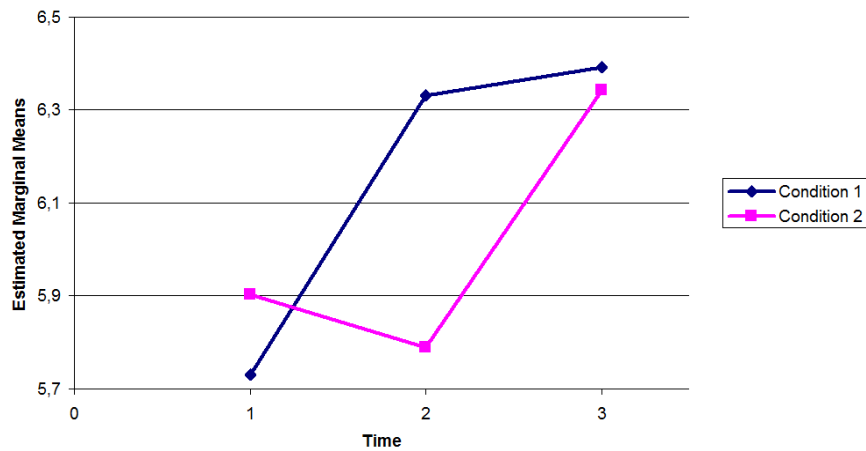


Figure 5.3. Effects on the levels of self-reflection.

Figure 5.3a shows a significant increase in the level of critical thinking for condition 1 as expected. For condition 2 during experiment 1, the control group for experiment 1, seems to also experience an increase (visually) but this effect is statistically insignificant as the mixed model results show. After condition 2 has also taken the course, both conditions are not significantly different. Figure 5.3b shows the effects

of the IC course on self-reflection. Analysis of whether conditions after following the new course were significantly different with respect to self-reflection showed that it was not the case.

### 3.4 Exploring interaction effects

We explored the data whether students with higher levels of intrinsic motivation, higher levels of English, higher levels of International Experience, or those that have taken the 5<sup>th</sup> year course in IC would profit most from the IC course because it stimulates the development of IIC, critical thinking, self-reflection in a setting that encourages intellectual development through intra- and interpersonal growth, which is new for most students. We found a multivariate significant interaction effect between the level of intrinsic motivation and growth of interpersonal IIC. Having divided the measured levels of motivation of the students in four, we find that students with significantly higher levels of motivation, also growth faster intrapersonally. Pillai's trace = .15,  $F(4,184) = 3.85$ ,  $p = .01$ ,  $\eta^2 = .15$ . We did not find interaction effects between levels of intrinsic motivation and the other variables.

We also found a univariate significant interaction effect between level of English and critical thinking: the higher the level of English, the higher the measured critical thinking skills of the participants.

Having tested extensively for interaction effects between the level of International Experience and our course variables, we did not find any significant interaction effects.

Having anticipated that students that have followed the fifth year course could benefit significantly more than those that did not, we did not find an interaction effect between fifth year course and levels of IIC, implying that following the 5<sup>th</sup> year course in IC had no effect on performance in this course.

## 4. CONCLUSIONS

Having implemented a pre-test versus post-test design for two conditions, we have been able to cross-validate the results two times, following the use of switching replications (Shadish, Cook and Campbell, 2002). We have hypothesised that a course on IC based on Kholodnaya's model of intellectual development, comprising of intrapersonal and interpersonal development should enhance the students' level of IIC, critical thinking, and self-reflection.

Our first two hypotheses were confirmed: the course affected both intra-IIC and inter-IIC significantly, with large effect sizes. We included two dimensions of ICC in this study to shed light on the intra- as well as interpersonal development of IIC. The more intrapersonal related dimension of IIC taps into personal development of tolerance of cultural stress, and willingness to experiment with the cultural self through cognitive, meta-cognitive and intentional experiences, thus leading to increased IIC. The interpersonal dimension focuses more on developing critical cultural awareness and learning in a dialogue – feeding into the intrapersonal development process.

We found that – as mentioned in hypothesis three – the growth rate of the intra-IIC dimension appears to be significantly lower than the inter-IIC dimension. We hypothesised that this was due to the fact that intrapersonal development (i.e. a student's way of coding information, semantic structures, cognitive schemes) takes place at a deeper personal level than interpersonal development (i.e. the manifestation of intrapersonal development in the exchange of information with students with other depths and degrees of intrapersonal development). The latter, moreover, can become automated to a certain extent when reactions are applied to recurring situations.

We have also hypothesised on the existence of a significant prolonged effect of the IC course for the interpersonal dimension of IIC. The results show, that there is indeed a statistically significant prolonged positive effect of following the course in terms of the interpersonal side of IIC development, which supports our theory. For the intrapersonal side of IIC, no significant prolonged effect is found, which is in line with our understanding that a lasting effect in terms of this dimension of IIC takes much more time to form because it involves developing new personal views, and changes in semantic schemes, beliefs and cognitive styles. This is different for interpersonal IIC that encompasses more practical skills in concrete intercultural situations.<sup>49</sup> Intrapersonal development of IIC is not restricted to foreign cultures alone but also to 'otherness' within domestic cultures, which implies that once it has been developing – for example because of a course in IC designed to do so – one interprets new intercultural encounters differently (along the lines of Kholodnaya's (2002) model of development); i.e. the cognitive system for interpretation has changed and keeps changing by interpreting new situations. This mechanism is fundamental but slow. Rather a small change in the cognitive system is expected to manifest itself in different approaches to interpersonal IIC and in different ways engagement of the student with the environment, in searching for and obtaining different practices and pieces of information from the environment.

The levels of critical thinking and self-reflection also increased significantly for both conditions upon following the course on IC, fulfilling our fifth hypothesis.

Running several tests for interaction effects, we found two significant interaction effects. First of all there is an interaction effect between levels of intrinsic motivation and growth of intra-IIC. The higher the levels of intrinsic motivation of students, the more they benefit from the course in terms of intra-IIC. Secondly, between level of English and critical thinking also an interaction effect was observed. The higher the level of English, the more the students would engage in and develop their critical thinking skills. All other interaction effects were not significant; neither of the level of English, nor of International Experience nor the fifth year course.

The goal of the chapter has been to look at if and how a model for intellectual development combined with learning in a dialogue could provide insights into the way intercultural competences are intellectually processed and grow; i.e. how the two

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<sup>49</sup> For inter-IIC there may be a prolonged effect, but only after a much broader multiple-course development of this dimension of IIC, not after just one course.

dimensions of IIC are enhanced. It has touched upon several other issues that are beyond the scope of this research, but that are worth mentioning. First of all, this course on IC has been designed in order to test the theoretical framework of intellectual development and learning in a dialogue. This full course has used existing materials. Further research could look into how adapting the prototype course by further changing the content and materials would affect the two dimensions of IIC. Second, further research into the realms of other social science courses like economics or politics could be carried out to identify which aspects are comparable to a course on IC and which aspects are not. Third, further research into the combination of stimulating IIC and value-loaded learning (Frijters, Ten Dam, and Rijlaarsdam, 2008) could be carried out. Fourth, the tests and course materials could be translated into Russian and the working language of the course could be changed into Russian to see what effects the language factor has on learning about IIC. Finally, it would be interesting to change the proportion of intrapersonally focused versus interpersonally focused activities in the course and see whether more activities aimed at intrapersonal stimulation might actually lead to more growth with respect to this dimension of IIC.



## CHAPTER 6

### SUMMARY AND DISCUSSION

“Tell me and I forget. Teach me and I remember. Involve me and I learn”  
-- *Benjamin Franklin – American statesman, scientist, inventor*

In this final chapter, we aim to provide the reader with a brief summary of the study in terms of its purpose, the design and methodology employed, and the overall results. We also address the strengths and added value of this study and areas where further improvements are possible and needed. Linked to the evaluation of work done, we provide some areas for future research. We conclude with some final remarks.

#### 1. SUMMARY

Our world is globalising and becoming more international by the day. Because of the increased need for peoples worldwide to communicate with each other across and beyond cultural boundaries; i.e. engage in intercultural communication (IC), we believe there is an important – and ever increasing – didactic role to play for course designers and curriculum builders at universities. Universities have the social obligation to prepare their students for the world that is out there waiting for them, the moment they graduate. That means, students will have to have acquired competences and capabilities to be equipped to act as competent intercultural communicators of the future. Referring back to the Indian proverb in the introductory chapter: they should have been taught *how* to fish.

##### *1.1 Purpose of the study*

This study was set out to design and implement a new course in Intercultural Communication that stimulated both intrapersonal and interpersonal growth in intercultural intellectual capabilities (IIC) among students. This course should fill a gap in the practice of teaching IC that is focused on stimulating both intercultural compe-

tences and intellectual capabilities. The course aimed to stimulate students to become true intercultural communicators, ready for the globalised and internationalised world that awaits them.

### *1.2 Design and methodology*

To reach the overall aim of this study, a new model of experiential learning in Intercultural Communication, focused on growth of intercultural intellectual capabilities (IIC), was developed. This model was based on theories regarding intellectual development following experiential learning (Kholodnaya and Shavinina, 1996; Kholodnaya, 2002; Matsumoto et al., 2001; King and Baxter Magolda, 2005) which were combined with the view that intercultural communication benefits strongly from learning in a dialogue with others (Lustig and Koester, 1998; Frijters et al., 2008) and that focus should be on stimulating intercultural competences (Byram, 1997; Williams, 2005; Deardorff, 2006).

Combining these two views on developing intercultural competences, or intercultural intellectual capabilities as we called them, we derived four course design parameters (CDP) and three clusters of course design specifications (CDS). The designed course should include exercises and activities to stimulate critical cultural awareness (CDP 1), cultural stress tolerance (CDP 2), increase students' willingness to experiment with their cultural selves (CDP 3), and allow them to engage in interpersonal intercultural dialogues (CDP 4). The course was then designed in detail, employing different pedagogical design specifications (e.g. autonomous learning exercises, problem-solving and critical thinking exercises), content design specifications (e.g. information about the native culture, providing different views on cultures and providing culture-general and culture-specific information), and various teaching formats (e.g. simulations, snowball discussions, group work, video fragments). Based on these CDP and CDS the new course was designed; i.e. rooted systematically in the latest theoretical insights. This course design was tested.

We have also tested and validated measurement instruments to measure changes in students' levels of IIC and in critical thinking and self-reflection. From a large number of potential measurement instruments, we pre-selected the most viable ones (based on three objective criteria) and finally selected one measurement instrument for intra-IIC, one for inter-IIC, one for critical thinking, one for self-reflection, and one for intrinsic motivation. These measurement instruments were tested three times: once in April 2008 in a special session used to test the measurement instruments, a second time in September 2008 during the trial course, and a third time during the full course that we taught in March-April 2009.

Finally, having created a new model of experiential learning, having checked the validity of the course design and having selected and validated the measurement instruments, we taught the designed course and measured its effects (March-April 2009). For this full course run, we implemented a pre-test post-test design with swapping panels to measure changes in IIC and the complex cognitive processes critical thinking and self-reflection. Because of the double experimental design, the

effect of the course was measured twice and we were also able to test some of the post-course effects for the first experiment.

### *1.3 Results*

In this study, we obtained three different clusters of results of which the third and final result were the most important. First, we validated the course design to be in line with the theoretical model in which it was rooted. Second, we validated the chosen measurement instruments to measure changes in IIC, critical thinking and self-reflection. Third, we confirmed – based on the validated course design and measured with validated measurement instruments – that the experimental course on IC taught in March-April 2009 in Tomsk did cause significant and positive growth of intrapersonal IIC, interpersonal IIC, critical thinking skills and self-reflection skills among the participating students.

#### *Validation of course design*

The intended course design was to be rooted systematically in the theoretical model. We used various measurements to ensure that the intended and perceived course design were indeed in line with the CDP and CDS that followed from the model of growth of intra- and interpersonal intellectual capabilities. Based on the theoretical model, the course needed to include activities that would enhance critical cultural awareness among students, stimulate their tolerance to cultural stress and encourage them to be open and willing to experiment with their cultural selves. The course also needed to stimulate development of interpersonal experiences through dialogue with others. In order to evaluate the validity of the course design, we first measured the perceived course design during the trial course experiment. Ten modifications were made to the course following these trial course measurements. In the full course, we evaluated the course with the students, especially the CDP and CDS. The teacher and observers took extensive notes to document student reactions, comments and progress. We presented the students with a Learner Report and a Learner Questionnaire as well as with a check on their levels of intrinsic motivation for the course, and detailed measurements for time-on-task.

The evaluation, matching intended and perceived CDP and CDS, showed that in general the course design was perceived as intended. Two modules were not matching designer expectations (i.e. their perceived effects were lower than their intended effects), while three modules performed slightly better in terms of breadth and depth of CDP and CDS coverage.

