

University of Helsinki, Faculty of Educational Sciences  
Helsinki Studies in Education 35

**Tuija Veintie**

**REVIVAL AND REGENERATION OF INDIGENOUS KNOWLEDGE  
IN INTERCULTURAL BILINGUAL TEACHER EDUCATION**

**A study in the Ecuadorian Amazonia**

Academic dissertation to be presented, with the permission of the Faculty of Educational Sciences at the University of Helsinki, for public examination in seminar room 302 at Athena (Siltavuorenpenger 3A) on Friday 23 November 2018, at 12 o'clock.

Helsinki 2018

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“Learning about leaves” Tuija Veintie & Olli Tourunen

Unigrafia, Helsinki 2018

ISBN 978-951-51-4604-5 (paperback)

ISBN 978-951-51-4605-2 (PDF)

ISSN 1798-8322 (paperback)

ISSN 2489-2297 (PDF)

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**Revival and regeneration of Indigenous knowledge in intercultural bilingual teacher education**

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**Abstract**

This doctoral dissertation examines how Indigenous knowledge is recognized and incorporated into a teacher education programme targeted at Amazonian Indigenous *Shuar*, *Achuar* and *Kichwa* students. It is based on an ethnographic field study in an intercultural bilingual teacher education (IBTE) institute in the Amazonian region of Ecuador. It is compiled of four peer reviewed articles and a summarizing report. The summarizing part introduces the study and its background and context, compiles its theoretical and methodological framework, and discusses the findings presented in the four articles.

This study leans on theory and concepts deriving from critical studies in education, including critical pedagogy, culturally relevant pedagogy, critical race theory, and decolonizing studies on Indigenous education. Moreover, based on postcolonial and decolonial research literature, this study discusses the global epistemic power relations.

The ethnographic field study at the teacher education institute during 2007–2009 involved data production through various methods. The observation data include participant observation at the institute and in the Indigenous community surrounding the institute. The interview data consist of individual and group interviews with teacher education students (N = 22), teacher educators (N = 16) and elementary school teachers (N = 4). In addition, the study employed a participatory photography method that involved teacher education students (N = 11) taking photographs, about which they were later interviewed. All the teacher education students were Indigenous Amazonian *Shuar*, *Achuar* or *Kichwa* people. Of the teacher educators, six were Indigenous *Shuar* or *Kichwa*, and 10 were non-Indigenous Spanish-speaking *Mestizos*. The four elementary school teachers were *Kichwa*.

This study showed that the *Shuar*, *Achuar* and *Kichwa* teacher education students conceptualized knowledge and learning primarily through their everyday domestic life, and that schooling seemed to play a secondary role. Both the students and the teacher educators were concerned about the amount of theory-oriented education in schools, and believed that learning through observation and practice, hands-on activities and manipulative educational materials was culturally pertinent for the Indigenous students. The interview data show that many of the *Kichwa*, *Shuar* and non-Indigenous teacher educators in the studied IBTE institute were committed to reasserting and

supporting the revival of Indigenous knowledge. Furthermore, these educators perceived Indigenous knowledge as an important resource in terms of confirming Indigenous identity.

The interviews and observations showed that the educators promoted Indigenous knowledge in their instruction, particularly by bringing students' knowledge into the classroom, using culturally relevant instruction methods and connecting with the Indigenous community. The non-Indigenous educators sought Indigenous knowledge from books, the Indigenous community and the students, and used instructional methods, such as hands-on activities and group work that they considered culturally pertinent to the students. The Kichwa and Shuar educators drew particularly on their own life experiences and knowledge and Indigenous oral tradition in their classroom instruction. The observation data also showed some examples of educators furthering dialogue between Indigenous and non-Indigenous knowledges, which offered opportunities to regenerate Indigenous knowledge by creating knowledge in between diverse epistemologies.

The study indicates that more effort is needed to develop instructional practices that would better reflect Indigenous epistemologies. The Shuar, Kichwa and non-Indigenous educators, and the Shuar, Achuar and Kichwa students discussed, for instance, the pertinence of connecting instruction with the Indigenous community and learning through exploration. However, based on my observations, connections with the community or learning through exploration were not among the common instructional practices at the teacher education institute.

The data showed that the incorporation of Indigenous knowledge into instruction forms a challenge for educators because of the lack of adequate educational materials, insufficient or lacking initial or in-service education related to Indigenous students and intercultural bilingual education (IBE), and the lack of the educators' understanding of epistemological diversity and Indigenous knowledges. Furthermore, IBE teacher educators' cultural, linguistic and educational backgrounds vary, as does their commitment to IBE and their preparedness and willingness to break with the epistemological hierarchy and strive for epistemological justice by promoting Indigenous and alternative knowledges, ways of thinking and instruction practices.

**Tuija Veintie**

## **Alkuperäiskansojen tiedon elvyttäminen ja tuottaminen kulttuurienvälisessä kaksikielisessä opettajankoulutuksessa**

Tutkimus Amazonin alueella Ecuadorissa

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### **Tiivistelmä**

Tämä väitöskirja tarkastelee alkuperäiskansojen tietoa, ja millä tavoin erityisesti Shuar, Achuar ja Kichwa alkuperäiskansojen tietoa sisällytetään Amazonin alkuperäiskansoille suunnatun opettajankoulutusohjelman opetuskäytäntöihin. Väitöskirja perustuu etnografiseen tutkimukseen Amazonin alueella Ecuadorissa. Väitöskirja koostuu neljästä tieteellisestä, vertaisarviodusta artikkelista sekä yhteenveto-osioista. Yhteenveto-osio esittelee tutkimuksen taustan, kontekstin ja teoreettisen sekä metodologisen viitekehyksen, ja tarkastelee artikkeleissa esiteltyjä tutkimustuloksia.

Tutkimus nojautuu teorioihin ja käsitteisiin, jotka ovat lähtöisin koulutusta kriittisesti tarkastelevista tutkimus-suuntauksista, kuten kriittinen pedagogiikka, kulttuurisesti responsiivinen pedagogiikka, critical race theory, sekä dekolonialistinen alkuperäiskansojen koulutustutkimus. Erityisesti jälkikolonialistiseen ja dekolonialistiseen tutkimuskirjallisuuteen nojaten tämä tutkimus tarkastelee globaaleja epistemologisia valtasuhteita.

Etnografinen kenttätutkimus opettajankoulutusinstituutissa vuosina 2007-2009 piti sisällään aineistonkeruuta eri tavoin. Havainnointiaineisto on koottu osallistuvalla havainnoinnilla sekä opettajankoulutusinstituutissa että instituuttia ympäröivässä alkuperäiskansan kyläyhteisössä. Haastatteluaineisto muodostuu yksilö- ja ryhmähaastatteluista, joihin osallistui opettajaopiskelijoita (N=22), opettajankouluttajia (N=16), sekä peruskoulun opettajia (N=4). Lisäksi tutkimuksessa käytettiin osallistuvan valokuvauksen menetelmää, johon liittyen osa (N=11) tutkimukseen osallistuvista opiskelijoista otti valokuvia, minkä jälkeen heitä haastateltiin uudelleen heidän ottamiinsa kuviin liittyen. Kaikki tutkimukseen osallistuneet opettajaopiskelijat kuuluvat Amazonin alueen Shuar, Achuar tai Kichwa alkuperäiskansoihin. Opettajankouluttajista 6 kuuluu Shuar tai Kichwa alkuperäiskansoihin ja 10 espanjankieliseen valtaväestöön. Kaikki neljä tutkimukseen osallistunutta peruskoulun opettajaa kuuluvat Kichwa alkuperäiskansaan.

Tutkimuksen tulokset osoittavat, että tutkimukseen osallistuneiden Shuar, Achuar ja Kichwa alkuperäiskansoihin kuuluvien opettajaopiskelijoiden käsitykset tiedosta ja oppimisesta muodostuvat ensisijaisesti heidän arkisen elämänsä kokemusten kautta. Koulutuksella ja kouluympäristöllä on heidän tieto- ja oppimiskäsityksissään toissijainen rooli. Sekä opettajaopiskelijat että opettajankouluttajat pitävät kouluopetuksen teoriapainotteisuutta ongelmallisena. Heidän näkemyksissään korostuvat keskeisinä, alkuperäiskansoihin

kuuluville opiskelijoille kulttuurisesti responsiivisina opetuksen käytäntöinä, havainnoinnin ja tekemisen kautta oppiminen, käytännönläheiset oppimistehtävät ja käsin kosketeltavat oppimateriaalit.

Haastatteluaineisto osoittaa että monet tähän tutkimukseen osallistuneista Kichwa ja Shuar alkuperäiskansoihin sekä espanjankieliseen valtaväestöön kuuluvista opettajankouluttajista ovat hyvin sitoutuneita vahvistamaan ja tukemaan alkuperäiskansojen tiedon elvyttämistä. Lisäksi nämä opettajankouluttajat pitävät alkuperäiskansojen tietoa alkuperäiskansaidentiteettien vahvistamisen kannalta tärkeänä resurssina.