The Learner Report results showed that students mentioned critical cultural awareness, knowledge about other cultures and experimentation with the cultural self as increasing knowledge, while cultural stress tolerance, self-reflection and willingness to experiment with the cultural self were indicated as important skills that have improved. Especially the interactive lectures and process of self-reflection were considered positively during the course.

Our analysis of levels of intrinsic motivation showed strong positive effects of the course on student levels of motivation. This was encouraging for course validity,

because it implied that the course fulfilled its aim to get students more interested and thus involved in the course related to IC, which is a prerequisite for learning and being open to personal growth. Indirectly, these findings suggested that the quality of the course was perceived as high by the students.

Our findings with respect to time-on-task supported earlier evidence that course design was satisfactory. Students appeared to be on task 97 percent of the time (in both conditions) which showed their levels of commitment and the fact the course kept them working continuously. Also the findings on types of tasks and types of activities appeared to be in line with the intended use of CDS in the course design. We need to note, however, that the time-on-task measures were based on a sample and thus did not cover each class in detail for each group. They showed that at the aggregate level, implemented course design were in line with intended course design for the CDS. Furthermore, time-on-task for the CDP showed that most time was spent on activities and exercises stimulating critical cultural awareness (34 and 30 percent for the two conditions) and learning in an interpersonal dialogue (33 percent for both conditions), while slightly less time was spent on activities related to cultural stress tolerance (22 and 24 percent for the two conditions) and experimentation with the cultural self (11 and 13 percent for the two conditions).

Taken together, these measurements presented the picture that the course matched the course design parameters and course design specifications to a satisfactory degree.

#### *Validity and reliability of measurement instruments*

In total, 252 students from the Linguistics and Intercultural Communication study at TSU, participated during the three occasions (with in total six moments) where the measurement instruments were tested. We selected the ICAPS instrument (Matsumoto et al., 2001) to measure intra-IIC, the INCA instrument (INCA, 2007) to measure inter-IIC, the MSLQ-CT instrument (Pintrich et al., 1991) to measure critical thinking, the Self-reflection instrument to measure self-reflection and the IMI instrument (Ryan and Deci, 1992) to measure intrinsic motivation. All instruments were adapted to a larger or lesser extent as described in chapter 3 in order to increase validity and reliability as well as understanding of the items in each of the instruments.

During the full course, the validity and reliability of all instruments were measured three times. For the ICAPS instrument, validity as measured by the value of Cronbach alpha was .80, .90 and .89 for the three moments of testing. For INCA, the values of Cronbach alpha were .66, .96 and .82 for the three moments respectively. The MSLQ-CT instrument and Self-reflection instrument were also valid with values of Cronbach alpha of .82, .86 and .84 for MSLQ-CT and .81, .76 and .81 for self-reflection for the three moments of testing. Finally, internal validity of the IMI instrument was confirmed by Cronbach alpha values of .97, .91, .88 for the instrument as a whole. Though total instrument validity tests were satisfactory, for some of the factors within the instruments, especially for the INCA instrument, the results were not strong, prompting us to not look at the factors individually, but at the instruments at the aggregate level.

Pearson correlations between the five instruments showed that correlations were very low between all variables except between MSLQ-CT and Self-reflection (a correlation of .66). We believe this came in part because some items of the self-reflection scale were taken from the MSLQ instrument and because self-reflection in part overlapped with critical thinking as a concept and cognitive process; i.e. it can be argued that elements of self-reflection are in part also critical thinking. Even though the correlation between the two instruments was relatively high, there was still sufficient room for unexplained variance, allowing us to treat the two measures separately.

#### *Results of the full IC course*

A group of 98 students followed an introductory class and eight modules on IC. The group of students was split into two groups (conditions). Condition one started with the course while condition two did nothing. Then, after condition one finished, condition two took the course, while condition one did nothing. At three moments we tested the levels of IIC, critical thinking and self-reflection: at moment 1 (before the start of the course), at moment 2 (when condition one had just finished the course, but condition two still had to start), and at moment 3, when both conditions had followed the course.

Measuring at these three moments, we could infer some strong conclusions from the experiments that we ran. First, we found that the level of intra-IIC increased significantly for both experiments. Intra-IIC measures intrapersonal growth, including changes in values and personal beliefs tapping into personal development of tolerance of cultural stress, and willingness to experiment with the cultural self through cognitive, meta-cognitive and intentional experiences. For condition one the effect size of moment 1 to moment 3 was 1.25 ( $p$ -value of .001) while for condition two the effect size of moment 2 to moment 3 was 1.49 ( $p$ -value of .001). For inter-IIC, that measures the interpersonal dimensions of IIC, i.e. situational experience, critical cultural awareness and learning in a dialogue, also strong and significant positive effects of the course were measured. For experiment one, the effect size was 4.91 ( $p$ -value of .001) between moment 1 and moment 3, while for experiment two, the size effect was 5.02 ( $p$ -value of .001) between moments 2 and 3. These figures also showed that the increase in inter-IIC was much larger than the increase in intra-IIC. This could be explained by the fact that inter-IIC involved practical manifestations of learning from a dialogue with others that – when practiced regularly – could grow into a set of automated responses in intercultural situations, while intra-IIC involved fundamental changes in the complex intellect of a person, affecting personal values and beliefs at a fundamental cognitive level.

Turning to critical thinking and self-reflection, the two higher order complex cognitive processes that occurred at the dimension of intellectual capabilities in our model, we found that both increased significantly during the course, for both experiments. For experiment one, the effect size from moment 1 to moment 3 was 1.47 ( $p$ -value = .001), while for experiment two, the effect size from moment 2 to moment 3 was .78 ( $p$ -value = .001). For self-reflection we found similar significant

positive effects of our course on the learners (effect size for experiment one was 1.46 ( $p$ -value = .001) and for experiment two it was 1.25 ( $p$ -value = .001).

From the significant growth in intra-IIC, inter-IIC, critical thinking and self-reflection because of the experiences the students were confronted with during the course on IC, we concluded in nuce, as many psychologists would confirm, *experientia docet*.<sup>50</sup>

Finally, we checked for several interaction effects and found one interesting one: there appeared to be a significant interaction effect between intrinsic motivation and growth of intra-IIC; i.e. students with higher levels of intrinsic motivation also showed higher levels of growth of intra-IIC. The effect could be explained by the fact that students with higher levels of motivation were more open to the course and more willing to engage deeply in the exercises, simulations, snowball discussions and group work. This, in turn, stimulated their levels of cultural stress tolerance, critical cultural awareness and willingness to experiment with their cultural selves much more strongly than in those students that were not so motivated.

## 2. EVALUATION OF THIS RESEARCH

This study has set itself the ambitious aim to develop and test a new course in IC, rooted in theory, aimed at significantly stimulating student levels of Intercultural Intellectual Capabilities (IIC). In this section, we do as we have asked the students to do during the course: we self-reflect on what have been the strong aspects of this research and where lie areas for improvement.

### 2.1 Strengths of this study

Some of the strengths of this research have been implicitly presented in the results section above, but nonetheless, we would like to put forward some strong aspects more explicitly.

First of all, the general aim and outcome of the research is that a new course has been designed that significantly affects student levels of IIC. This course has been tested for a match with the CDP, and its course design has been validated. Also, the effects of the new course have been measured using measurement instruments that have been carefully selected and checked for validity and reliability. This implies that the overall endeavour has been successful because the course – systematically rooted in our theoretical model – has been shown to work.

Another strength of this study is the research design with a pre-test post-test run with swapping panels. This has allowed us to run two (repeated) experiments in one design, whereby one experiment served as control group and the other one as the experimental group. This is a strong design for reason of generalisation. Moreover, having collected data – for 98 students in the full course run – three times, including for experiment 1 a month after the course was finished, shows the longer run effects

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<sup>50</sup> Latin for “Experience teaches”.

and evades the critique that the research results are based on a one-shot data collection.

On the theoretical level, we have been able to develop a new model of experiential learning that combines some of the core competences of ICC from the ICC research with research on intellectual development. Our model encompasses previous models (King and Baxter Magolda, 2005; Matsumoto et al., 2001) and lays bare that stimulation of the intellect is subject to changes at the cognitive, meta-cognitive, intentional and intellectual levels; i.e. we open the black box of how intercultural (intra- and interpersonal) experiences interact with the complex mental structures and lead to growth in Intercultural Intellectual Capabilities to higher levels of intercultural maturity.

From our theoretical model, the course design parameters follow logically. Many components of ICC have been identified in the literature over the past decades – an endeavour still ongoing. However, only few of these components are also related to stimulating intellectual capabilities through cognitive, meta-cognitive, intentional and intellectual levels, opening up the black box of intrapersonal learning and intellectual growth. At the meta-cognitive level, cultural stress tolerance is stimulated through the motivation to control all information against an intercultural filter and by conscious choice to control cultural stress. Also critical cultural awareness is encouraged in this dimension because the learner strives to be open to new cultures and otherness. The dimension of intentional intercultural experiences can stimulate critical cultural awareness because of the creation of new views and preferences as well as new frames of mind inside the learner's mental structure. In the fourth dimension, intercultural intellectual capabilities, divergent capabilities combined with self-reflection lead a learner to experiment more with the cultural self, while divergent capabilities also include finding creative solutions to intercultural challenges, which facilitates tolerance for cultural stress. Interpersonal experiences, the fourth CDP, matter because they feed into the cognitive dimension of a learner, adding to intrapersonal experiences to stimulate the cognitive process of balancing personal views, beliefs and frames of mind when confronted with new (diverging) ones.

The newness and originality of the designed course lies not so much in having developed new materials and knowledge. Intercultural knowledge, in our view, is not the focus of the course, but rather a vehicle to set cognitive learning processes going that in turn stimulate critical cultural awareness, cultural stress tolerance and the willingness to experiment with the cultural self. Our focus was on the combination and sequence of activities and exercises that dig deeper into the individual minds as the course progresses with a large variety of carefully selected exercises and activities, makes this course stand apart. For each of the CDP, specific activities and exercises have been designed and implemented based on a creative variety of sources. For example, intercultural stress and levels of discomfort are carefully built up throughout the different modules and climax in the 'Building a Bridge – The Derdians' simulation game, forcing students to look into themselves and reflect on what happened and how that has influenced their views of the world, their frames of reference and their knowledge perception styles – all through a process of critical thinking and self-reflection.

Another strength is the multi-occasion and multi-pronged approach to validating the course design. First of all, the course design has been evaluated both in the trial course run and the full course run. Modifications have been made to the full course based on the outcomes of the trial course evaluation, with the purpose of better aligning the intended and implemented/perceived course designs. Furthermore, the course design validity – i.e. the degree to which course design matches the CDP – has been tested using various approaches. The student evaluations, teacher and observer notes, Learner reports, Learner questionnaires, measures for intrinsic motivation, and time-on-task measurements all point in the direction that the course is designed satisfactorily. When one measurement instrument shows that the course is well designed, all depends on the reliability of that one measurement instrument. However, when six measurements – that are collected independently from each other – all point in the same direction, the validity of the combined approaches is much stronger. Thus we can say with much more certainty that the course was designed in line with the CDP.

Finally, looking at the results from the measurement instruments that have measured the effect of the full course, we find that these learning results are strong and interesting: levels of IIC are affected positively and at very high levels of statistical significance, and so are the levels of critical thinking and self-reflection. Our analysis also shows how these variables are affected differently (e.g. intra-IIC grows, but at a slower rate than inter-IIC). These findings also provide information about the learning process – no longer a black box, but going through four dimensions of intellectual development – and the link between two important complex skills, critical thinking and self-reflection, and IIC. The interaction effect between intrinsic motivation and intra-IIC is interesting because it shows that students that have higher levels of motivation learn faster intrapersonally, most likely because they are more open and engaged in the various facets of the course.

## *2.2 Areas for improvement for this study*

Even though we are satisfied with the results and the way we have achieved the research goal of this study, there are some aspects of this research that could benefit from further improvements and scrutiny.

First of all, methodologically, it might have been better to have also a fourth moment of measuring during the full course – a delayed post test for both experiments in order to measure the longer-term effects. In our research, we conducted the third test right after the end of the course for experiment two and about one month after the end of the course for experiment one. A fourth delayed post-test would provide further information about the longer term effects of the course on IIC.

Even though we were satisfied with the reliability of the measurement instruments, further efforts could be put into increasing the levels of validity and reliability of the instruments. Our detailed analysis in chapter 3 shows that even though for the measurement instruments on the aggregate reliability figures look fine, the factors that comprise the total instrument sometimes have very low levels of Cronbach

alpha. Especially the INCA measurement instrument shows somewhat low levels of internal validity on the level of subscales.