Haastatteluihin ja havainnointiin perustuen tässä tutkimuksessa havaitaan, että opettajankouluttajat edistävät alkuperäiskansojen tiedon käyttämistä opetuksessa monin eri tavoin. Erityisesti toimintatavoissa erottuvat opettajien pyrkimykset rohkaista opiskelijoita tuomaan oma tietonsa mukanaan luokkahuoneeseen, käyttää kulttuurisesti responsiivisia opetusmenetelmiä ja luoda yhteyksiä opetuksen ja alkuperäiskansayhteisö välille. Espanjankieliset opettajankouluttajat hakevat alkuperäiskansojen tietoa kirjoista, alkuperäiskansayhteisöstä ja opiskelijoilta. He myös käyttävät kulttuurisesti responsiivisina pitämiään opetusmenetelmiä, kuten käytännön harjoituksia ja ryhmitöitä. Kichwa ja Shuar opettajankouluttajat puolestaan nojaavat opetuksessaan erityisesti omaan elämäkokemuksensa, tietoonsa ja alkuperäiskansojen suulliseen traditioon. Lisäksi havainnointiaineistossa voidaan nähdä esimerkkejä opettajankouluttajista, jotka edistävät alkuperäiskansojen tiedon ja muun tiedon välistä dialogia. Tämän dialogin kautta on mahdollista luoda myös uutta tietoa epistemologioiden välillä.

Tutkimustulokset näyttävät että on tarpeellista kehittää uusia opetuskäytäntöjä, jotka olisivat paremmin yhteensopivia alkuperäiskansojen tietokäsitysten kanssa. Muun muassa opetuksen ja alkuperäiskansayhteisön välisen yhteyden merkitys ja tutkimalla oppiminen nousevat esille erityisen olennaisina seikkoina Shuar ja Kichwa alkuperäiskansoihin kuuluvien ja espanjankielisten opettajankouluttajien sekä Shuar, Achuar ja Kichwa alkuperäiskansoihin kuuluvien opiskelijoiden puheessa. Havaintoaineiston valossa voidaan kuitenkin todeta, että opetuksen ja yhteisön välinen yhteys tai tutkimalla oppiminen eivät ainakaan toistaiseksi kuuluneet keskeisiin opetuskäytäntöihin tässä opettajankoulutusinstituutissa.

Tutkimusaineiston perusteella alkuperäiskansojen tiedon sisällyttäminen opetuksen käytäntöihin on opettajankouluttajille haasteellinen tehtävä. Haasteita muodostavat soveltuvien oppimateriaalien puute, opettajankouluttajien riittämätön tai puuttuva koulutus liittyen alkuperäiskansoihin ja kulttuurien välisen kaksikielisen koulutuksen periaatteisiin ja menetelmiin, sekä opettajankouluttajien vaikeus ymmärtää epistemologista monimuotoisuutta ja alkuperäiskansojen tietoa. Lisäksi opettajankouluttajien välillä on eroja heidän kulttuurisessa, kielellisessä ja koulutuksellisessa taustassaan, heidän sitoutuneisuudessaan kulttuurienväliseen kaksikieliseen koulutukseen, sekä siinä millaiset valmiudet heillä on purkaa epistemologisia hierarkioita ja tukea vaihtoehtoisia tiedon ja ajattelemisen muotoja sekä opetuskäytäntöjä.

# ACKNOWLEDGEMENTS

To begin with, I will be eternally grateful to all the students and educators in Ecuador who participated in this study. I have been privileged to meet so many wonderful people interested in discussing education, knowledge and life. I would like to thank each and every one of them.

The doctoral dissertation process has been quite a journey. At times it has been about moving forward with determined steps, but quite often it has involved wandering around, hesitating, having moments of both clarity and confusion, feelings of both enthusiasm and despair, and everything in between. During this process I have been lucky to be surrounded by people who have provided me with food for thought and support, and have spurred me on in times when I most needed it.

As for the research community, I would first like to thank my supervisors. My primary supervisor, Professor Gunilla Holm, guided me throughout the research process with her insightful advice and feedback on my writing in the early research plans, through working papers, presentations and manuscripts, to the summarizing part of the dissertation. I thank Gunilla for co-authoring articles I and IV with me, for all her advice and guidance over so many years, and for encouraging me during moments of uncertainty. Title of Docent Juan Carlos Llorente provided me with esteemed advice, particularly during the first years of the research process. I am grateful for his invaluable insight into issues related to education in the Latin American context. Furthermore, I thank Juan Carlos and Professor Hannu Simola for believing in my initial research ideas at the very beginning. Towards the end of the dissertation process I was lucky to have Professor (tenure track) Pirjo Kristiina Virtanen as my supervisor, and I would like to thank her for her constructive criticism and suggestions which pushed me to review and rethink my dissertation manuscript. Thank you also for the valuable contacts and references and for your encouraging words when they were so greatly needed.

I wish to thank the pre-examiners, Professor Angelina E. Castagno (Northern Arizona University) and Professor Emeritus Luis Enrique López Hurtado (Universidad Mayor de San Simón) for reviewing my dissertation manuscript and providing encouraging evaluations and pertinent suggestions that helped me improve the final version of this work. I am grateful to Professor Regina Cortina (Columbia University) for agreeing to act as my opponent at the public examination of this dissertation. I thank the faculty representatives in my examination committee, Associate Professor Sirpa Lappalainen, and University Lecturer and Title of Docent Ulla-Maija Salo.

An essential element of the dissertation process is peer support and collaboration with fellow doctoral students and other members of the academic community. Firstly, I would like to thank the members of our international doctoral seminar group: Laia Saló i Nevado (*moltes gràcies*),

Harriet Zilliacus (*tusen tack*) and Chia-Chien Chang (*xièxie*) for all the discussions, questions, searching, pondering, laughter, and support that took place in and outside of our meetings. To Laia I owe special thanks for her collaboration, friendship and the good times back in the day at our shared office on Teollisuuskatu. The Intercultural and Bilingual Education in Latin America (IBE) project group was an excellent source of intellectual inspiration, information, advice and practical support for my doctoral dissertation. For this I would like to thank Kari Kantasalmi and Saija Volmari, in addition to Laia, Juan Carlos and Hannu. I also wish to offer special thanks to Saija for her sharp observations and discussions in and outside of the academic sphere, and for her priceless support and friendship.

I would furthermore like to express my sincere gratitude to Professor Elina Lahelma, who offered me valuable support and advice during this dissertation process. Thanks to Elina, I also had the opportunity to meet great colleagues in the KiTKA and KUFÉ seminars. These and other research seminars have been important spaces for discussion, feedback and peer support, and I would like to thank a great number of people for sharing their ideas, questions, suggestions, and inspiration in these seminars. I also owe a big thank-you to my fellow doctoral students and other colleagues for enriching my academic life by being such great office roommates and good lunch and coffee break company. I am so happy that during the dissertation process, I crossed paths with wonderful colleagues such as Päivi Berg, Kristiina Brunila, Solveig Cornér, Tuuli From, Hanna Guttorm, Katariina Hakala, Susanna Hannus, Jenni Helakorpi, Ida Hummelstedt-Djedou, Elina Ikävalko, Ulpukka Isopahkala-Bourét, Ina Juva, Charlotta Järf, Minna Kelhä, Mikael Kivelä, Sonja Kosunen, Tuuli Kurki, Anna Kuuteri, Jukka Lehtonen, Monica Londen, Minna Lähteenmäki, Jan-Erik Mansikka, Pia Mikander, Reetta Mietola, Anna-Maija Niemi, Antti Paakkari, Hannele Pitkänen, Anna-Leena Riitaaja, Sanna Ryyänen, Mia Smeds, Mari Simola, Touko Vaahtera, and many others. I would also like to acknowledge the invaluable assistance of Coordinator Salla Keski-Saari in the numerous steps related to the examination of this doctoral dissertation. I thank Olli Tourunen for his assistance with the cover picture.

I gratefully acknowledge the financial support received for this study. The IBE project made it possible for me to start planning this dissertation and carry out my field visits in Ecuador. I am hugely grateful to the Faculty of Educational Sciences at the University of Helsinki, the SYLFF association and the FiDPEL network for their funding, which secured me periods of full-time research work. At other times, working in administrative positions at the University of Helsinki kept me close to the research community.

Through the IBE project and the collaboration between the University of Helsinki and the Finnish Ministry for Foreign Affairs, I was connected to the international development collaboration project on Intercultural Bilingual Education in the Amazonia region (EIBAMAZ). These connections enabled the opportunity to meet many teachers, researchers, and public servants working in the sector of IBE in Ecuador as well as in Peru and Bolivia. I truly value the



discussions with all these people, and their outlooks, experience and advice. I am particularly grateful to Educational Officer Juan Pablo Bustamante at UNICEF Ecuador for his time and kind advice, and Director Mariano Morocho at the National Directorate of the Intercultural Bilingual Education (DINEIB) for approving the study. A very special thank-you goes to Doctor Fernando Yáñez for our many discussions and his indispensable advice and help in many practical issues in Ecuador. I would also like to extend my warmest thanks to Doctor Juan de Dios Simón whose insight, sincerity and intellectual curiosity have been so inspirational.