In this study, we have tested the measurement instruments on reliability and internal validity of the instruments by measuring Pearson correlations to ensure the instruments measure significantly different aspects, and to ensure the instrument is constructed validly. Further strengthening of our chosen instruments would come from conducting an external comparison of results with other instruments. The closer our findings are in comparison with other research employing comparable instruments, the stronger the external validity and the more our own findings are corroborated by other research.

Further research into both the concepts of critical thinking and self-reflection and their measurement instruments is needed. We found a rather high correlation between the two instruments. This may be due to two reasons. First of all, because part of the items were taken from the same instruments (MSLQ) though from a different factor than critical thinking, there may be an overlap between what is measured in the two instruments. Second, on a more conceptual level, further research into the exact relation between critical thinking and self-reflection matters. It matters, because if indeed self-reflection is part of critical thinking in some situations, the two concepts (partially) overlap – hence the high correlations found.

We have focused on the intellectual component of ICC, calling it IIC. Further studies must also validate this focus; i.e. to what degree does IIC relate to actual communicative behaviour in IC settings. Our findings will stand stronger if other research validates our choice.

### 3. AREAS FOR FUTURE RESEARCH

Part of the suggestions for further research stem from our section on weaknesses but other elements are aspects that warrant further research in support of our first findings of this study.

First of all, for the purpose of generalisability, it would be good to run the entire experiment again, but with a different group of learners; different in the sense of different nationalities or different in the sense of non-university students or university students with different study backgrounds. ICAPS in Matsumoto et al. (2001), for example, started off as a measurement instrument focused on Japanese sojourners. Only later, has the instrument also been used by other authors to analyse effects in the US. Our testing population consisted of 252 university students at TSU in Russia of Russian (or Kazakh) nationalities.

Studying and incorporating more elements of additional theories of intellectual development (e.g. King & Baxter Magolda, 2005; Arasaratnam and Doerfel, 2005) and assessing which ones or which elements would also be able to capture intercultural development would be an interesting area for future research. We would be able to more strongly link the work on components of ICC to our theory of IIC, by deepening and broadening the element of intellectual development linked to ICC.

In general, the idea of intellectual development could be studied in more depth and also more research into different measurement instruments could be done. Measuring with different instruments, and still getting significant and positive results would then more strongly validate the model of IIC in light of Intercultural Communication. In more detail, increased attention could be paid to studying knowledge growth in more detail – a focus not chosen in this research. More effort has to go into studying each of the four dimensions of intellectual development separately as well as together. Right now, we have linked our four dimensions of IIC that learners have to grow through in order to mature to the three relevant components of ICC, critical cultural awareness, cultural stress tolerance and experimentation with the cultural self. When studying each dimension in more detail, we may find other factors, especially grounded in theories of intellectual development and not intercultural communicative competence, that matter in the growth process of IIC.

More specifically, research could go into which of the CDP did contribute relatively more or most to achieving the goal of stimulating the development of IIC. One could think of regression analyses to determine relative weights or magnitudes of effects from each of the four CDP, given a list of control variables. This approach would have to be tested, cleared of different methodological challenges like the problems of multicollinearity and omitted variables, and further verified.

Combining two of the suggestions for further research mentioned so far, one could study whether interactions between the dimensions of growth of IIC would be robust against changes in the testing population. Changes in the testing population would then not only relate to university vs. non-university students or to students of different study backgrounds, but also to highly intellectually developed persons versus far less developed individuals, or to very young versus very old learners.

We have worked with a large sample size of students from TSU in Tomsk, Russia. Future research could focus on repeating the course and testing for other student populations in other countries. Much like the work of Matsumoto, this broadening of testing samples to include different nationalities, would strengthen the results of our work. It would also highlight if there are any typical Tomsk-specific or Russia-specific elements in our current research.

Further research could also look into how we could adapt the content and course materials to further strengthen the message of IIC growth, instead of keeping the knowledge component of the materials largely unchanged as was done in this research. Our current course has used existing materials and combined them in an original way. It would be interesting and challenging – especially now that the focus on IIC seems to be a promising road for further research – to adapt content and course materials to focus more on the intrapersonal effect information has.

Another area that is interesting to explore further, is delving into the combination of stimulating IIC and value-loaded learning. Frijters, Ten Dam, and Rijlaarsdam (2008) have worked on this from the perspective of ICC and dialogic learning, but a link to IIC could also be further explored. Value-loaded learning could be an important factor in the intrapersonal process of growth of IIC, further enhancing the importance of interpersonal experiences and the engagement in a dialogue with others.

We did not find interaction effects of the levels of English, except for with critical thinking. However, the students repeatedly indicated that following the course in

Russian, their mother tongue, would facilitate their understanding more. The tests and course materials could be translated into Russian and the working language of the course could be changed into Russian to see what effects the language factor has on learning about IIC. One could imagine an experiment whereby two groups would follow an identical course design, with the one exception of language. One group would follow the entire course in Russian, the other group in English. Comparison of measurements and results of the course would give insightful information as to the role of language in stimulating intellectual capabilities. It would also provide insights into the effects on IIC growth when using English as a second language.

Finally, it would be interesting to change the proportion of activities in the course towards more intrapersonally-focused work, away from interpersonally focused activities in the course and see whether this shift in focus actually leads to stronger intra-IIC growth versus inter-ICC growth or not. This experiment would provide us with further information as to how differences in growth rates of the two angles towards IIC are related to different foci of activities in the course design.

#### 4. FINAL REMARKS

At the outset of this study, the question arose whether ‘extra interactive efforts on behalf of the teacher to make the class more student-centred are worth the while for students beyond the knowledge they are supposed to obtain’. Having created a new course and tested it, we can conclude that ‘*Usus magister est optimus*’<sup>51</sup> and the answer to the question is ‘Yes’.

This study has clarified matters and shown positive results regarding the effectiveness and usefulness of an approach based on experiential learning and intellectual development in teaching IC. However, we are convinced that more work on course validation and corroboration of these results is needed. Nonetheless, we hope to have provided a model and tested a course on how IC could be taught in the future. Moreover, if valid courses that stimulate IIC can be offered to large enough student groups at universities, the intercultural capability of society as a whole could grow, which holds a promise of better cooperation and mutual understanding in the future.

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<sup>51</sup> Latin for: “Practice is the best teacher”.



## REFERENCES

- Abarbanel, J. (2009). Moving with emotional resilience between and within cultures. *Intercultural Education*, 20 (4), 133-141.
- Adler, P.S. (1972). Culture Shock and the Cross-cultural Learning Experience. In Hoopes, D.S. (ed.), *Readings in Intercultural Communication*, vol. 2, Pittsburgh, PA: Regional Council for International Education.
- Allport, G.W. (1954). *The nature of Prejudice*. Cambridge, MA: Addison-Wesley.
- Alred, G., & Byram, M. (2002). Becoming an Intercultural Mediator: A Longitudinal Study of Residence Abroad. *Journal of Multilingual and Multicultural Education*, 23, 339-352.
- Alred, G., Byram, M., & Fleming, M. (2006). *Education for intercultural citizenship: concepts and comparisons: Multilingual Matters*.
- Ames, C. (1990). Motivation: What teachers need to know. *Teachers College Record*, 91, 409-421.
- Amir, Y. (1969). Contact hypothesis and ethnic relations. *Psychological Bulletin*, 71, 319-342.
- Arasaratnam, L.A. (November 2004). *Intercultural communication competence: Development and empirical validation of a new model*. Paper presented at the annual meeting of the International Communication Association, November 2004, New Orleans, LA.
- Arasaratnam, L.A. (2005). Sensation seeking and international students satisfaction of experiences in the United States. *Journal of Intercultural Communication Research*, 34, 184-194.
- Arasaratnam, L.A. (2006). Further Testing. *Communication Resource Reports*, 23(2), 93-99.
- Arasaratnam, L. A., & Doerfel, M. L. (2005). Intercultural communication competence: Identifying key components from multicultural perspectives. *International Journal of Intercultural Relations*, 29, 137-163.
- Arina, G.A., & Koloskova, M.V. (1989). The cognitive synthesis test. *Voprosu Psichologii*, 3, 171-172.
- Armann, S. (2004). *Entwicklung und Erprobung eines Interkulturellen Assessment Centers für Ingenieure* [Development and Trialling of an intercultural assessment centre for engineers]. Diplomarbeit [diploma thesis], University of Bayreuth, Germany (Unpublished).
- Arthur, W. Jr., & Bennett, W. Jr. (1995). The international assignee: The relative importance of factors. *Personnel Psychology*, 48 (1), 99-115.
- Arthur, W., Jr., Bennett, W., Jr., Stanush, P. L., & McNelly, T. L. (1998). Factors that influence skill decay and retention: A quantitative review and analysis. *Human Performance*, 11, 57-101.
- Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25, 297-308.
- Ausubel, D., Novak, J. & Hanesian, H. (1978). *Educational Psychology: A Cognitive View*. New York: Holt, Rinehart & Winston.
- Baxter Magolda, M. B. (2001). *Making their own way: Narratives for transforming higher education to promote self-development*. Sterling, VA: Stylus.
- Beck, U. (1996). *Beck Depression Inventory*. Harcourt, New York.
- Belluigi, D.Z. (2009). Exploring the discourses around 'creativity' and 'critical thinking' in a South African creative arts curriculum. *Studies in Higher Education*, 34 (6), 699-717.
- Bem, S.L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, 42, 155-62.
- Bem, S.L., & Watson, C. (1976). *Scoring packet: Bem Sex Role Inventory*. Unpublished Manuscript.
- Bennett, M.J. (1991). New insights for "intercultural sensitivity" model. *Training and Culture Newsletter*, 3(5).
- Bennett, M.J. (1993). Towards ethnorelativism: A developmental model of intercultural sensitivity. In R.M. Paige (Ed.), *Education for the intercultural experience* (2<sup>nd</sup> ed., pp. 21-71). Yarmouth, ME: Intercultural Press.
- Bennett, M.J. (1994). A developmental model of intercultural sensitivity. *Perry Network Newsletter*, 16(1), 6-7.
- Bennett, C. (2001). Genres of research in multicultural education. *Review of Educational Research*, 71(2), 171-217.

- Bennett, J.M., & Bennett, M.J. (2004). Developing intercultural sensitivity: An integrative approach to global and domestic diversity. In: D. Landis, J. Bennett & M. Bennett (Eds), *Handbook of Intercultural Training* (3rd ed., pp. 147–165). Thousand Oaks, CA: Sage.
- Bennett, M.J., & Hammer, M.R. (1998). *The Intercultural Development Inventory (IDI) Manual* Portland, Oregon: The Intercultural Communication Institute.
- Bhawuk, D. & Brislin, R. (1992). The measurement of intercultural sensitivity using the individualism and collectivism concepts. *International Journal of Intercultural Relations* 16, 413-436
- Bochner, A.P., & Kelly, C.W. (1974). Interpersonal competence: Rationale, philosophy, and implementation of a conceptual framework. *Speech Teacher*, 23, 279–301.
- Bohm, D. & Peat, F.D. (1987). *Science, Order, and Creativity*. London: Routledge.
- Braaksma, M.A.H., Van den Bergh, H., Rijlaarsdam, G., & Couzijn, M. (2001). Effective learning activities in observation tasks when learning to write and read argumentative texts. *European Journal of Psychology of Education*, 16(1), 33-48.
- Brein, M., & David, K.H. (1971). Intercultural communication and the adjustment of the sojourner. *Psychological Bulletin*, 76, 215-230.
- Brislin, R., & Yoshida, T. (1994). *Intercultural communication training: An introduction*. Thousand Oaks, CA: Sage.
- Broome, B. (1986). A context-based framework for teaching intercultural communication. *Communication Education*, 35, 296-306.
- Brown, A. L. (1978). Knowing when, where, and how to remember: A problem of metacognition. In R. Glaser (Ed.), *Advances in instructional psychology*, 1, pp. 77–165. Hillsdale, N.J.: Erlbaum.
- Brown, A. L. (1984). Metacognition, executive control, self-regulation, and other even more mysterious mechanisms. In F. E. Weinert & R. H. Kluwe (Eds.), *Metacognition, motivation, and learning*, pp. 60–108. Bonn: Kuhlhammer.
- Burbules, N.C., & Berk, R. (1999). Critical thinking and critical pedagogy: Relations, differences, and limits. In T.S. Popkewitz, & L. Fendler (Eds.), *Critical theories in education*, pp. 45-65. New York: Routledge.
- Byram, M. (1989). *Cultural Studies in Foreign Language Education*, Clevedon: Multilingual Matters.
- Byram, M. (1997). *Teaching and assessing intercultural communicative competence*. Clevedon: Multilingual Matters.
- Byram, M., Gribkova, B., & Starkey, H. (2002). *Developing the intercultural dimension in language teaching: A practical introduction for teachers*. Strasbourg: Council of Europe, Language Policy Division.
- Byram, M., Nichols, A., & Stevens, D. (Eds.), (2001). *Developing intercultural competence in practice*. Tonawanda, NY: Multilingual Matters, Ltd.
- Byram, M.S., & Risager, K. (1999). *Language Teachers, Politics and Cultures*. Multilingual Matters Ltd.
- Byram, M. & Zarate, G. (1995). *Young people facing difference. Some proposals for teachers*. Strasbourg: Council of Europe.
- Byram, M., & Zarate, G. (1997). *The socio-cultural and intercultural dimension of language learning and teaching*. Strasbourg: Council of Europe.
- Calloway-Thomas, C., Cooper, P., & Blake, C. (1999). *Intercultural communication: Roots and routes*. Boston: Allyn and Bacon.
- Campbell, E. (2002). Course on Intercultural Communication. Wheaton College. USA. <http://www.asnweb.org/apm/syllabi/files/c561.PDF> Retrieved on July 16, 2010.
- Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. *Journal of Applied Linguistics*, 1(1), 1-47.
- Carroll, J., & Howieson, N. (1992). Recognizing creative thinking talent in the classroom. *Roeper Review*, 14 (4), 209-212.
- Casse, P. (1982). *Training for the multicultural manager: a practical and cross-cultural approach to the management of people* (1<sup>st</sup> edition). Society for Intercultural Education, Training and Research, Washington DC.
- Cegala, D. J., Savage, G. T., Brunner, C. C., & Conrad, A. B. (1982). An elaboration of the meaning of interaction involvement: Toward the development of a theoretical concept. *Communication Monographs*, 49, pp. 229–48.
- Chase, M., Macfadyen, L., Reeder, K., & Roche, J. (2004). *Intercultural Challenges in Networked Learning: Hard technologies meet soft skills*. First Monday, 2004.

- Chen, G. (1987). *Dimensions of intercultural communication competence*. Ph.D. Dissertation. Ohio: Kent State University.
- Chen, L.S.C. (May 2001). Teaching Language for Intercultural Communication: Conflict between Theory and Practice, Paper presented at AARE Conference, May 2001. Available at: <http://www.aare.edu.au/01pap/che01101.htm>.
- Chen G.M., & Starosta, W.J. (1988). *Foundations of intercultural communication*. Boston: Allyn & Bacon.
- Cobb, P., McClain, K., & Gravemeijer, K. (2003). Learning about statistical covariation. *Cognition & Instruction, 21*, 1–78.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd edition), Hillsdale, NY: Lawrence Erlbaum Associates.
- Corbett, J. (2003). *Intercultural approach to English language teaching*. Clevedon: Multilingual Matters.
- Corbett, J.N. (1998). *Global Awareness Profile*. Yarmouth, ME: Intercultural Press.
- Costa, P. T., & McCrae, R.R. (1985). *The NEO personality inventory manual*. Odessa, FL: Psychological Assessment Resources.
- Costa, P. T., Jr., & McCrae, R. R. (1992). *NEO PI-R professional manual*. Odessa, FL: Psychological Assessment Resources, Inc.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*(3), 297-334.
- Craik, F. I. M., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal Behavior, 11*, 123-136.
- Cushner, K. and Brislin, R.W. (1996), *Intercultural interactions: a practical guide*, Thousand Oaks: SAGE Publications Inc.
- Danielewicz, J. (2001). *Teaching selves: Identity, pedagogy, and teacher education*. Albany, NY: SUNY Press.
- David, M.H. (1980). A multidimensional approach to individual differences in empathy. American Psychological Association, Journal Supplement Abstract Service Catalog of Selected Documents in Psychology, 10.
- Davis, M.H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology 44*(1), 113-126.
- Davis, S. L., & Finney, S. J. (2006). A factor analytic study of the cross-cultural adaptability inventory. *Educational and Psychological Measurement 66*, 318 - 330.
- De Groot, A.D. (1978). *Wat neemt de leerling mee van onderwijs? Gedragsrepertoires, programma's, kennis-en-vaardigheden* [What do students take with them from education? Behavioural repertoires, programmes, knowledge-and-skills]. Handboek Onderwijspraktijk (2).
- De Groot, A.D. (1980). *Over leerervaringen en leerdoelen* [About Learning Experiences and Learning Aims]. Handboek Onderwijspraktijk (10).
- Deardorff, D.K. (2006). Identification and assessment of intercultural competence as a student outcome of internationalization. *Journal of Studies in International Education, 10*(3), 241-266.
- Deardorff, D. 2009. (ed.). *The Sage handbook of intercultural competence*. London: Sage.
- De Corte, E., Geerligs, C.T. & Lagerweij, N.A.J. (1981). *Beknopte didaxologie. (Concise didaxology)* (5th revised edition). Leuven: Leuven University Press.
- Deci, E.L., & Ryan, R.M. (2000) The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry (11)*, 227–68
- DeRoma, V.M., Martin, K.M., & Kessler, M.L. (2003). The relationship between tolerance for ambiguity and need for course structure. *Journal of Instructional Psychology, 30*, 104-109.
- Digman, J.M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology, 41*, 417–440.
- Eisenclas, S., & Trevaskes, S. (2003). Teaching intercultural communication in the university setting: An Australian perspective. *Intercultural Education, 14*(4), 397-408.
- Eisenclas, S., & Trevaskes, S. (2007). Developing intercultural communication skills through intergroup interaction. *Intercultural Education, 18*(5), 413-25.
- Elbers, E., & De Haan, M. (2004). Dialogic learning in the multi-ethnic classroom. Cultural resources and modes of collaboration. In J. van der Linden & P. Renshaw (Eds.), *Dialogical perspectives on learning* (pp. 17-43). Dordrecht: Kluwer.
- Eysenck, H.J., & Eysenck, S.B.G. (1975). *Manual of the Eysenck Personality Questionnaire*. London: Hodder and Stoughton.

- Facione, P.A., Sánchez, G.C.A., Facione, N.C., & Gainen, J., (1995). The disposition toward critical thinking. *Journal of General Education*, 44 (1), 1-25.
- Facione, P. A. (1990). *The California Critical Thinking Skills Test (CCTST): Forms A and B; and the CCTST Test manual*. Millbrae, CA: California Academic Press.
- Facione, P. A. (1992). *Empirical methods of theory and tool development for the assessment of college level critical thinking and problem-solving*. Report, 1992.
- Fantini, A.E. (2006). Exploring and Assessing Intercultural Competence. The Initial Phase of An Extended Project to Explore and Assess Intercultural Outcomes in Service Program Participants Worldwide, NY, [www.experiment.org/documents/FinalGSIResearchReport12.06\\_000.pdf](http://www.experiment.org/documents/FinalGSIResearchReport12.06_000.pdf).
- Fink, L.D. (1999). *Five principles of good course design*. Humboldt State University, Center for Excellence in Learning and Teaching, Berlin.
- Flavell, J. H. (1976). Metacognitive aspects of problem solving. In L. B. Resnick (Ed.), *The nature of intelligence* (pp. 231–235). Hillsdale, N.J.: Erlbaum.
- Foley, W.A. (1997). *Anthropological linguistics*. Oxford: Blackwell Publishers.
- Fowler, S.M., & Mumford, M.G. (1999). *Intercultural sourcebook: cross-cultural training methods*: Intercultural Press.
- Frijters, S., Ten Dam G., & Rijlaarsdam, G. (2008). Effects of dialogic learning on value-loaded critical thinking. *Learning and Instruction*, 18, 66-82.
- Furnham, A. (1986). *Cultural shock: Psychological reactions to unfamiliar environments*. New York: Methuen.
- Furnham, A. (1987). The adjustment of sojourners. In Y. Y. Kim & W. B. Gudykunst (Eds.), *Crosscultural adaptation: Current approaches* (pp. 42–61). Beverly Hills, CA: Sage.
- Furnham, A., & Bochner, S. (1982). Social difficulty in foreign culture: An empirical analysis of culture shock. In S. Bochner (Ed.), *Cultures in contact: Studies in cross-cultural interaction*. New York: Pergamon Press.
- Furnham, A., & Ribchester, T. (1995). Tolerance of ambiguity: A review of the concept, its measurement and applications. *Current Psychology*, 14(3), 179-199.
- Furstenberg, G., Levet, S., English, K., & Maillet, K. (2001). Giving a virtual voice to the silent language of culture: The Cultura project. *Language Learning & Technology*, 5(1), 55-102.
- Gagné, R.M. (1965). *The conditions of learning*. New York: Holt, Rinehart & Winston.
- Gagné, R.M. (1984). Learning outcomes and their effects: Useful categories of human performance. *American Psychologist*, 39(4), 377-385.
- Galperin, P.I. (1969). Stages in the development of mental acts. In M. Cole & I. Maltzman (Eds.), *A handbook of contemporary soviet psychology* (pp. 249-273). New York: Basic Books, Inc.
- Galperin, P.I. (1992). Stage-by-stage formation as a method of psychological investigation. *Journal of Russian and Eastern European Psychology*, 30(4), 60-80.
- Garson, D. (1998). *Use of Cronbach Alpha*. Last updated 9/9/2008. <http://faculty.chass.ncsu.edu/garson/PA765/standard.htm> [downloaded 1 April, 2009]
- Gay, G., & Kirkland, K. (2003). Developing cultural critical consciousness and self-reflection in pre-service teacher education. *Theory into practice*, 42 (3), 181-186.
- Goodenough, W.H. (1957). Cultural anthropology and linguistics. In P.L. Garvin (Ed.), *Report of the Seventh Annual Round Table Meeting on Linguistics and Language Study* (pp. 167-173). Washington, DC: Georgetown University.
- Gough, H.G. (1987). *California Psychological Inventory Administrator's Guide*. Palo Alto, CA: Consulting Psychologists Press, Inc.
- Gottfredson, L.S. (1997). Why g matters: the complexity of everyday life. *Intelligence*, 1, 79-132.
- Gottfredson, L.S. (2004). Schools and the g factor. *The Wilson Quarterly*, 12, 35–45.
- Gudykunst, W.B., & Kim, Y.Y. (1984). *Communicating with strangers: an approach to intercultural communication*. New York: Random House.
- Gudykunst, W., & Nishida, T. (2001). Anxiety, uncertainty, and perceived effectiveness of communication across relationships and cultures. *International Journal of Intercultural Relations*, 25(1), 55-71.
- Gudykunst, W. B., Nishida, T., & Chua, E.(1986). Uncertainty reduction in Japanese-North American dyads. *Communication Research Reports*, 3, 39 - 46.
- Gudykunst, W.B., Ting-Toomey, S., & Wiseman, R.L. (1991). Taming the beast: designing a course in intercultural communication. *Communication Education*, 40, 272-285.