In addition to the financial support and the support from the research community, I am deeply indebted to my family and friends who supported me in countless ways during the dissertation process. I wish to thank you, dear friends and family members, for all the times you asked how the dissertation was coming along, for the conversations over a cup of coffee or a glass of wine, and for sometimes giving me something completely different to think about. I am most grateful to you for all the social support you provided through your friendship, empathy and encouragement. I also have to say that this dissertation would not have been completed without my parents Ritva and Raimo Veintie. I owe my parents an enormous thank-you for so many things, but particularly for all the help in child care and other most valuable, practical help. My sincere thanks for all the encouragement, food and care! Olli, thank you for being there all along, through the ups and downs of the dissertation process, helping me see issues from a pragmatic viewpoint, maintaining your sense of humour, being supportive, and being a great partner in solving the mysteries of harmonizing study, work and family life. Our two children were born during this dissertation process and I thank my dearest Niilo and Topi with all my heart for arriving and bringing so much joy, love and interesting questions.

Helsinki, 12 October 2018

Tuija Veintie



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# LIST OF ORIGINAL PUBLICATIONS

This thesis is based on the following publications:

I Veintie, Tuija and Holm, Gunilla (2010). The perceptions of knowledge and learning of Amazonian Indigenous teacher education students. *Ethnography and Education* 5(3), 325-343.

II Veintie, Tuija (2013). Practical Learning and Epistemological Border Crossings: Drawing on Indigenous Knowledge in Terms of Educational Practices. *Diaspora, Indigenous, and Minority Education: Studies of Migration, Integration, Equity, and Cultural Survival* 7(4), 243-258.

III Veintie, Tuija (2013). Coloniality and Cognitive Justice: Reinterpreting Formal Education for the Indigenous Peoples in Ecuador. *International Journal of Multicultural Education*, 15(3), 45-60.

IV Veintie, Tuija and Holm, Gunilla (in press). Thinking from Another Perspective in an Intercultural Bilingual Teacher Education Programme. In K. Trimmer, D. Hoven, & P. Keskitalo, (eds.), *Indigenous postgraduate education: Intercultural perspectives*. Research in Multicultural Education and International Perspectives. Charlotte, NC: Information age publishing (IAP).

The publications are referred to in the text by their roman numerals.

## **ABBREVIATIONS**

cf.	conferatur (compare)
e.g.	exempli gratia (for example)
i.e.	id est (that is)
DINEIB	Dirección nacional de educación intercultural bilingue (The National Directorate of the Intercultural Bilingual Education)
IBE	Intercultural bilingual education
IBTE	Intercultural bilingual teacher education
MOSEIB	Modelo de sistema de educación intercultural bilingue (model of the intercultural bilingual education system)

# 1 INTRODUCTION

*Writing makes a difference. The major part of the substance is Western. But in the Indigenous<sup>1</sup> nations, equally, there is knowledge. [--] In the past there was no school but our ancestors had wide knowledge about all kinds of crafts and medicine, for example. This knowledge was never written down in books. We, as prospective teachers, need to recover again all the values, wisdom and knowledge that our ancestors applied. We need to revive this.*

*Alfredo, Diego & Danilo, Amazonian Shuar teacher education students, 2007.*

*There is no global social justice without global cognitive justice.*

*Santos, 2007.*

Today's mainstream education systems bear the legacy of colonialism. The European colonization that began centuries ago in different parts of the world has produced uneven global power relations, including the global epistemic power hierarchies in which white Western European thinking and knowledge continue to have a privileged position (Mignolo, 2002; Quijano, 2000; Santos, 2007). As a result, mainstream schools and universities in many parts of the world work on the assumption that legitimate knowledge is produced by a Eurocentric academe, and any other knowledge, such as Indigenous knowledge, remains unacknowledged (Battiste, 2008b; Kuokkanen, 2000; Mignolo, 2000; Smith, 1999, 2006). This doctoral dissertation project arose from a motivation to fracture such epistemological dominance of the "West"<sup>2</sup> (Santos, 2007), challenge the Eurocentric models of formal education (Shadduck-Hernández, 2006), and support culturally relevant education (Ladson-Billings, 2009; 2014) for Indigenous peoples.

Indigenous peoples have "lived the colonial wound" (Walsh 2012, 14), meaning that colonization continues to affect Indigenous peoples in detrimental ways. Current international laws and regulations recognize this position of the Indigenous peoples and the need to specifically prescribe the conventions and declarations regarding Indigenous peoples' rights. In this

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<sup>1</sup> There is no consensus as to whether the word Indigenous should be capitalized or not. In this dissertation I capitalize Indigenous in the same vein as other nationalities or cultures or languages such as Ecuadorian, Latin American, or Spanish.

<sup>2</sup> By "West" and "Western" I refer to a geopolitical concept that is constructed discursively through narratives of "Western" civilization which derives from ancient Greece, or common "Western" heritage that constructs an imagined community of the "West" between Western European and currently also the North American countries. In this discourse, "Western" intertwines with modernity, coloniality, capitalism, whiteness, and Christianity. (Mignolo 2002; Quijano 2000).

regard, the International Labour Organization (ILO) was a groundbreaker in 1957 when it adopted the Indigenous and Tribal Populations Convention (ILO, 1957), the first international convention to construct Indigenous and tribal peoples as a specific social group with specific needs and rights. Thereafter, the World Declaration on Education for All (World Conference on Education for All: Meeting Basic Learning Needs, 1990) addressed Indigenous peoples along with other vulnerable groups.

The UN Educational, Scientific and Cultural Organisation's (UNESCO, 2001) Universal Declaration on Cultural Diversity, and the UN Declaration on the Rights of Indigenous Peoples (UN General Assembly, 2007) also define Indigenous peoples as a distinct social group and directly address their rights. With regard to Indigenous peoples and educational rights, the United Nations Declaration on the rights of Indigenous peoples states in Article 14 that "Indigenous peoples have the right to establish and control their educational systems and institutions providing education in their own languages, in a manner appropriate to their cultural methods of teaching and learning" (UN, 2007)<sup>3</sup>.

Indigenous peoples have developed diverse interpretations of the educational systems and methods of teaching and learning for the Indigenous people. The Kaupapa Maori system in New Zealand is probably one of the best known Indigenous reconceptualizations of an educational system (Bishop and Glynn, 1999; Smith, 1997; Pihama & al, 2004). In Latin America, Indigenous peoples have fostered different types of bilingual education (López, 2008). In Ecuador, Indigenous organizations have furthered the development of IBE as the national educational system for the Indigenous peoples in Ecuador, led by the Ecuadorian Indigenous peoples themselves (Aikman, 1996; Brysk, 2000; CONAIE, 2007).

This study focuses on IBE in Ecuador and in particular, IBE teacher education in Ecuadorian Amazonia. It is based on ethnographic fieldwork in one IBE teacher education institute. This institute forms a multicultural environment for encounters between students from three different Amazonian Indigenous peoples (Shuar, Achuar and Kichwa) and both Indigenous (Shuar and Kichwa) and Spanish-speaking non-Indigenous teacher educators.

Previous studies of IBE in Ecuador have mainly focused on linguistic aspects, and research related to Indigenous knowledge has been limited (See for example Bertely Busquets & González Apocada, 2004). Furthermore, studies and development projects have often focused on the largest Indigenous groups in the Andean region, and the Amazonian Indigenous populations that are fewer in number and live in remote rural areas have drawn less attention. Hence, this study widens the scope of research on IBE by focusing on Indigenous knowledge, particularly among the Indigenous Shuar, Achuar and Kichwa peoples of Amazonia. The overarching objective of this research is to

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<sup>3</sup> See also articles 11, 12, 15 (UN, 2007).



examine how Indigenous knowledge guides IBE policy and practice in a teacher education programme in Amazonia.

## **1.1 RESEARCH QUESTIONS AND STRUCTURE OF THE DISSERTATION**

This study answers the following research questions:

**RQ1** What are teacher education students' and teacher educators' perceptions of Indigenous knowledge and Indigenous ways of learning and acquiring knowledge?

**RQ2** To what extent and in what ways are Shuar, Achuar and Kichwa Indigenous knowledge and ways of acquiring knowledge and learning incorporated into the instructional practices of an intercultural bilingual teacher education programme in Ecuadorian Amazonia?

**RQ3** What aspects hinder the incorporation of Shuar, Achuar and Kichwa Indigenous knowledge and ways of acquiring knowledge and learning into the instructional practices of this intercultural bilingual teacher education programme?

These research questions are answered in four peer reviewed articles that are included at the end of this dissertation. The dissertation begins with an overview of the context of the study, Ecuador, and its Indigenous population and the education for Indigenous peoples in Ecuador. In Chapter 3, the dissertation continues with a review of central literature on the conceptual and theoretical background of the study, discussing Indigenous knowledge and epistemic power relations. Chapter 4 focuses on the research process, discussing the ethical considerations, the researcher's positioning and the methodological choices. The research findings are then examined in Chapter 5, which presents my four articles and summarizes how these articles answer the research questions. Finally, Chapter 6 enters into a discussion on the findings, presents some implications for teacher education and instructional methods, and concludes with methodological reflections and suggestions for further studies.