- Gudykunst, W. B., Yang, S., & Nishida, T. (1985). A cross-cultural test of uncertainty reduction theory: Comparisons of acquaintances, friends, and dating relationships in Japan, Korea, and the United States. *Human Communication Research, 11*(3), 407 - 455.
- Hammer, M. R., Bennett, M. J., & Wiseman, R. (2003). Measuring intercultural sensitivity: The intercultural development inventory. *International Journal of Intercultural Relations, 27*, 421-443.
- Harvey, R.J. (1991). Job analysis. In M.C. Dunnette & L.M. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 2, pp. 234 - 271). Palo Alto: Consulting Psychologists Press.
- Hathaway, S. R., & McKinley, J. C. (1940). A multiphasic personality schedule (Minnesota): Construction of the schedule. *Journal of Psychology, 10*, 249-254.
- Hoebel, E.A., & Frost, E.L. (1976). *Culture and social anthropology*. New York: McGraw Hill.
- Hofstede, G. H. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills: Sage Publications.
- Hofstede, G. (1991). *Cultures and organisations: software of the mind*. London: Harper Collins Business.
- Hofstede, G.J., & Pedersen, P. (1999). Synthetic cultures: Intercultural learning through simulation games. *Simulation & Gaming, 30*(4), 415-440.
- Hogan, J.C. (1991). Physical abilities. In M.C. Dunnette & L.M. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 2, pp. 272-298). Palo Alto: Consulting Psychologists Press.
- Hohn, P. (1972). The Authoritarianism-Rebellion Scale: A balanced F-Scale with Left-Wing reversals. *Sociometry, 35*(1), 176-189
- Holtom, B.C., & Kenworthy-U'Ren, A.L., (2006). Electronic Negotiation: A Teaching Tool for Encouraging Student Self-Reflection. *Negotiation Journal, 22*(3), 303 – 324.
- Huber-Kriegler, M., Lázár, I., & Strange, J. (2003). *Mirrors and windows: and intercultural communication textbook*: Council of Europe Publishing, Brussels.
- Huijser, M. (2006). *The cultural advantage: a new model for succeeding with global teams*. Intercultural Press, Boston.
- Hung, S. (July 2006). *Intercultural communicative competence in tele-collaborative foreign language learning*. Paper presented at the conference Crossing Frontiers: Languages and the International Dimension in Cardiff University: held on July 6-7, 2006. Available at: <http://www.llas.ac.uk/resources/paper.aspx?resourceid=2687> Retrieved on August 8, 2007.
- Hunter, J.E. (1983). *Overview of validity generalization for the U.S. Employment Service*. (USES Test Research Report No. 43). Washington, DC: U.S. Department of Labor, Employment and Training Administration.
- Hunter, J.E. (1986). Cognitive ability, cognitive aptitudes, job knowledge, and job performance. *Journal of Vocational Behavior, 29*, 340-362.
- INCA Project. Project website: <http://www.incaproject.org> [Accessed 14 April 2007].
- Ingram, D., & Wylie, E. (1984). *Australian second language proficiency ratings*. Canberra: Australian Government Publishing Service.
- Ingram, D., & Wylie, E. (1997). *International second language proficiency ratings*. Nathan, Queensland: Griffith University.
- Janssen, T., & Rijlaarsdam, G. (1990a). What do students learn from literature teaching? In Hayhoe, M. & S. Parker (Eds), *Reading and Response*, pp. 94-106. Buckingham: Open University Press.
- Janssen, T., & Rijlaarsdam, G. (1990b). Opbrengsten van literatuuronderwijs: een vooronderzoek [Results of literature teaching: a pilot study]. *Spiegel 8* (2), 29-47.
- Janssen, T. & Rijlaarsdam, G. (1992). Het learner report in the praktijk van de bovenbouw. [Learning Reports in Teaching Practices in Higher Secondary Education]. In De Moor, W., & M. van Woerkom, (Eds), *Literaire competentie: het doel van literatuuronderwijs*, pp. 209-222.. Den Haag: NBLC.
- Kalkofen, R. (2010). Contextual studies – Critical thinking and cultural awareness. University of St. Gallen, Switzerland. Retrieved on July 17, 2010. <http://www.unisg.ch/en/Studium/IntranetPublic/MasterStufe/MAStufeKontextstudium.aspx>
- Kealey, D.J. (1988). Explaining and predicting cross-cultural adjustment and effectiveness: A study of Canadian technical advisors overseas. Hull, Quebec, Canada: Canadian International Development Agency.
- Kealey, D.J. (1996). The challenge of international personnel selection. In D. Landis & R.S. Bhagat (Eds), *Handbook of intercultural training (2nd edition)*, pp. 81-105. Thousand Oaks, CA: Sage Publications.
- Kegan, R. (1994). *In over our heads: The mental demands of modern life*. Cambridge, MA: Harvard University Press.

- Kelly, C., & Meyers, J.E. (1992). *The cross-cultural adaptability inventory manual*. Minneapolis, MN: National Computer Systems, Inc.
- Kelley, C., & Meyers, J. (1995). *CCAI cross cultural adaptability inventory manual*. Minneapolis, MN: National Computer Systems, Inc.
- Kholodnaya, M. A. (1983). Интегральные системы понятийного мышления. [The integrated structures of conceptual thinking]. Tomsk: Tomsk University Press (in Russian).
- Kholodnaya, M. A. (1990). Существует ли интеллект как психическая реальность? [Is there intelligence as a psychological reality?] Вопросы психологии, Questions in Psychology 5, 121–128.
- Kholodnaya, M. A. (1993). Психологические механизмы интеллектуальной одаренности. [Psychological mechanisms of intellectual giftedness]. Вопросы психологии. Questions in Psychology, 1, 32–39.
- Kholodnaya, M. A. (1997). Психология интеллекта. [The psychology of intelligence]. Moscow: IPRAN Press
- Kholodnaya, M. A. (2002). Психология интеллекта: парадоксы исследования. [Psychology of intelligence: Paradoxes of research]. Saint Petersburg: Peter Publishing House.
- Kim, M.S. (1994). Cross-Cultural Comparisons of the Perceived Importance of Conversational Constraints. *Human Communication Research*, 21(1), 128-151.
- King, P.M., & Baxter Magolda, M.B. (2005) A developmental model of intercultural maturity. *Journal of College Student Development*, 46(6), 571-592.
- King, P. M., & Kitchener, K. S. (2004). Reflective judgment: Theory and research on the development of epistemic assumptions through adulthood. *Educational Psychologist*, 39(1), 5-18.
- Kirsch, I.S., Jungeblut, A., Jenkins, L., & Kolstad, A. (1993). *Adult literacy in America: A first look at the results of the National Adult Literacy Survey*. Princeton: Educational Testing Service.
- Koester, J., & Olebe, M. (1988). The behavioural assessment scale for intercultural communication effectiveness. *Journal of Intercultural Relations*, 12, 233-246.
- Kramsch, C. (1998). *Language and culture*. Oxford: Oxford University Press.
- Kramsch, C. (2006). From communicative competence to symbolic competence. *The Modern Language Journal*, 90(2), 249-252.
- Krutetskii, V.A. (1968). *The psychology of mathematical abilities in schoolchildren*. Moscow: Prosvetsheniye.
- Kühlmann, T.M., & Stahl, G.K. (1998). Diagnose interkultureller Kompetenz: Entwicklung und Evaluierung eines Assessment Centers. In C. Barmeyer & J. Bolten (Eds.) *Interkulturelle personalorganisation*, pp. 213-223. Berlin: Verlag Wissenschaft & Praxis: 213-223.
- Landreman, L. (2003, November). *A multidimensional model of intercultural consciousness: A reconceptualization of multicultural competence*. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, November 2003, Portland, OR.
- Leask, B. (2005). Plagiarism, cultural diversity and metaphor. *Assessment and Evaluation in Higher Education*, 31(2), 183-199
- LeRoux, J., & Matsumoto, D. (2000). *The Intercultural Adjustment Potential Scale-55 (ICAPS-55)*. Culture and Emotion Research Laboratory, Department of Psychology, San Francisco State University, 1600 Holloway Avenue, San Francisco, CA, 94132.
- Leung, A. K.-Y., & Chiu, C.-Y. (2010). Multicultural experience, idea receptiveness, and creativity. *Journal of Cross-Cultural Psychology*, Online publication March 1, 2010.
- Leung, A. K.-Y., Maddux, W., Galinsky, A., & Chiu, C. T. (2008). Multicultural experience enhances creativity: The when and how. *American Psychologist*, 63, 169-181.
- Levy, M. (2007). Culture, culture learning and new technologies: Towards a pedagogical framework. *Language Learning & Technology*, 11(2), 104-127.
- Little, D. (2000). Why focus on learning rather than teaching: From theory to practice. In D. Little, L. Dam & J. Timmer (Eds.), *Focus on learning rather than teaching: Why and how* (pp. 18 – 27). Dublin University: Center for language and communication studies.
- Lubinski, D., & Dawis, R.V. (1992). Aptitudes, skills, and proficiencies. In M.D. Dunnette, & L.M. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 3, pp. 328-341). Palo Alto: Consulting Psychologists Press.
- Lundstedt, S. (1963). An introduction to some evolving problems in cross-cultural research. *Journal of Social Issues*, 19 (3), 1-9.
- Lustig M.W., & Koester J. (1996). *Intercultural competence: interpersonal communication across cultures* (1<sup>st</sup> ed.). New York: HarperCollins College Publishers.

- Lustig M.W., & Koester J. (1998). *Intercultural competence: Interpersonal communication across cultures* (2<sup>nd</sup> ed.). New York: HarperCollins College Publishers.
- Lustig, M.W., & Koester J. (2003). *Intercultural Competence: Interpersonal Communication Across Cultures* (4<sup>th</sup> ed.). Boston: Allyn & Bacon.
- Maddux, W., & Galinsky, A. (2009). Cultural borders and mental barriers: The relationship between living abroad and creativity. *Journal of Personality and Social Psychology*, 96, 1047-1061.
- Markland, D. (1999). Self-determination moderates the effects of perceived competence on intrinsic motivation in an exercise setting. *Journal of Sport & Exercise Psychology*, 21, 351-361.
- Marum, E. (1996). *Children and books in the modern world: contemporary perspectives on literacy*. London: The Falmer Press, Taylor & Francos Group.
- Martin, J.N., & Nakayama, T.K. (2003). *Intercultural communication in contexts*, (3<sup>rd</sup> ed.) New York: McGraw Hill.
- Martin, J.N. (1987). The relationships between student sojourner perceptions of intercultural competencies and previous sojourn experience. *International Journal of Intercultural Relations*, 11, 337-55.
- Matarazzo, J.D. (1972). *Wechsler's Measurement and appraisal of adult intelligence* (5th ed.). Baltimore: Williams & Wilkins.
- Matsumoto, D. (1993). Ethnic differences in affect intensity, emotion judgments, display rule attitudes, and self-reported emotional expression in an American sample. *Motivation & Emotion*, 17(2), 107 - 123.
- Matsumoto, D., Leroux, J., Ratzlaff, C, Tatani, H., Uchida, H., Kim, C., & Araki, S. (2001). Development and validation of a measure of intercultural adjustment potential in Japanese sojourners: The Intercultural Adjustment Potential Scale (ICAPS). *International Journal of Intercultural Relations*, 25, 483-510.
- Matsumoto, D., Wallbott, H. G., & Scherer, K.R. (2003). Emotions in Intercultural Communication. In Asotte, M.K., & W.B. Gudykunst (eds.), *Handbook of International and Intercultural Communication*, pp. 225-246: Sage Publications, Newbury Park, CA.
- Matsumoto, D., Leroux, J., & Yoo, S.H., (2005). The role of culture in the communication process. In Asotte, M.K., & W.B. Gudykunst (eds.), *Handbook of International and Intercultural Communication*, pp. 225-246: Sage Publications, Newbury Park, CA.
- Mason J.L. (1995). *Cultural competence self-assessment questionnaire: A manual for users*. Portland, Ore: Portland State University, Research and Training Center on Family Support and Children's Mental Health.
- McAuley, E., Duncan, T.E., & Tammen, V. V. (1987). Psychometric properties of the Intrinsic Motivation Inventory in a competitive sport setting: A confirmatory factor analysis. *Research Quarterly for Exercise and Sport*, 60, 48-58.
- McAuley, E., Wraith, S., & Duncan, T.E. (1991). Self-Efficacy, Perceptions of success, and intrinsic motivation for exercise. *Journal of Applied Social Psychology*, 21, 139-155.
- McKeachie, W.J. (2002). *Teaching tips: Strategies, research, and theory for college and university teaching*. Boston: Houghton & Mifflin.
- Mendenhall, M.E., Stevens, M.J., Bird, A., & Oddou, G.R. (2008). Specification of the content domain of the intercultural effectiveness scale. *The Kozai Monograph Series* 1(2).
- Müller-Jacquier, B. (2000). Linguistic awareness of cultures. Grundlagen eines Trainingsmoduls. In: Bolten, Jürgen (ed.). *Studien zur internationalen Unternehmenskommunikation*, 20-49. Leipzig: Popp.
- Nicol, D.J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: a model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199-218.
- Nishida, H. (1985). Japanese intercultural communication competence and cross-cultural adjustment. *International Journal of Intercultural Relations* 9, 247-269.
- Norton, R.W. (1975). Measurement of Ambiguity Tolerance. *Journal of Personality Assessment*, 39(6), 18-38.
- O'Dowd, R. (2000). Intercultural learning via videoconferencing: A pilot exchange project. *ReCALL*, 12(1), 49-61.
- O'Dowd, R. (2006). The use of videoconferencing and email as mediators of intercultural student ethnography. In J. Belz & S. Thome (Eds.), *Internet-mediated intercultural foreign language education*: pp. 86-120. Boston, MA: Thomson Heinle.