## 2 CONTEXT OF THE STUDY

I conducted the empirical field study for this research project in Ecuador during 2006–2009. The main site of the fieldwork was situated in the Amazonia region of Ecuador. In the following two sections I briefly introduce Ecuador and its Indigenous peoples and then move on to describe the development of formal education for the Indigenous peoples in Ecuador, in the Amazonia region in particular.

### 2.1 ECUADOR AND ITS INDIGENOUS PEOPLES

Mainland Ecuador is divided into three regions. *Costa* is the coastal area by the Pacific Ocean, *Sierra* the Andean highlands, and *Amazonia* the tropical rain forest area. The Galapagos Islands in the Pacific are also part of the Ecuadorian territory. Each of Ecuador's regions has a distinctive climate, landscape, biodiversity, and population. The total population of Ecuador is close to 14.5 million. In the latest Ecuadorian census (INEC 2010) 72% of the total population of Ecuador self-identified themselves as Mestizo<sup>4</sup>, 7% as Indigenous, 7% as Montubio<sup>5</sup>, 7% as Afro-Ecuadorian, 6% as white, and less than 1% as other. This means that over one million people in Ecuador self-identify themselves as Indigenous. The ratio of the Indigenous to non-Indigenous population varies considerably between regions and provinces. As much as 68% of all the Indigenous peoples in Ecuador live in the Sierra region, 24% in the Amazonia region, and 8% in the Costa region. The province of Pichincha in Sierra has the highest numbers of Indigenous people. In Pichincha, 17% of the population self-identify as Indigenous whereas in the provinces of the Amazonia region, the number of Indigenous people varies between 4% and 7% of the total population of each province.

The majority of the Indigenous population in Ecuador belong to diverse Indigenous nationalities (*nacionalidades*) and peoples (*pueblos*). Indigenous nationalities in Ecuador consist of 14 Indigenous groups, each of which has their own distinctive language and culture. These include the nationalities of

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<sup>4</sup> Mestizo refers to mixed heritage, which in the Ecuadorian context means people with mixed European (particularly Spanish) and Indigenous heritage. The Mestizo in Ecuador generally speak Spanish.

<sup>5</sup> Montubio refers to a particular group of Mestizo people in the Costa region. The Montubio speak Spanish and have not maintained much of any non-European heritage. However, already in the early 19<sup>th</sup> century, literature named a specific group of peasants in the Costa region the Montubio. The Montubio have developed and maintained a distinctive regional culture, dialect and identity (Mathewson, 2008). Politically, the Montubio were recognized as a particular social group by the Ecuadorian constitution in 2008 (Constitución Política de la República del Ecuador, 2008).

Tsáchila, Chachi, Epera, and Awa in the Costa region; the Shuar, Achuar, Shiwiar, Cofán, Siona, Secoya, Zápara, Andoa and Waorani in the Amazonia region; and the Kichwa people who reside in all parts of the country. The largest group within these nationalities is the Kichwa, which includes almost 86% of the total Indigenous population. The Kichwa nationality includes several peoples, meaning groups of Indigenous people who speak the Kichwa language but have their own distinctive dialects, cultures and living areas<sup>6</sup>. The second biggest Indigenous nationality after the Kichwa is the Shuar from the Amazonia region, who represent 9% of the Ecuadorian Indigenous population. In addition, 14% of the Indigenous population in Ecuador self-identify themselves as Indigenous, but do not identify with any of the above mentioned nationalities or peoples (Álvarez & Montaluisa 2017; INEC 2010).

Indigenous language is an important marker of an Indigenous identity (Goodfellow, 2005; Ninawaman, 2005) and an essential medium for producing and transmitting Indigenous knowledge (Battiste, 2002). As much as 35% of the Indigenous population in Ecuador are monolingual Indigenous language speakers and 29% are bilingual, speaking one of the Indigenous languages and Spanish, which is the majority language. Notably, nearly 33% of the population who self-identify as Indigenous are monolingual Spanish-speakers (INEC 2010). The high percentage of the Spanish-speaking Indigenous population gives us an idea of the extent of Indigenous language loss in Ecuador. The subordination of Indigenous languages dates back to the colonial era, when the Spanish language and Spanish customs were imposed on the Indigenous peoples in the name of the empire. Ecuador's independence from Spain did not improve the position of Indigenous languages. On the contrary, the ideal of Spanish as the unifying language was an important part of the nation-building process, and thus the subordination of Indigenous languages continued (Freeland 1996, Langer 2003).

Colonial relations between the social groups and the hierarchical distribution of power are reflected in today's Ecuadorian society. In Ecuador, as in many other Latin American countries, the European descendants and Mestizo people have formed local elites, whereas the Indigenous peoples have been marginalized in political and economic spheres. (Arnové & al., 2003; Freeland, 1996; Mignolo, 2000; Quijano, 2000). The roots of Indigenous subordination originate from colonialism and Eurocentric ideas of white supremacy. The early European conquerors believed that in the name of the crown and in the name of God they were entitled to take possession of the lands and peoples in the Americas. In 1513, the rule of *requerimiento* required Native Americans to convert to Christianity. The conquerors were ordered to read the *requerimiento* text to the natives. Only if natives did not agree to convert was it rightful for the conquerors to enslave or kill them in the battles. The *requerimiento* was written and read to the natives in Spanish, in a

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<sup>6</sup> These peoples include the Pastos, Natabuela, Otavalo, Karanki, Kayambi, Kitucara, Panzaleo, Chibuleo, Salasaca, Kisapincha, Tomabela, Waranka, Puruha, Kañari, Saraguro, and Paltas.

language that most of natives at that time did not understand (Valtonen 2002). The colonial administration system was based on the Spanish model and supported the Spanish crown. In the colonial *encomienda* system, which functioned until the 1550s, the Spanish crown appointed a Spanish colonizer to be in charge of each territory and the Indigenous population in its realm. The purpose of the *encomienda* was to use the Indigenous peoples as a labour force, but also to “civilize” and Christianize them. In the countryside, the economically productive lands ended up in the hands of the Mestizo, who formed a rural elite. The Indigenous peoples had no land property of their own but were subjugated as labour force for the *haciendas*, the large estates of land (Lyons 2006, Pérez & Arguello & Purcachi 2015, Valtonen 2002). In the Amazonia region, the *haciendas* were mostly formed around the rubber industry, and were smaller in size than in Sierra and Costa (Moreno Tejada, 2015). The *hacienda* system was abolished in Ecuador in the land reforms of the 1960s and 1970s, but these reforms did not result in the redistribution of the economically most productive lands or the properties of the *haciendas*. In all, the effects of these reforms were not as extensive as they could have been, and did not meet the expectations of the peasantry (Bréton, 2008; Valtonen, 2002).

Another chapter in the Ecuadorian economic development and the Indigenous people’s struggle for land rights began with the discovery of oil in the Amazonia region in the 1960–1970s (Gerlach, 2003; Valtonen, 2002). Generally, the Latin American states, including Ecuador, have not responded to the concerns of their Indigenous populations: they have not addressed the issue of the Amazonian Indigenous peoples’ land rights and the multinational oil companies appropriating and polluting the lands. These concerns were topical in the 1970s, when Indigenous organizations started to form in Latin America. The Latin American Indigenous movements grew during the 1970s and 1980s, and at the same time a growing number of international NGOs became interested in Indigenous issues, human rights and environmental questions. The international interest in Indigenous issues and the support to Indigenous organizations is related to increasing global interconnectedness through telecommunications, regular contact with foreign citizens and the ease of travelling that has emerged in recent decades. This globalization has enabled Indigenous organizations to establish contacts with national and international nongovernmental organizations. (Brysk, 2000; Langer, 2003; Mato, 2000). During the 1990s, the Indigenous organizations in Ecuador mobilized several national Indigenous uprisings that raised issues related to the land reform, Indigenous land rights, oil exploitation by multinational companies, Indigenous people’s right to education, and Indigenous representation in national-level organizations and politics (Becker, 2011; Sawyer 2004).

The recent political development in Ecuador during the leftist government of Rafael Correa (2007–2017) seems to be taking the Indigenous population and Indigenous perspectives into account in a new way, at least on the surface.

The Ecuadorian constitution that was ratified in 2008 recognizes the Indigenous nationalities and Ecuador as a plurinational state, puts interculturality in centre stage, speaks about *pacha mama* (mother earth) and discusses national development in terms of *Sumaq Kawsay* or *buen vivir*, which is interpreted in English as “good living” or “living well”. Overall, the constitution is progressive. However, the relations between the Correa government and the Indigenous social movements have been marked by conflicts. Correa and his government did not guarantee Indigenous representation or consider the views of the Indigenous social movements in the writing of the new constitution or, for instance, in the new mining law or the new law on intercultural education. Therefore, the *buen vivir* of the Ecuadorian constitution only partially reflects the Kichwa concept of *Sumaq Kawsay*, which in simplified terms, considers the aim of a person and a community to be to conduct a full life in harmony with nature and to reach happiness in terms of the person, the community, and nature (Salgado & Morán 2014, Walsh 2010). Furthermore, Correa has reacted with hostility to social movements and activists who have criticized his decisions and actions (Becker, 2011).

In the economy, Correa’s government took a strong position in regard to the redistribution of wealth and to decrease income inequality in Ecuador. Therefore, income inequality (Aristizábal-Ramírez, Canavire-Bacarreza & Jetter 2015), as well as the share of people living in poverty or extreme poverty, decreased in Ecuador during the Correa government. However, the improvement in economic equality has not affected the rural population as much as the urban population (Pérez & Arguello & Purcachi, 2015): rural poverty continues to affect a large number of the Indigenous population in Ecuador. According to the latest census (2010) 78.5% of the Indigenous people in Ecuador live in rural areas, and 50% of the Indigenous labour force works in agriculture, animal farming, fishing, or forestry. Furthermore, the poverty indicators of living conditions show that a vast proportion of Indigenous people live in households that have restricted access to basic public services and infrastructure such as electricity and water. For example, according to the 2010 census, 48% of Indigenous households in Ecuador had no access to public services for clean drinking water in their house, and 72% of Indigenous households were not connected to a public sanitary sewage network (INEC 2010).

Although poverty is generally associated with low levels of education, this does not mean that a high level of education would guarantee a high level of income (Aristizábal-Ramírez, Canavire-Bacarreza & Jetter 2015). Education may nonetheless help marginalized people access more opportunities to participate in society and increase possibilities for upward social mobility. As education is considered a fundamental human right (UN General Assembly, 1948) it is important to notice inequalities related to levels of education. For example, the Indigenous population of Ecuador has considerably lower levels of education than the Ecuadorian population on average. The most recent

statistics (2016) show that on average the Ecuadorian adult population<sup>7</sup> has spent 10 years in formal education, while among the Ecuadorian adult population who self-identify as Indigenous, the average time spent in formal education is only 5.6 years. This means that on average, the Indigenous adult population in Ecuador has only completed about six grades of basic education (INEC 2017). Recently, in 2016, as much as 92% of 5–14-year-old Indigenous children participated in basic education, and 67% of the Indigenous youth attended upper secondary education. In basic education, the difference between the attendance of Indigenous boys and girls was very small, but there was a gender gap in upper secondary education, as 71% of Indigenous boys and 63% of Indigenous girls attended upper secondary school. Only 3% of the Indigenous adult population aged over 23 had graduated from higher education, as compared to the national average of 6% of higher education graduates in the total population (INEC 2017).

Post (2011) examines access to upper secondary and higher education in Ecuador and presents an analysis of intersecting inequalities. For instance, upper secondary and higher education opportunities are more easily available to urban than rural young people, and a large proportion of the Indigenous population lives in rural areas. The social background of the family, in terms of both financial resources and cultural capital, also has a significant effect on access to upper levels of education. Hence, young people with poor social backgrounds are underrepresented in upper secondary and higher education (Post 2011). This applies to the Indigenous youth, since a considerable number of Indigenous people are poor (INEC 2017).

Illiteracy<sup>8</sup> rates show notable differences among the Indigenous population in comparison to national averages. According to the Ecuadorian census conducted in 2010, the illiteracy rate of the total population aged 15 and over was under 7%, whereas among the Indigenous population of same age the illiteracy rate was as high as 20%. We can observe differences in literacy, as well as gender differences, between ethnic groups and geographical locations in Ecuador. For instance, of the Indigenous peoples, the Awá have the highest illiteracy rates, as 41% of the Awá people over 15 years of age cannot read or write. The gender gap is also notable: 27% of Indigenous women aged over 15 are illiterate, while the corresponding figure among Indigenous men is 14%. The illiteracy rates and educational indicators show that the Indigenous population is in a disadvantaged position in Ecuador.

In summary, the Indigenous population in Ecuador has been, and still is, disadvantaged in terms of the social, economic, and educational situation. Colonial schooling has played a significant role in the marginalization of Indigenous peoples. By colonial schooling I do not only mean schooling during the colonial era, but schooling that imposes the majority language, culture and knowledge. In the next section, I discuss in more detail the recent

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<sup>7</sup> Adult population here refers to the population aged over 23.

<sup>8</sup> Illiteracy means here that a person cannot read or write.

developments in the formal education for the Indigenous population in Ecuador, particularly those in the Amazonia region.

## 2.2 EDUCATION OF THE INDIGENOUS PEOPLES IN ECUADOR

In Ecuador, the Roman Catholic Salesian mission has been a major actor in the education of the Indigenous peoples, particularly in the Amazonia region. The Salesians established their missionary stations in the Amazonia region already in the late 19<sup>th</sup> century. The magazine of the Salesians, *Bollettino Salesiano*, portrays the goals and activities of the early Salesian missionaries. A text published in the *Bollettino Salesiano* in 1894 describes how the Salesian mission helps the Ecuadorian government “raise the numerous savage people, who live in the remote, immense Amazonian rain forest, out of ignorance and barbarity<sup>9</sup>”. According to the author of this text some “comforting” results in terms of Christian civilization were reached through constant preaching and children’s schools (Bottasso 1993, 10).

The role of the Salesians increased in the Amazonia region in the early 20<sup>th</sup> century. At that time, the importance of the Amazonia region for the Ecuadorian state grew for many reasons. Firstly, there were military confrontations between Ecuador and Peru in the Amazonia region. Furthermore, the Ecuadorian government allowed international oil companies to start exploring for oil in Amazonia. In addition, the region’s population began to grow gradually, as the *colonos*, meaning the settlers from Sierra, started to spread towards Amazonia. For these abovementioned reasons, there was a need to improve the infrastructure of Amazonia. But the government lacked funds. As a result, the government turned to the Salesians, who then founded schools and hospitals in the region. The missionary stations and the schools were generally located close to the *colonos*. For many of the Indigenous people, this meant that the schools were located far away from home, and Indigenous children often had to walk long distances to reach the school, or live in boarding schools. Boarding school meant that Indigenous children were separated from their parents and from the influences of the Indigenous culture, as the Salesian mission imposed the Christian religion and Spanish language on the Indigenous peoples (Rubenstein 2001, see also Gerlach 2003). In the boarding schools, Indigenous children were prohibited from speaking their Indigenous languages, ordered to abandon their culture and customs, for example the clothing and haircuts that were pertinent to their Indigenous community, and were subject to maltreatment. As a result of traumatic childhood experiences in a Spanish-speaking boarding school, some Indigenous people chose later in their adult life not to speak their Indigenous language to their own children. In this way, the missionary boarding schools

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<sup>9</sup> Translation from Spanish by the author.



had adverse consequences for Indigenous language vitality across generations (Krainer, 1999).

In addition to the Salesians, a North American organization called the Summer Institute of Linguistics (SIL) also played a role in the education for the Indigenous people in Ecuador. In Ecuador, SIL started in the 1950s, combining missionary work with linguistic research and promoting the substitution of the “unhealthy” aspects of the Indigenous cultures with Christian values (Freeland 1996:172). The main objective of SIL was to translate the Bible into different Indigenous languages. As a by-product of evangelization, SIL conducted linguistic research that contributed to the development of writing Indigenous languages. Importantly, SIL also contributed to literacy education and trained Indigenous teachers who would use their native language as the language of instruction (*Ministerio de Educación del Ecuador*, 2013).

Since the 1970s, the Salesian mission has been actively involved in initiatives that promote the use of Indigenous languages as languages of instruction in formal education for Indigenous peoples. For example, in the Amazonia region, the Shuar bilingual and bicultural educational radio (*Educación Radifónico Bilingüe Bicultural Shuar*) was established in 1979 in collaboration between the Salesian mission and a Shuar and Achuar peoples’ organization (*Federación Interprovincial de Centros Shuar y Achuar*) and the Ecuadorian ministry of education (*Ministerio de Educación del Ecuador*, 2013).

The gradual change from the imposition of the Spanish language and majority culture towards bilingual and bicultural education has been mainly supported by actors other than the Ecuadorian state. In the 1950s, the educational policies in Latin America started highlighting the quality of education, especially in higher education. The Latin American countries based their higher education on the traditions of European universities and European knowledge. Issues such as bilingualism, equality in educational opportunities, or Indigenous perspectives on education quality did not form part of the mainstream quality discourses (Arnové et al. 2003). However, the Latin American social movements, such as *educación popular* (popular education), and the Indigenous movements that started to grow in the 1970s, brought forward social, cultural and educational concerns of the Indigenous peoples and other marginalized groups, raising questions about the inequality of educational opportunities and outcomes (Morrow & Torres, 2002). Also issues related to decolonizing the mind and decolonizing education were discussed in Latin America already in the 1960s and 1970s (López, 2017). In the 1980s, the identity politics and attempts to recover Indigenous peoples’ dignity became particularly important issues in many Indigenous organizations, and highlighted the celebration of cultural difference, ethnic identity and ethnic pride (Langer, 2003).