- O'Dowd, R., & Ritter, M. (2006). *Understanding and working with "failed communication" in telecollaborative exchanges*. *CALICO Journal*, 23(3). Available at: <http://www3.unileon.es/personal/wwdfmrod/CALICO.pdf> Retrieved on August 8, 2007.
- Olebe, M., & Koester, J. (1989). Exploring the cross-cultural equivalence of the behavioral assessment scale for intercultural communication. *International Journal of Intercultural Relations*, 13, 333-347.
- Ones D.S., Viswesvaran C., (1998). Gender, age, and race differences on overt integrity tests: results across four large-scale job applicant data sets. *Journal of Applied Psychology* 83, 35-42.
- Oostdam, R., & Rijlaarsdam, G. (1995). *Towards strategic language learning*. Amsterdam: Amsterdam University Press.
- Osland, J., Bird, A., & Gundersen, A. (March 2010). *Trigger events in intercultural sensemaking*. Management meeting, March 2010, New York.
- Otten, M. (2003). Intercultural learning and diversity in higher education. *Journal of Studies in International Education*, 7(1), 12-56.
- Owens Swift, C., & Denton, L. (2003). Cross-cultural experiential simulation in the global marketing classroom Bafa-Bafa and its variants, *Marketing Education Review*, 13(3), 41-51.
- Paige, R. M., Jacobs-Cassuto, M., Yershova, Y. A., & DeJaeghere, J. (2003). Assessing intercultural sensitivity: An empirical analysis of the Intercultural Development Inventory. *International Journal of Intercultural Relations*, 27, 467-486.
- Palomba, E. (November 2006). *ICT Technologies and Intercultural Issues*. Paper presented at the Fourth International Conference on Multimedia and Information and Communication Technologies in Education, 22-25 November, Seville, Spain.
- Parks, M.R. (December 1976). *Communication competence*. Paper presented at the meeting of the Speech Communication Association, San Francisco.
- Paul, R.C. (1992). *Critical thinking: What every person needs to survive in a rapidly changing world* (2nd revised ed.). Santa Rosa, CA: Foundation for Critical Thinking.
- Paul, R.C. (1994). Teaching critical thinking in the strong sense. In K. Walters (Ed.), *Re-thinking reason: New perspectives in critical thinking* (pp. 181-198). Albany, NY: SUNY.
- Pavlovskaya, A. (2005). *England and the English*. Moscow: Moscow University Press.
- Peterson, B. (2004). *Cultural intelligence: A guide to working with people from other cultures*. Intercultural Press.
- Pintrich, P.R. (1988a). A process-oriented view of student motivation and cognition. In J. Stark & L. Mets (eds), *Improving teaching and learning through research: New directions for institutional research* (Vol. 57, 65-79). San Francisco: Jossey-Bass.
- Pintrich, P.R. (1988b). Student learning and college teaching. In R.E. Young & K.E. Eble (eds.), *College teaching and learning: Preparing for new commitments. New directions for teaching and learning* (Vol. 33, 71-86). San Francisco: Jossey-Bass.
- Pintrich, P.R. (1989). The dynamic interplay of student motivation and cognition in the college classroom. In C. Ames & M. Maehr (eds.), *Advances in motivation and achievement: Motivation-enhancing environments* (Vol. 6, 117-160). Greenwich, CT; JAI Press.
- Pintrich, P. R., Marx, R. W., & Boyle, R. A. (1993). Beyond cold conceptual change: The role of motivational beliefs and classroom contextual factors in the process of conceptual change. *Review of Educational Research*, 63, 167-199.
- Pintrich, P.R., Smith, D.A.F., Garcia, T., & McKeachie, W.J. (1991). *A Manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ)*. Ann Arbor, MI: National Center for Research to Improve Postsecondary Teaching and Learning, University of Michigan.
- Ponterotto, J., & Casas, M. (1991). *Handbook of racial/ethnic minority counseling research*. Springfield, IL: Charles C Thomas.
- Precht, E., & Lund, A.D. (2007). Intercultural competence and assessment: perspectives from the INCA Project 2007. *Handbook of Intercultural Communication*, 22, 467-490.
- Pressley, M., Borkowski, J. G., & Schneider, W. (1987). Cognitive strategies: Good strategy users coordinate metacognition and knowledge. In R. Vasta (Ed.), *Annals of child development: Vol. 4* (pp. 89-129). Greenwich, CT: JAI Press.
- Pruegger, V. J., & Rogers, T. B. (1994). Cross-cultural sensitivity training: Methods and assessments. *International Journal of Intercultural Relations*, 18(3), 369-387.
- Purves, A.C., (1971). Evaluation of learning in literature. In Bloom, B.S., Hastings, J.T., & Madaus, G.F. (eds). *Handbook on formative and summative evaluation of student learning*. New York, McGraw-Hill.

- Quené, H., & Van den Bergh, H. (2004). On multi-level modeling of data from repeated measures designs: A tutorial. *Speech Communication*, 43, 103-121.
- Quené, H., & Van den Bergh, H. (2008). Examples of fixed-effects modelling with crossed random effects and with binomial data. *Journal of Memory and Language* 59 (4), 413-425.
- Reigeluth, C.M., & Carr-Chellman, A.A. (Eds.), (2009). *Instructional-design theories and models, Volume III: Building a common base*. New York: Routledge.
- Renshaw, P.D. (2004). Dialogic learning teaching and instruction: Theoretical roots and analytical frameworks. In van der Linden, J. & P.D. Renshaw (Eds.), *Dialogic learning: shifting perspectives on learning instruction and teaching*, pp. 1-15. Dordrecht, Netherlands: Kluwer Academic Publishers, 1-15.
- Revenko, O.A. (2006). *Развитие межкультурной компетенции при решении задач в Интернете. [Development of intercultural competence when doing tasks on the Internet]*. Paper presented at 2nd International scientific and methodological conference on information and communication technologies in foreign language teaching in Moscow on June 8-9, 2006. Faculty of foreign languages and Area studies, Lomonosov Moscow State University. Available at: <http://distance.fl.msu.ru/cdo/conf0606/persons.htm> Retrieved on May 29, 2007.
- Riemer, M.J. (2003). Integrating emotional intelligence into engineering education. *World Transactions on Engineering and Technology Education* 2(2). UICEE.
- Rijlaarsdam, G. (1992). The triangular model for intra- and intercontextual evaluation of written composition. In Helbo, A. (ed). *Evaluation and Language Testing*, pp. 259-274. Bern, Peter Lang.
- Risager, K. (2006). *Language and culture: Global flows and local complexity*. Clevedon: Multilingual Matters.
- Risager, K. (2007). *Language and culture pedagogy: From a national to a transnational paradigm*. Buffalo, NY: Multilingual Matters.
- Rodriguez A. (2002). Culture to culturing. Re-imagining our understanding of intercultural relations. *Intercultural Communication*, 5. Available at: <http://www.immi.se/intercultural/>
- Romney, A.K., & Moore, C.C. (1998). Toward a theory of culture as shared cognitive structures. *Ethos*, 26(3), 314-337.
- Ronen S. (1989). Training the international assignee. In Goldstein I.L. (Ed.), *Training and development in organizations* (pp. 417-453). San Francisco: Jossey-Bass.
- Ruben, B.D. (1976). Assessing communication competency for intercultural adaptation. *Group and Organizational Studies* 1(3), 334-354.
- Ryan, R.M. (1982). Control and information in the intrapersonal sphere: An extension of cognitive evaluation theory. *Journal of Personality and Social Psychology*, 43, 450-461.
- Ryan, R.M., Mims, V., & Koestner, R. (1983). Relation of reward contingency and interpersonal context to intrinsic motivation: A review and test using cognitive evaluation theory. *Journal of Personality and Social Psychology*, 45, 736-750.
- Ryan, R.M., Connell, J.P., & Plant, R.W. (1990). Emotions in non-directed test learning. *Learning and Individual Differences*, 2, 1-17.
- Ryan, R.M., Koestner, R., & Deci, E.L. (1991). Varied forms of persistence: When free-choice behavior is not intrinsically motivated. *Motivation and Emotion*, 15, 185-205.
- Ryan, R.M., & Deci, E.L. (1992). Intrinsic Motivation Inventory. Retrieved on September 14, 2007 from <http://www.psych.rochester.edu/SDT/measures/intrins.html> Direct link: <http://www.psych.rochester.edu/SDT/measures/word/IMIfull.doc>
- Sadler, R.D. (2009). Grade integrity and the representation of academic achievement. *Studies in Higher Education*, 34(7), 807 – 826.
- Samovar, L.A., & Porter, R.E. (1991). Basic principles of intercultural communication. In Samovar, L.A. & Porter, R.E., *Intercultural Communication: A Reader*. Wadsworth, Inc.
- Samovar, L.A., R.E. Porter, and E.R. McDaniel (2008), *Intercultural Communication – a Reader*. Wadsworth, Inc.
- Sapir, E. (1924). Culture, genuine and spurious. *The American Journal of Sociology*, 29(4), 401-429.
- Saphonova, V. (1991). *Социокультурный подход к обучению иностранным языкам [Sociocultural approach in teaching foreign languages]*. Moscow: Vysshaya Shkola.
- Saphonova, V. (1992). *Культуроведение и социология в языковой педагогике [Cultural studies and sociology in language pedagogy]*. Voronezh, Russia: Voronezh University Press.

- Saphonova, V. (1996). *Изучение языков международного общения в контексте диалога культур и цивилизаций [Teaching languages of international communication in the context of dialogue of cultures and civilizations]*. Voronezh, Russia: Istoki.
- Savicki, V., Downing-Burnette, R., Heller, L., Binder, F., & Suntinger, W. (2004). Contrasts, changes, and correlates in actual and potential intercultural adjustment. *International Journal of Intercultural Relations*, 28, 311-329.
- Savignon, S.J., & Sysoev, P.V. (2002). Sociocultural strategies for a dialogue of cultures. *The Modern Language Journal*, 86(4), 508-524.
- Saville-Troike, M. (1982). *The ethnography of communication. An introduction*. Oxford: Blackwell.
- Schmidt, C.M. (2004). The relevance of culture-specific conceptualisation for organisational management: a cross-cultural study on the difference between German and Swedish organisational concepts. In: Allwood, J., & B. Dorriots (Eds.): *Intercultural Communication at work*. 10th NIC Symposium. Göteborg.
- Schmidt, F.L., Ones, D.S., & Hunter, J.E. (1992). Personnel selection. *Annual Review of Psychology*, 43, 627-670.
- Scollon, R. & Scollon, S.B.K. (1995). *Intercultural Communication: a discourse approach*. Cambridge, MA: Blackwell.
- Seelye, H. N. (Ed.), (1996). *Experiential activities for intercultural learning*. Yarmouth, Maine: Intercultural Press.
- Sercu, L. (2000). *Acquiring intercultural communicative competence from textbooks*. Leuven, Belgium: Leuven University Press.
- Sercu, L. (2002). Autonomous learning and the acquisition of intercultural communicative competence: Some implications for course development. *Language, Culture and Curriculum*, 15 (1), 61-74.
- Sercu, L., Carmen Mendez Garcia, M., & Castro Prieto, P. (2005). Culture learning from a constructivist perspective. An investigation of Spanish Foreign Language teacher's views. *Language and Education*, 19 (6), 483-495.
- Sercu, L. (2009). *Assessing intercultural competence. An anything but wounded-up issue*. Unpublished working paper, Catholic University Leuven, Leuven.
- Sfard, A. (1998). On two metaphors for learning and the dangers of choosing just one. *Educational Researcher*, 27, 4-13.
- Shadish, W.R., Cook, T.D., & Campbell, D.T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houghton-Mifflin.
- Shavinina, L.V. (1994). Specific intellectual intentions and creative giftedness. *European Journal for High Ability*, 5(2), 145-152.
- Shavinina, L.V. (1995). The personality trait approach in the psychology of giftedness. *European Journal for High Ability*, 6(1), 27-37.
- Shavinina, L.V. (1996). The objectivization of cognition and intellectual giftedness. *High Ability Studies*, 7(1), 91-98.
- Shavinina, L.V. (2001). Beyond IQ: A new perspective on the psychological assessment of intellectual abilities. *New Ideas in Psychology*, 19, 27-47.
- Shavinina, L.V. (2008). A unique type of representation is the essence of giftedness: Towards a cognitive-development theory. In L.V. Shavinina (ed), *The International Handbook on Giftedness*. Dordrecht, the Netherlands: Springer Science & Business Media.
- Shavinina, L.V. (2010). What does research on child prodigies tell us about talent development and expertise acquisition? *Talent Development & Excellence*, 29(2), 29-49.
- Shavinina, L. V., & Kholodnaya, M. A. (1996). The cognitive experience as a psychological basis of intellectual giftedness. *Journal for the Education of the Gifted*, 20(1), 4-33.
- Shealy, C. N. (2004). A model and method for "making" a combined-integrated psychologist: Equilintegration (EI) theory and the beliefs, events, and values inventory (BEVI). *Journal of Clinical Psychology*, 60(10), 1065-1090.
- Shore, B. M., & Dover, A. C. (1987). Metacognition, intelligence and giftedness. *Gifted Child Quarterly*, 31, 37-39.
- Shore, B. M., & Kanevsky, L. S. (1993). Thinking processes: being and becoming gifted. In K. A. Heller, F. J. Mönks, & A. H. Passow (Eds.), *International handbook of research and development of giftedness and talent* (pp. 133-147). Oxford: Pergamon Press.
- Sinicrope, C., Norris, J., & Watanabe, Y. (2007). Understanding and assessing intercultural competence. *Second language studies*, 26(1), 1-58.

- Skopinskaja, L. (2003). *Intercultural communicative competence: A new challenge for FL teachers*. Available at: [http://www.hum.au.dk/engelsk/naes2004/show\\_abstract.html?ID3](http://www.hum.au.dk/engelsk/naes2004/show_abstract.html?ID3) Retrieved on May 5, 2007.
- Smart, T. (2010). Intercultural Communication Course. University of Bedfordshire. UK. <http://www.beds.ac.uk/courses/bysubject/lancom/ma-intcom>. Retrieved on July 17, 2010.
- Sodowsky, G.R., Taffe, R.C., Gutkin, T.B., & Wise, S.L. (1994). Development of the Multicultural Counseling Inventory: A self-report measure of multicultural competencies. *Journal of Counseling Psychology, 41*, 137-148.
- Spielberger, C.D., Gorsuch, R.C., Lushene, R.E., Vagg, P.R., Jacobs, G.A. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto: Consulting Psychologists Press.
- Spitzberg, B. H. (1993). The dialectics of (in) competence. *Journal of Sinful and Personal Relationships, 10*, 137 -158.
- Stefani, L.A.J. (1994). Peer, self and tutor assessment: Relative reliabilities. *Studies in Higher Education, 19*(1), 69-75.
- Sternberg, R. J. (1986a). A triarchic theory of intellectual giftedness. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp.223–243). Cambridge: Cambridge University Press.
- Sternberg, R.J., & Lubart, T.I. (1995). *Defying the crowd: Cultivating creativity in a culture of conformity*. New York: Free Press.
- Sternberg, R.J., & Lubart, T.I. (1999). The concept of creativity: Prospects and paradigms. In R.J. Sternberg (Ed.), *Handbook of creativity* (pp. 3–15). New York: Cambridge University Press.
- Storti, C. (1999). *Figuring Foreigners Out: A practical guide*. Yarmouth, ME: Intercultural Press, Inc.
- Stronge, J.H. (2002). *Qualities of effective teachers*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Sysoev, P. (2001). *Культурное самоопределение личности в контексте диалога культур [Individual cultural identity in the context of a dialogue of cultures]*. Tambov, Russia: The Tambov State University Press.
- Tellegen, A., Ben-Porath, Y.S., McNulty, J.L., Arbisi, P.A., Graham, J.R., & Kaemmer, B. (2003). *The MMPI-2 Restructured Clinical Scales: Development, validation, and interpretation*. Minneapolis, MN: University of Minnesota Press.
- Ten Dam, G. & Volman, M. (2004). Critical thinking as a citizenship competence: Teaching strategies. *Learning and Instruction, 14*(4), 359-379.
- Ter-Minasova, S.G. (2000). *Язык и межкультурная коммуникация [Language and cross-cultural communication]*. Moscow: Moscow State University.
- The Common European Framework of References for Languages: Learning, teaching, assessment (2004). Council of Europe. Cambridge, UK: Cambridge University Press.
- Ting-Toomey, S., & Chung, L. C. (2005). *Understanding intercultural communication*. Los Angeles, CA: Roxbury Publications.
- Torres, R. 2005. *Alfabetizacion y alfabetismo en Ecuador: Opciones para la politica y la practica*. [Language learning in Ecuador: Options for theory and practice] Quito, Ecuador: UNESCO.
- Trickey, D. (2004) *Diversity management competencies and the development challenge: special competencies, skills and attitudes needed to 'manage through cultures'*. *Diversity Management e Società Multiculturale 35*(2), 220-232.
- Tucker, M.F., *The Overseas Assignment Inventory*. No date. Retrieved on December 8, 2008.
- Tucker, M.F., Bonial, R., & Lahti, K. (2004). The definition, measurement and prediction of intercultural adjustment and job performance among corporate expatriates. *International Journal of Intercultural Relations, 28* (3/4), 221-251.
- U.S. Department of Labor (1970). *Manual for the USTES General Aptitude Test Battery*. Washington, DC: U.S. Government Printing Office.
- Van Lier, L. (1996). *Interaction in the language curriculum: Awareness, autonomy and authenticity*: London: Longman.
- Varner, I., & Beamer, L. (1995). *Intercultural communication in the global workplace*. Chicago: Iwin.
- Van den Berg, I., Admiraal, W., & Pilot, A. (2006). Design principles and outcomes of peer assessment in higher education. *Studies in Higher Education, 31*(3), 341-356.
- Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

- Vygotsky, L.S. (1983). *История развития высших психических функций [History of development of higher psychic functions]*. In Vygotsky, L.S. Collected works. In 6 volumes. Vol.3. (pp. 231-256), Moscow: Pedagogica.
- Walker, R., & Jeurissen, R.J.M. (2003). E-based solutions to support intercultural business ethics instruction: an exploratory approach in course design and delivery, *Journal of Business Ethics*, 48(1), 113-126.
- Watson, G. B., & Glaser, E. M. (1994). *Watson-Glaser critical thinking appraisal Form S manual*. San Antonio, TX: Harcourt Brace.
- Wechsler, D. (1981). *WAIS-R manual: Wechsler Adult Intelligence Scale-Revised*. New York: Psychological Corporation.
- Wheless, E. W., & Duran, R. L. (1982). Gender orientation as a correlate of communicative competence. *Southern Speech Communication Journal*, 48, 51-64.
- Wiemann, J. M. (1976). *An experimental investigation of communication competence in initial interactions*. New Brunswick, N.J.: Institute for Communication Studies.
- Wiemann, J. M. (1977). Explication and test of model of communication competence. *Human Communication Research*, 3, 195-213.
- Williams, T.R. (2005). Exploring the impact of study abroad on students' intercultural communication skills: Adaptability and sensitivity. *Journal of Studies in International Education*, 9(4), 356-371.
- Wills, S., & Barham, K. (1994). Being an international manager. *European Management Journal*, 12(1): 49-58.
- Wierzbicka, A. (2006). The concept of 'dialogue' in cross-linguistic and cross-cultural perspective. *Discourse Studies*, 8(5), 675-703.
- Wiertzema, K., & Jansen, P., (2006). *Communication and management: A comprehensive introduction to communication*. Hilversum: Arden Publishers.
- Wonderlic Personnel Test, Inc. (1992). *Wonderlic Personnel Test and Scholastic Level Exam: User's manual*. Libertyville, IL: Author.
- Yin, R.K. (1984). *Case Study Research, Design and Methods*. Sage Publications, Beverly Hills, California.
- Yore, L., Bisanz, G.L., & Hand, B. (2003). Examining the literacy component of science literacy: 25 years of language arts and science research. *International Journal of Science Education*, 25(6), 687-725.
- Zimmerman, S. (1995). Perceptions of Intercultural Communication Competence and International Student Adaptation to an American Campus. *Communication Education*, 44(4), 321-335.
- Zúñiga, X. (2003). Bridging differences through intergroup dialogue. *About Campus*, 7(6), 8-16.

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## ABBREVIATION LIST

ACTFL	American Council on the Teaching of Foreign Languages
AFQT	Armed Forces Qualifying Test
ANOVA	Analysis of Variance
ASIR	Amsterdam School of International Relations
BASIC	Behavioral Assessment Scale for Intercultural Communication
BDI	Beck Depression Inventory
BEVI	Beliefs, Events, and Values Inventory
CC	Communicative Competence
CCA	Critical Cultural Awareness
CCAI	Cross-Cultural Adaptability Inventory
CCSAQ	Cultural Competence Self-Assessment Questionnaire
CCTDI	California Critical Thinking Disposition Inventory
CDP	Course Design Parameter(s)
CDS	Course Design Specification(s)
CPI	California Personality Inventory
CST	Cultural Stress Tolerance
CT	Critical Thinking
DC	Design Criteria
ECs	Experimentation with the Cultural Self
EPI	Eysenck Personality Inventory
EQ	Emotional Intelligence
GAP	Global Awareness Profile
GATB	General Aptitude Test Battery
GSTL	Graduate School of Teaching and Learning
IC	Intercultural Communication
ICAPS	Intercultural Competence Adaptation Potential Scale
ICC	Intercultural Communicative Competence
ICSI	Intercultural Sensitivity Inventory
IDI	Intercultural Development Inventory
IIC	Intercultural Intellectual Capability
IIED	Interpersonal Intercultural Experiences in a Dialogue
ICT	Information and Communication Technology
IMI	Intrinsic Motivation Inventory
IMIQ	Intrinsic Motivation Inventory Questionnaire
INCA	Intercultural Competence Assessment
Inter-IIC	Interpersonal dimension of Intercultural Intellectual Capability
Intra-IIC	Intrapersonal dimension of Intercultural Intellectual Capability
IRI	Interpersonal Reactivity Index

IT	Information Technology
M.A.	Master of Arts
Max	Maximum
MCAS	Multicultural Counseling Awareness Scale
MCI	Multicultural Counseling Inventory
Min	Minimum
MMPI	Minnesota Multiphasic Personality Inventory
MSLQ	Motivated Strategies for Learning Questionnaire
MSLQ-CT	Motivated Strategies for Learning Questionnaire – Critical Thinking
NA	Not Available
NALS	National Adult Literature Survey
NEO PI	Neuroticism-Extraversion-Openness Personality Inventory
OAI	Overseas Assignment Inventory
PAQ	Position Analysis Questionnaire
SR	Self-Reflection
STAI	State Trait Anxiety Inventory
TSU	Tomsk State University
US	United States of America
VOP	Vak Ontwikkel Parameters
VOS	Vak Ontwikkel Specificaties
WAIS	Wechsler Adult Intelligence Scale
WPT	Wonderlic Personnel Test

# APPENDICES

The annexes to this dissertation can be found on the website of the Graduate School for Teaching and Learning: [www.ilo.nl](http://www.ilo.nl).

Appendix A-1	Original INCA instrument – Part I
Appendix A-2	ICAPS instrument of 1 <sup>st</sup> test occasion
Appendix A-3	IMI instrument of 1 <sup>st</sup> test occasion
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Appendix E-1	Learner Report
Appendix E-2	Learner Questionnaire
Appendix E-3	Categories Learner Questionnaire
Appendix F	Time-on-task observation forms



# SAMENVATTING IN HET NEDERLANDS

## SUMMARY IN DUTCH

Globalisering en internationalisering van onze wereld gaan steeds verder door. Vanwege de noodzaak voor mensen om wereldwijd met elkaar te communiceren over culturele grenzen heen, geloven we dat er – in toenemende mate – een belangrijke rol voor programma bouwers aan universiteiten is weggelegd. Universiteiten hebben de sociale verplichting studenten voor te bereiden op de wereld die na het afstuderen op hen wacht. Dat betekent dat studenten de competenties en capaciteiten zich moeten hebben eigen gemaakt om zich als interculturele communicatoren van de toekomstige generatie te kunnen gedragen.

### *1. Doel van het onderzoek*

Dit onderzoek heeft zich ten doel gesteld een nieuw vak Interculturele Communicatie (IC) te ontwikkelen, testen en implementeren, dat zowel intra- als interpersoonlijke groei van studenten in interculturele intellectuele capaciteiten (IIC) stimuleert. Hiermee doen wij een poging en gat te vullen in de praktijk van het doceren van IC door de nadruk te leggen op het stimuleren van zowel interculturele communicatieve competenties (ICC) als intellectuele capaciteiten. Het vak heeft als doel studenten te stimuleren echte interculturele communicatoren te worden, die klaar zijn voor de globaliserende en internationaliserende wereld die op ze wacht.

### *2. Ontwerp en methodologie*

Om het algemene doel van dit onderzoek – het ontwikkelen en implementeren van een nieuw vak Interculturele Communicatie – te bereiken, hebben wij een nieuw model, dat zich richt op experimenteel leren en het stimuleren van IIC, ontwikkeld. Dit model is gebaseerd op theorieën over intellectuele ontwikkeling volgend op experimenteel leren (Kholodnaya and Shavinina, 1996; Kholodnaya, 2002; Matsumoto et al., 2001; en King and Baxter Magolda, 2005) en hebben die gecombineerd met het inzicht dat interculturele communicatie profiteert van het leren in een dialoog

met anderen (Lustig and Koester, 1998, Frijters, Ten Dam and Rijlaarsdam, 2008), waarbij de nadruk ligt op het stimuleren van interculturele competenties (Byram, 1997; Williams, 2005; Deardorff, 2006).

Uit de combinatie van deze twee visies op het ontwikkelen van interculturele competenties – of interculturele intellectuele capaciteiten (IIC); de term die wij vanaf nu zullen gebruiken – leiden we vier vakontwikkelparameters (VOP) en drie clusters van vakontwikkelspecificaties (VOS) af die van belang zijn voor het definiëren van de structuur van het vak. Het ontworpen vak moet oefeningen en activiteiten bevatten die kritiek cultureel bewustzijn (VOP 1) en tolerantie voor culturele stress (VOP 2) stimuleren en die de bereidheid van studenten te experimenteren met hun culturele zelf (VOP 3) aanwakkeren. Ook dient het vak inter-persoonlijke contacten via dialogen met anderen aan te moedigen (VOP 4). Op detailniveau worden dan verschillende pedagogische oefeningen (zoals bijvoorbeeld oefeningen om autonoom te leren, oefening die studenten dwingen probleem-oplossend bezig te zijn, of kritische denkoefeningen), inhoudelijke ontwerp specificaties (zoals het aanbieden van cultureel-algemene en cultureel-specifieke informatie) en verschillende didactische methoden (zoals simulaties, discussies, het gebruik van video fragmenten, en groepswork) gebruikt om het vak concreet in te richten. Het vak is dus ontworpen aan de hand van de VOP en VOS. De structuur van het vak is uitgebreid getest.