The growth of the Indigenous organizations from the 1980s onwards coincided with increasing global interconnectedness and the growth in

number of international nongovernmental organizations (NGOs) that take an interest in Indigenous issues, human rights and environmental questions (Brysk, 2000; Langer, 2003; Mato, 2000). Such international NGOs have given significant support to Indigenous organizations, not only by providing indispensable financial support, but also by putting pressure on governments (Brysk, 2000). The Ecuadorian Indigenous movement, often considered one of the strongest in Latin America, has effectively worked in collaboration with different organizations at local, regional, national, and transnational levels (Brysk, 2000; Langer, 2003). The Ecuadorian Indigenous movement has actively promoted Indigenous identities and knowledge, and demanded culturally responsive education for Indigenous peoples in order to eliminate the assimilating effects of colonial schooling (Aikman, 1996; Brysk, 2000; Laurie et al., 2005). However, the Indigenous peoples of Ecuador are not a unanimous group who support the same views. Some Indigenous people, for instance, disagree with the ideas of interculturality and bilingualism in education, claiming that the intercultural and bilingual approach prevents Indigenous people from accessing Spanish-speaking mainstream knowledge (Botasso & Conjosa, 1991). Nevertheless, the largest Indigenous organization in Ecuador, the Ecuadorian Indigenous Nations Federation, CONAIE (*Confederación De Las Nacionalidades Indígenas Del Ecuador*), founded in 1986, has declared that the struggle to have IBE as the model for Indigenous people's "proper education" is one of its main missions (CONAIE, 2007).

In Ecuador, CONAIE has been an important political actor. And in CONAIE, as in other Indigenous peoples' movements in Latin America, the demand for self-determination has gone hand in hand with the demand for educational reforms (cf. López & Sichra, 2016). As a result, in 1988 IBE achieved formal status as the Ecuadorian national education system for the Indigenous population. By the 2000s, Ecuador had over 2000 IBE elementary schools and five intercultural bilingual teacher education (IBTE) institutes. The national IBTE curriculum (DINEIB 2005) emphasizes the importance of confirming Indigenous knowledge, cultural practices, languages and identities in order to produce intercultural bilingual primary school teachers with the competence to improve the sociocultural, linguistic and economic situation of the Indigenous population. Some initiatives have also been launched to develop intercultural or Indigenous universities. One of the most influential initiatives for Indigenous higher education in Ecuador was the Amawtay Wasi Intercultural University of the Indigenous peoples and Nations (*Universidad Intercultural de los Pueblos y Nacionalidades Indígenas*), established by CONAIE and the Scientific Institute of Indigenous Cultures (*Instituto Científico de Culturas Indígenas - ICCI*) in 2005. The Amawtai Wasi University was located in Quito, the capital city of Ecuador, in Sierra (Sarango, 2009).

In addition, several mainstream universities in Ecuador have developed ways to further cultural diversity within higher education by supporting Indigenous and Afro-Ecuadorian students' access to existing educational

programmes or by developing new educational programmes specifically for Indigenous peoples (Cuji, 2012). Ecuadorian universities have tended to develop educational programmes for Indigenous and Afro-Ecuadorian students in “extensions” in the rural areas, close to the rural Indigenous and Afro-Ecuadorian communities, and with focus on topics related to nature conservation, eco-tourism, agriculture, and education. This indicates that Indigenous and Afro-Ecuadorian people are seen primarily as rural people, interested in professions related to nature and agriculture. However, a large number of Indigenous and Afro-Ecuadorian people live in urban areas. The higher education opportunities in the major cities of Ecuador are mainly in the mainstream universities. Therefore, Cuji (2012) emphasizes that the mainstream universities should, firstly, pay more attention to supporting Indigenous peoples’ access to higher education also in the urban areas. Secondly, the mainstream universities should work in favour of more equal intercultural relations and, in particular, diminish racism and prejudice toward Indigenous and Afro-Ecuadorians. The narrow scope of the educational programmes directed towards Indigenous people does not reflect the aspiration and ambitions of Indigenous young people. Cuji (2012) claims that many Indigenous young people who end up studying in, for instance, IBTE programmes, are not particularly interested in a career in education; they simply had no access to or dropped out from their desired programme in a mainstream university.

Indigenous peoples’ elementary and higher education has undergone many transitions during the Correa government (2007–2017). In 2009, 21 years after IBE achieved its formal status, the Ecuadorian government abolished the autonomy of the DINEIB. According to the Executive Decree 1585, the IBE system was incorporated into the national educational system, falling within the authority of the Ecuadorian Ministry of Education. This change did not abolish the IBE system altogether, but it affected the Indigenous peoples’ sovereignty with regard to their education. More specifically, the Indigenous organizations lost their right to elect national and provincial authorities for IBE, as the right to choose authorities was given to the minister of education. (Martínez Novo, 2013) Moreover, in 2011, the government enacted a new law for the intercultural education, the LOEI (*Ley Orgánica de Educación Intercultural*). In principle, the LOEI supports interculturality, stating that all schools throughout Ecuador are intercultural. According to the LOEI, the study of Indigenous languages and local knowledges should be incorporated into the curriculum, and the natural and cultural heritage of the country should be protected. However, in practice, not much evidence exists of the use of Indigenous languages or the incorporation of Indigenous knowledges into the curriculum in mainstream schools. (Cortina, 2014; Martínez Novo, 2013 Rodríguez Cruz, 2015).

In higher education, the Ecuadorian state has not supported alternative or experimental higher education initiatives, such as intercultural bilingual higher education institutes or other educational programmes, for which

cultural diversity is a point of departure. On the contrary, the government of Rafael Correa has taken measures to reduce the number of universities and their rural “extensions”. The reduction in the number of institutions offering higher education specifically for Indigenous peoples has not been compensated by assuming affirmative actions to support the access of Indigenous people to study, to support them in completing their studies or finding opportunities to work in mainstream higher education institutions (Cuji, 2012).

In 2009 and 2013, the National Higher Education Evaluation Council, *Consejo de Evaluación, Acreditación y Aseguramiento de la Calidad de la Educación Superior* (CEAACES) conducted a national evaluation of higher education institutes, including the IBTE institutes. After an initial evaluation, the five Ecuadorian IBTE institutes were authorized to continue their activities for the time being, but were required to produce a quality improvement plan in order to gain permission to continue in the long term. The Amawtay Wasi Intercultural University of the Indigenous Peoples and Nations was closed in 2013 after the national evaluation (Acosta, 2013; CEAACES, 2014; CEAACES, 2013).

The closure of this Indigenous university was problematic in terms of international laws and regulations, since the UN Declaration on the Rights of Indigenous Peoples (UN General Assembly, 2007) clearly states that “Indigenous peoples have the right to establish and control their educational systems and institutions” (Art 14.1.). The perseverance of the Ecuadorian Indigenous peoples is reflected by the fact that immediately after the closure of the Amawtay Wasi, the supporters of this university established a community-based organization (*organización comunitario*) called *Pluriversidad Amawtay Wasi*, to continue the work of the intercultural university.

The recent developments in Ecuador in intercultural education, the legislation on intercultural education and higher education, the evaluation of higher education institutes, and events such as the closure of the Amawtay Wasi University have created tensions between the Indigenous population and the government, as well as between different Indigenous organizations, which have taken positions of either allies or opponents of the Correa government. (Cortina, 2014; Martínez Novo, 2013). For instance, some Indigenous people in Ecuador interpreted the actions of the CEAACES in closing the Amawtay Wasi University as intentional political acts against the Indigenous population. Other Indigenous people in Ecuador interpreted the closure more as an indication of the state being insensitive to new and alternative ideas regarding what constitutes higher education, what should constitute it, and how these alternative higher education institutes can be evaluated (Cuji 2012, Mato 2014).

### **3 CONCEPTUAL AND THEORETICAL BACKGROUND OF THE STUDY**

In the following sections, I review the literature that is essential for explaining the conceptual and theoretical background of this study. Literature by Indigenous and “third world” scholars is central to this study, and may challenge the hegemonic Eurocentric paradigms (see e.g. Grosfoguel, 2011). Since the context of the study is Ecuador and the Amazonia region, I have specifically studied the literature in Ecuador and the neighbouring countries. I discuss the literature related to the concepts of indigeneity and Indigenous knowledge in general, and that related to Indigenous knowledge in the Ecuadorian Amazonia in particular. Thereafter, I discuss the importance of Indigenous knowledge in education through theoretical tools that derive from the literature related to, for example, the fields of critical pedagogy, critical race theory, Indigenous education studies, and culturally relevant education. Lastly, I return to the aforementioned question of epistemic power relations through literature, which draws on postcolonial and decolonial theories.

#### **3.1 CONTESTED INDIGENEITY**

While conducting this study, I was asked what makes Indigenous knowledge indigenous? The concept of “Indigenous knowledge” is equivocal. Both the term “Indigenous” as well as “knowledge” are contested and ambiguous, and there are no univocal definitions of the individual terms, nor of the combination of the two. In this study, I mainly look at Indigenous knowledge in a certain local context, from the point of view of the Amazonian Shuar, Achuar and Kichwa peoples. But if we speak of Indigenous peoples and Indigenous knowledges in more general terms we can lean on, for example, international laws and conventions, particularly the International Labour Organization (ILO) Indigenous and Tribal Peoples Convention No. 169 (ILO, 1989) and the United Nations Declaration on the Rights of Indigenous Peoples (UN General Assembly, 2007).

The ILO Convention considers that “self-identification as Indigenous or tribal shall be regarded as a fundamental criterion” in order to determine which groups of people are Indigenous or tribal (ILO 1989, Art 1.2.). However, the Convention also states certain general features that characterize Indigenous and tribal people by claiming that the convention applies to peoples whose “social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations”, as well as peoples who “are regarded as Indigenous on account of their descent from the populations which inhabited the country, or a

geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions” (ILO 1989, Art 1.1.). The UN Declaration on the Rights of Indigenous Peoples also recognizes that Indigenous peoples are groups of people who have suffered as a result of colonization and “dispossession of their lands, territories and resources” and have their own “political, economic and social structures and [...] distinctive cultures, spiritual traditions, histories and philosophies” (UN General Assembly, 2007, 2). Therefore, looking at Indigenous peoples and Indigenous knowledge from the rights approach reveals that the issue is not only about having or claiming certain rights, but also about “righting wrongs” as Spivak (2004) says. Indigenous peoples, as groups, have been wronged. They have experienced colonization, discrimination and dispossession in relation to another more powerful or privileged group of people (Kenrick & Lewis 2004).

Both ILO (1989) Convention No 169 and the UN Declaration on the Rights of Indigenous Peoples (UN General Assembly, 2007) make clear statements on Indigenous peoples’ rights to maintain or revitalize and develop their cultural heritage, including their languages and knowledges. Both these international documents also cover Indigenous knowledge and education. ILO Convention No 169 states that “education programmes and services for the peoples concerned shall be developed and implemented in co-operation with them to address their special needs, and shall incorporate their histories, their knowledge and technologies, their value systems and their further social, economic and cultural aspirations” (ILO 1989, Art 27). While the ILO (1989) argues for developing educational programmes “in co-operation” with Indigenous peoples, the UN Declaration (UN General assembly, 2007) takes a further step in terms of Indigenous peoples’ sovereignty by stating that “Indigenous peoples have the right to establish and control their educational systems and institutions” and to provide education in their Indigenous languages and “in a manner appropriate to their cultural methods of teaching and learning” (Art 14.1.).

Thus, the ILO (1989) Convention and the UN Declaration (UN General Assembly, 2007) construct Indigenous peoples as groups of people with a special historical and social background, who have specific needs and rights. In order to claim their rights, these people needed to self-identify as Indigenous peoples. In some cases, this may have induced re-indigenization, as groups of people who did not previously identify as Indigenous people assumed an Indigenous identity for claiming their rights, as for instance in Macaboa, Ecuador<sup>10</sup>. To communicate with international organizations and allies, and to gain more international attention and leverage for their causes,

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<sup>10</sup> The community of Macaboa in the coastal area of Ecuador was considered Mestizo, but the leaders of the community recognized that it was useful for the community to assume an Indigenous identity in order to claim their land rights (Bauer 2009).

Indigenous peoples have formed new international organizations and alliances which in turn reshape new epithets and collective Indigenous identities. Epithets such as transnational “Amazonian Indigenous” or national “Ecuadorian Indigenous” are used for pushing the cause of diverse groups of Indigenous peoples. If these collective national or pan-Indigenous epithets override the more subtle, local, ethnic and cultural identities, indigeneity<sup>11</sup> may become a homogenizing epithet (Nina Pacari according to Langer & Muñoz 2003). However, cultural distinctiveness is an integral and well-recognized part of indigeneity. Western people, including the Western allies of Indigenous organizations, may tend to see Indigenous peoples as exotic “others,” emphasizing the difference between the Indigenous and non-Indigenous. Therefore, it may also be useful for Indigenous peoples to perform their distinctive indigeneity in order to attract the attention of international audiences (Mato, 2000). Exotic indigeneity can also be of value for tourism and marketing Indigenous handicrafts or other material culture (Wilson, 2008). This is to say that indigeneity is a social and political concept (Hathaway, 2010) that may have concrete social implications with regard to gaining rights and earning one’s livelihood.

The experiences of indigeneity, as well as the relations between the Indigenous and non-Indigenous, are manifold. Lucero (2006), for instance, writes in the Ecuadorian and Bolivian context about non-Indigenous people having expectations of some kind of “authentic” indigeneity that has not been “westernized” through the influences of Western education, language and culture. Through such expectations, indigeneity becomes an essentializing category with limited agency. Furthermore, the limits of indigeneity are set by outside (Western) observers instead of the Indigenous peoples themselves (Lucero, 2006, 35). In contrast, Jones (2011) writes about her experience as a researcher in New Zealand, where the Indigenous *Māori* people adhere to their cultural distinctiveness and separate themselves from the non-Indigenous *Pakeha*, while the *Pakeha* would rather wipe away the social division between Indigenous and non-Indigenous. She understands that the division is necessary for the *Māori*, because “to negate the difference in a society dominated by European assumptions is to sign the death warrant for *Māori* knowledges, language and identity” (Jones, 2011, 105). In this case, highlighting distinctiveness is a measure of protection. In other words, indigeneity may be either a restrictive and essentializing, or a protective and empowering epithet, depending on who is defining it. What makes the difference is Indigenous people’s agency and self-determination with regard to their indigeneity.

Therefore, many groups of people around the world name themselves Indigenous, perform their indigeneity and reconceptualize indigeneity through their specific concerns and desires for self-determination and sovereignty. Thus, indigeneity is produced in these performative and

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<sup>11</sup> I use indigeneity in the meaning of *being Indigenous* or *being closely related to Indigenous*.

contextual processes of self-identification by the individuals and groups that name themselves Indigenous (Graham & Penny, 2014). Indigeneity and Indigenous knowledge are often understood in the discourse of difference through binary oppositions to whiteness or the colonizer (see Andersen 2009) and Western or Euro-centric knowledge (e.g. Battiste 2008b; Mignolo 2007). The opposition between Western and Indigenous dates far back in time to the beginning of colonization. For example, Flesken (2013) refers to the history of Bolivia and how the Spanish colonizers drew a distinctive line between themselves and the Indigenous peoples. This boundary, set by the colonizer, grouped the diverse Indigenous peoples of the region together. Before this, these groups had no sense of belonging together and may not have shared very much culturally or linguistically. What they do share now is the experience of colonization, a common difference from the dominant people (Flesken 2013). Thinking in binary oppositions is a colonial configuration and a common feature in Western thinking and science. For example, in early structuralism, which has greatly influenced social sciences and humanities, the binary opposition is fundamental (Saussure, 1915). Thinking in binaries is not very compatible with the holistic and relational epistemologies that are considered typical of Indigenous peoples (e.g. Porsanger 2011). Furthermore, in Western theories, binary oppositions have been criticized and deconstructed by theories such as post-structuralism and post-colonialism. Thus, a culturally pertinent and decolonizing way to approach knowledge is to deconstruct the binary oppositions and go beyond the discourse of difference. Macedo (1999, xv) speaks of a “false dichotomy between Western and Indigenous knowledge” and argues that “it is through the decolonization of our minds and the development of political clarity that we cease to embrace the notion of Western versus Indigenous knowledge, so as to begin to speak of human knowledge. It is only through the decolonization of our hearts that we can begin to humanize the meaning and usefulness of indigeneity”.

However, such decolonization of the minds and hearts should penetrate the entire dominant society and its institutions if it is to actually have an effect on the status of the Indigenous peoples and Indigenous knowledge in society. In many parts of the world, Indigenous peoples continuously encounter discrimination and disparagement because of their Indigenous background (Durie 2005). Therefore, the generalizing concepts of indigeneity and Indigenous knowledge are useful, as they introduce the global perspective, reminding us that many Indigenous peoples in the world share the colonial experience and that the knowledges of this diverse mass of people around the globe have been systematically dismissed by the dominant society. These people have a common cause to claim human rights and their rights as a minority entitled to protection by the state, and as a group that has the right to exercise self-determination and sovereignty (Durie 2005; UN General Assembly 2007). Thus, as long as people experience discrimination or epistemic injustice on the basis of their Indigenous backgrounds, there is a need to maintain the categories of Indigenous peoples as well as Indigenous



knowledges. At the same time, it is important to speak of Indigenous peoples and Indigenous knowledges in the plural, in order to make visible the diversity within these generalizing categories.

### **3.2 CAN WE DEFINE INDIGENOUS KNOWLEDGE IN THE ECUADORIAN CONTEXT?**

Indigenous knowledge is sometimes described as local knowledge. In other words, Indigenous knowledge is understood as being tied to local natural, social, and cultural conditions and requirements, and as being derived from local people's experiences, reasoning, beliefs, and memory. (See Battiste, 2008a; McGregor, 2004; Semali and Kincheloe, 1999.) Furthermore, Indigenous knowledge is sometimes described in terms of traditional knowledge (e.g. Barnhardt and Kawagley, 2005), which directs attention to the historical aspects of the knowledge, its continuity over time, and how it is passed on from one generation to another. However, traditional does not indicate that Indigenous knowledge is stationary or caught in past times or places. On the contrary, Indigenous knowledge changes over time and according to circumstances (see Kincheloe and Steinberg, 2008; Semali and Kincheloe, 1999). Academic disciplines of natural and environmental sciences have recognized the practical value of empirically-based and practically-oriented local, traditional or Indigenous knowledge as an important resource for many issues related to everyday living and environmental management in different local contexts (Ruddle 2000, 278; Simpson 2004, 373-374). Thus, a notable amount of academic literature discusses Indigenous knowledge from the perspective of environmental knowledge and in terms of Traditional Ecological Knowledge (TEK) (Simpson, 2004).