We hebben ook specifieke meetinstrumenten getest en gevalideerd om daarmee veranderingen in het niveau van IIC en veranderingen in de vaardigheid kritisch na te denken en zelf-reflectie bij studenten te kunnen meten. Uit een groot aantal potentiële meetinstrumenten hebben wij voor elke te meten variabele een meetinstrument geselecteerd: een instrument voor groei van intra-persoonlijke IIC (intra-IIC), een instrument voor inter-persoonlijke IIC (inter-IIC) groei, een instrument voor kritisch denken, een instrument voor interne reflectie, en een instrument voor intrinsieke motivatie. De meetinstrumenten zijn op drie gelegenheden getest: in april 2008, in september 2008, en in maart/april 2009.

Tenslotte hebben we de manier waarop we het vak hebben ontworpen gevalideerd door te controleren of het overeenstemt met de VOP en VOS die voortkomen uit ons model van IIC groei via experimenteel leren. Vooral tijdens het geven van het gehele vak in maart/april 2009 zijn er veel metingen verricht die het ontwerp hebben gevalideerd.

### 3. *Resultaten*

In dit onderzoek hebben we drie type resultaten behaald, waarvan het derde type resultaat het belangrijkste is. Ten eerste hebben we het ontwerp van het vak gevalideerd door te controleren en te bevestigen dat het ontwerp in lijn is met het theoretische model waar de VOP en VOS uit voortvloeien en waarin het ontwerp ingebed is. Ten tweede, hebben we de gekozen meetinstrumenten gevalideerd; meetinstrumenten die groei van intra-IIC, inter-IIC, kritisch denken en zelf-reflectie meten. Ten derde hebben we wetenschappelijk aangetoond dat – gebaseerd op een gevalideerd ontwerp van het vak en gebruik makend van de gevalideerde meetinstrumenten – het ontwikkelde vak in Interculturele Communicatie dat in maart/april 2009 in Tomsk

(Rusland) is gegeven, een statistisch significante en grote stijging van de niveaus van IIC, kritisch denken en zelf-reflectie bij de studenten teweeg heeft gebracht.

#### *Valideren van de structuur en het ontwerp van het vak*

Het ontwerp van het vak zoals dat de ontwikkelaars van het vak voor ogen stond is gebaseerd op het theoretische model dat zich richt op het stimuleren van IIC bij de deelnemende studenten. We hebben verschillende instrumenten gebruikt om te toetsen of de voorgenomen structuur van het vak ook daadwerkelijk overeenkomt met de VOP en VOS en de manier waarop het vak *de facto* is gegeven en gepercipieerd. Volgens ons theoretisch model, moeten in het vak activiteiten en oefeningen zitten die kritiek cultureel bewustzijn, tolerantie voor culturele stress, de bereidheid van studenten te experimenteren met hun culturele zelf stimuleren en die interpersoonlijke contacten via dialogen met anderen aanmoedigen. Ter validatie zijn de volgende instrumenten gebruikt: directe evaluaties met de studenten, aantekeningen van de docent en andere beoordelaars die aanwezig waren, Learner rapporten, Learner vragenlijsten, niveaus van intrinsieke motivatie, en gedetailleerde 'time-on-task' metingen.

De vergelijkende studentenevaluaties tussen voorgenomen en waargenomen VOP en VOS laat zien dat in het algemeen de structuur van het vak is geïmplementeerd zoals zou moeten op basis van het model waarop het vak is gebaseerd. Twee van de acht modules deden het iets minder goed dan verwacht, terwijl drie modules, zich boven verwachting schikten naar de VOP en VOS. De resultaten van het Learner Report (Cronbach alpha van .81) laten zien dat studenten vooral kritisch cultureel bewustzijn, kennis van andere culturen en het experimenteren met hun culturele zelf noemen als belangrijke leerpunten op het gebied van kennis. Op het gebied van vaardigheden geven de studenten aan vooral tolerantie van culturele stress, zelf-reflectie, en (wederom) het experimenteren met hun culturele zelf belangrijke leerpunten gevonden te hebben. Het niveau van intrinsieke motivatie is sterk gestegen tijdens het vak, wat ondersteunend is voor de validiteit van het vak, omdat het impliceert dat het vak er in is geslaagd studenten te interesseren en motiveren voor het vak. Dat laatste is een voorwaarde om te leren en open te staan voor het ontwikkelen van de eigen intellectuele capaciteiten. Tenslotte laten de 'time-on-task' metingen zien dat studenten hard gewerkt hebben (97 procent van de tijd waren ze bezig in beide groepen) en zich in voldoende mate met de vier VOP hebben beziggehouden (34 en 30 procent voor kritiek cultureel bewustzijn, 33 procent voor beide groepen voor interpersoonlijk leren in een dialoog met anderen, 22 en 24 procent voor tolerantie ten aanzien van culturele stress, en 11 en 13 procent voor het experimenteren met hun culturele zelf). Tezamen schetsen deze metingen een robuust beeld dat het ontwerp en de structuur van het vak aansluiten bij de VOP en VOS die voortvloeien uit het theoretische model.

#### *De meetinstrumenten*

In totaal hebben 252 studenten van de faculteit 'Talen en Interculturele Communicatie' deelgenomen aan het testen van de meetinstrumenten gedurende drie gelegenheden (met in totaal zes momenten). We hebben het ICAPS instrument geselecteerd

(Matsumoto et al., 2001) om intra-IIC te meten, het INCA instrument (INCA, 2007) om inter-IIC te meten, het MSLQ-CT instrument (Pintrich et al., 1991) om de vaardigheid kritisch denken te meten, en het Zelf-reflectie (aangepast van Pintrich et al., 1991) instrument om zelf-reflectie te meten. Intrinsieke motivatie wordt gemeten door het IMI instrument (Ryan and Deci, 1992). Alle instrumenten zijn in meerdere of mindere mate aangepast om beter te voldoen aan het doel van ons onderzoek, alsmede om de validiteit en betrouwbaarheid en ook de toegankelijkheid voor studenten te verhogen.

Tijdens het geven van het vak in maart/april 2009 zijn de validiteit en betrouwbaarheid van de instrumenten ieder drie keer gemeten. Voor het ICAPS instrument is de validiteit, gemeten via waardes van Cronbach alpha, .80, .90 en .89 voor de drie testmomenten. Met een minimumwaarde van .60 als grens voor validiteit, is het ICAPS instrument valide. Voor INCA zijn de waarden van Cronbach alpha respectievelijk .66, .96 en .82 voor de drie testmomenten. Het MSLQ-CT instrument en het zelf-reflectie instrument hebben waarden van Cronbach alpha van .82, .86 en .84 voor MSLQ-CT en .81, .76 en .81 voor zelf-reflectie voor de testmomenten. Tenslotte is ook het IMI instrument, om intrinsieke motivatie te meten, valide, met waarden voor Cronbach alpha van .97, .91, en .88 voor het instrument als geheel.

Pearson correlaties zijn een maatstaf voor de betrouwbaarheid van de meetinstrumenten. Het kan namelijk niet zo zijn dat twee instrumenten hetzelfde meten, wat gereflecteerd zou zijn in een hoge waargenomen correlatie tussen die twee instrumenten. Tussen de vijf instrumenten zijn de gemeten Pearson correlaties laag, met uitzondering van de MSLQ-CT en Zelf-reflectie instrumenten (een gemeten correlatie van .66). Wij geloven dat dit deels komt doordat een deel van het Zelf-reflectie instrument uit een andere factor van het MSLQ-instrument komt en deels doordat kritisch denken en zelf-reflectie geen los van elkaar staande concepten zijn, maar mogelijk deels overlappen. Dit komt terug in de gemeten correlatie. Ondanks het feit dat de correlatie hoog is, is er nog voldoende onverklaarde variantie om de twee instrumenten apart te beoordelen.

#### *Resultaten van het vak Interculturele Communicatie*

Een groep van 98 studenten – gesplitst in zes kleinere groepen waarvan er drie in conditie een en drie in conditie twee warden ingedeeld – hebben een introducerend college en acht modules gevolgd. De eerste conditie is direct begonnen met het vak, terwijl op dat moment conditie twee nog wachtte (en dus *de facto* als controlegroep fungeerde). Nadat conditie een klaar was met het vak, begon conditie twee aan het vak, terwijl conditie twee niets meer deed. Op drie momenten zijn de niveaus van IIC, kritisch denken en zelf-reflectie getoetst: op moment 1 (voor het begin van het vak), op moment 2 (nadat conditie een het vak heeft gevolgd, maar voordat conditie twee er aan begon), en op moment 3 (nadat beide condities het vak hebben gevolgd).

De metingen stellen ons in staat sterke conclusies te trekken uit de effecten van het ontwikkelde vak op de niveaus van intra-IIC, inter-IIC, kritisch denken en zelf-reflectie bij de studenten die het vak hebben gevolgd. Ten eerste vinden we dat het niveau van intra-IIC significant is toegenomen voor beide condities na het volgen van het vak (effect grootte van 1.25 voor conditie 1 en 149 voor conditie 2, beide

met een significantie (*p-waarde*) van .001). Voor inter-IIC – dat de interpersoonlijke dimensie van IIC meet, gerelateerd aan situationele ervaringen en kritisch cultureel bewustzijn alsook leren van en in een dialoog met anderen – vinden we ook een sterk positief en statistisch significant effect (effect grootte van 4.91 en 5.02 voor de twee condities met *p-waardes* van .001). Dit betekent ook dat inter-IIC veel sneller is gestegen dan intra-IIC. Dat zou te verklaren zijn vanwege het feit dat inter-IIC gerelateerd is aan praktische manifestaties van het leren uit een dialoog met anderen wat – indien voldoende geoefend – kan uitgroeien tot een repertoire van automatische reacties op interculturele situaties. Intra-IIC daarentegen verandert als er fundamentele veranderingen in de cognitieve, meta-cognitieve en bewuste dimensies van het denken van de studenten plaatsvindt.

Als we kijken naar kritisch denken en zelf-reflectie, de twee complexe cognitieve processen die in de vierde dimensie van het model van intellectuele groei plaatsvinden, zien we dat beide significant zijn gegroeid gedurende het volgen van het vak. Voor de conditie 1 zien we een effect grootte van 1.47 (*p-waarde* van .001) en voor conditie 2 de effect grootte is .78 (met een *p-waarde* van .001). Voor zelf-reflectie zijn die waarden 1.46 (*p-waarde* van .001) en 1.25 (*p-waarde* van .001) voor condities 1 en 2 respectievelijk.

Tenslotte hebben we ook alle mogelijke interactie effecten bekeken en één interessant effect ontdekt. Er blijkt een interactie effect te bestaan tussen intrinsieke motivatie en groei van intra-IIC. Dat wil zeggen: studenten met hogere niveaus van intrinsieke motivatie laten hogere groeivoeten van intra-IIC zien – ze ontwikkelen zich sneller intra-persoonlijk dan hun klasgenoten met lagere niveaus van intrinsieke motivatie. Dit is te verklaren uit het feit dat studenten met een hogere motivatie ook bereid zijn zich meer in te zetten en zich meer open te stellen voor het vak en haar leereffecten via activiteiten en oefeningen (zoals bijvoorbeeld simulaties, sneeuwbal-discussies en groepswork).

Uit de significante groei van intra-IIC en inter-IIC alsook van de complexe cognitieve vaardigheden kritisch denken en zelf-reflectie vanwege het volgen van het ontwikkelde vak Interculturele Communicatie, kunnen we – in lijn met ons theoretische model – zeggen dat *experientia docet*.<sup>52</sup>

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<sup>52</sup> *Latin for 'experience teaches'.*



## CURRICULUM VITAE

Tatiana Antonenko received her M.A. degree in Linguistics and Intercultural Communication from Tomsk State University in Russia in 2001. From 2001 until 2009, she has been a senior lecturer at Tomsk State University. In 2006 she obtained her M.A. degree in International and European Relations and Management with honours at the Amsterdam School of International Relations (ASIR) of the University of Amsterdam with a scholarship from MATRA. In April 2007 she started her PhD on 'Stimulating Intercultural Intellectual Capabilities in Intercultural Communication' at the Graduate School of Teaching and Learning (GSTL), at the University of Amsterdam, under supervision of Prof. dr. G. Rijlaarsdam (promotor) of the University of Amsterdam and Dr. L. Sercu (co-promotor) of the Catholic University Leuven, funded by a scholarship of the University of Amsterdam.