Indigenous knowledge is also a contested concept. North American Indigenous scholars Battiste and Henderson (2000), for instance, would rather not define Indigenous knowledge at all. They claim that definitions of the concept are misleading, often imposed by Eurocentric thinkers, and do not reflect the diversity of Indigenous peoples and their knowledge (Battiste and Henderson 2000). With regard to diversity, another North American Indigenous scholar, McGregor (2004) claims that "in the Aboriginal worldview, knowledge comes from the Creator and from Creation itself. Many stories and teachings are gained from animals, plants, the moon, the stars, water, wind, and the spirit world. Knowledge is also gained from vision, ceremony, prayer, intuitions, dreams, and personal experience" (p.388). A Hawaiian scholar, Meyer (2001), discusses fundamental differences between Hawaiian and their colonizers highlighting the importance of knowing through one's body and through the senses: "We simply see, hear, feel, taste, and smell the world differently" (p.125). Overall, the ways of gaining Indigenous knowledge are manifold. Furthermore, Indigenous knowledge is closely related to the lived experiences of the Indigenous people: "Indigenous

peoples come to know things by living their lives and adding to a set of cumulative experiences that serve as guideposts for both individuals and communities over time. In other words, individuals live and enact their knowledge and, in the process, engage further in the process of coming to be—of forming a way of engaging others and the world” (Brayboy & Maughan, 2009). This is to say that the acquisition (embodiment) of Indigenous knowledge requires a personal investment of time, in a similar way as cultural capital when it becomes embodied as an integral part of a person (Bourdieu, 2004).

Despite the diversity of Indigenous knowledge and Indigenous ways of knowing, gaining and living knowledge, commonalities also exist between many Indigenous peoples, including the Amazonian peoples. For example, several scholars claim that Indigenous ways of viewing the world tend to be holistic and that knowledge is not seen as something that could be fragmented into different categories or separated from the people or the environment (Battiste and Henderson, 2000; McGregor, 2004; Reascos, 2009). Furthermore, Battiste (2008b) has claimed that Indigenous knowledge should be recognized “as a distinct knowledge system, with its own concepts of epistemology and scientific and logical validity, within contemporary education systems” (p.85). In my view, looking at Indigenous knowledges as knowledge systems is a discursive way of pointing out that incorporating “parts” of Indigenous knowledge into the instruction is not culturally pertinent without understanding the “whole”, the holistic and relational epistemology. Therefore, on several occasions in the articles that form part of this study, I discuss Indigenous knowledge as a knowledge system that is based on Indigenous epistemology.

By using the term knowledge system in the articles, I am not referring to a single closed system that is in opposition to “Western” knowledge. On the contrary, I would like to emphasize the diversity and fluidity within Amazonian Indigenous knowledge. During the ethnographic field study that I conducted in Ecuador, I discussed Indigenous knowledge with the research participants on their own terms. Therefore, in this study, Indigenous knowledge is, primarily, the knowledge that derives from the Shuar, Achuar, and Kichwa peoples of the Ecuadorian Amazon. That is, knowledge that the Indigenous research participants recognize as “cultural knowledge” or “our knowledge” or that the participants claim originates from or belongs to their reference group as Indigenous people. These Amazonian Indigenous peoples have diverse ways of knowing, living and gaining knowledge. At the same time, we can see some common features in their epistemologies.

Ecuadorian researcher Reascos (2009) outlines the tenets of an Indigenous epistemology from an Ecuadorian perspective. He argues that most importantly, Indigenous epistemology is holistic, interested in totality rather than distinct disciplines or fields of knowledge. According to Reascos, Indigenous epistemology is relational; it starts from the premise that nothing in the universe is meaningful on its own and that everything has value in

relation to the totality. The holistic and relational epistemology of the Amazonian Indigenous peoples has been studied by groups of Amazonian Kichwa and Shuar researchers (Andy Alvarado & al 2012; Chiriap Tsenkush & al. 2012). They have found that a central feature of the Amazonian Kichwa and Shuar epistemology is the close connection between the human world<sup>12</sup>, the spiritual world above in the sky<sup>13</sup> and the spiritual world below in the soil<sup>14</sup>. The vital force and intellectual power, *Samay* (in Kichwa) or *Arútam* (in Shuar), guides all beings and phenomena in the human, non-human and spiritual worlds. Human society acquires its understanding of the human world and the spiritual worlds via myths and rites, and shares this understanding through diverse symbols (Andy Alvarado & al 2012; Chiriap Tsenkush & al. 2012).

Based on holistic and relational ontologies, the Kichwa and Shuar people tend to conceptualize time as a circle or spiral of recedings and approachings in time and space (Chacón 2012; Cornejo 1993; Pari Rodríguez 2009; Yañez 2009). Salgado (2011, 63) argues that for the *Naporuna* (Amazonian Kichwa of the Napo area), time is part of the “spiral of life” and is understood as “a living thing just like the spaces, animals, invisible beings, the ancestral medicine and the man and the woman”. As Pari Rodríguez (2009) states, the Indigenous circular or spiral conception of time and space vs. the Western linear conception of time essentially delineates the ways of thinking and acting of the Indigenous and Western people, respectively. Santos (2004) claims that the monoculture of lineal time is one of the mechanisms that produce a lack of alternatives to the hegemonic conception. Linear time prevails in Western thinking in such areas as, for example, Jewish and Christian religions, history and sciences (Marcus 1961; Santos 2004; Yañez 2009).

Furthermore, Reascos (2009) claims that in Indigenous epistemology, the subject that produces and holds the wisdom (regarding totality) is more important than knowledge (about separate things). In addition, to Reascos, Indigenous epistemology is pluralistic and inclusive, whereas Western epistemology tends to be monistic and exclusive.

In Ecuador, the Indigenous movement and the IBE system has been active in writing about Indigenous knowledge and epistemology. The interest in researching and writing about Indigenous knowledge is related to the project of decolonization and Indigenous people’s self-determination with regard to what aspects of their knowledge and cultures are researched, how they are researched, and what is written about them (Kuokkanen, 2000; Smith, 1999). Furthermore, Ramírez (2001) proposes that rigorous research on the knowledge of the Indigenous peoples should be conducted with the objective to create “scientific knowledge based on Indigenous knowledge”. In this way,

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<sup>12</sup> The world of humans is called *Kay Pacha* in Kichwa and *nunka* in Shuar.

<sup>13</sup> The spiritual world above is *Awa Pacha* in Kichwa and *nayaimp* in Shuar.

<sup>14</sup> The spiritual world below is *Uku Pacha* in Kichwa and *init* in Shuar.

Ramírez (2001) claims, Indigenous knowledge would “broaden the human horizon of knowledge” by contributing to the development of sciences.

### **3.3 ACKNOWLEDGING INDIGENOUS KNOWLEDGES IN EDUCATIONAL PROGRAMMES**

Mainstream educational programmes have often seen the Indigenous peoples as well as other minorities (based on race, culture, sexual orientation) or other non-dominant social groups (poor, working class) as lacking or deficient. As the focus has been on the assumed deficiencies of the dominated groups, this has led to a tendency to see the students themselves and their families and backgrounds as being the reason for the students’ low academic achievement. At the same time, the possible problems or causes of inequality within the educational system have not been addressed (see García and Guerra, 2004; Smith, 2000; Valencia, 1997; Yosso, 2005).

This kind of “deficiency thinking” or thinking that focuses on assumed deficiencies, has been criticized by scholars associated with theories such as critical pedagogy and critical race theory (CRT). To criticize thinking that focuses on assumed deficiencies, scholars have drawn attention to the “community cultural wealth” (Yosso, 2005), “resistant cultural capital” (Solórzano and Villalpando, 1998), or “cultural resources” (Chigeza, 2011) of the non-dominant social groups. Common to all the above-mentioned is how people from non-dominant social groups are acknowledged as “holders and creators of knowledge”, as Delgado (2002) puts it. Moreover, from these viewpoints, the previously sub-alternized knowledge of non-dominant social groups is viewed as an asset, resource, or capital that should be acknowledged in school settings.

The particular situation of the American Indian people and their experiences have been of interest for tribal critical race theorists (TribalCRIT). TribalCRIT is inspired by CRT, but pays special attention to the widespread effects of colonization and the assimilation of Indigenous people in schools and society at large (Brayboy, 2005; Castagno & Lee, 2007). In the context of Indigenous education in North America, Indigenous Dakota nation scholar Wilson (2004) argues that acknowledging a higher status for the knowledge that derives from Indigenous people contributes to the empowerment of Indigenous populations and helps change unequal power relations. Fundamentally, the aim of critical pedagogy, CRT and TribalCRIT is student empowerment and social justice – a social transformation that goes beyond the schools (Freire 2005a, McLaren 2007, 195) and furthers Indigenous sovereignty (Brayboy, 2005). In Freire’s critical pedagogy, empowerment and social change arises from conscientization, or a critical awareness of the social reality (Freire 2005). In the educational programmes designed by Freire and his colleagues, the first step towards a critical awareness of social reality is the use of instructional methods that are based on a horizontal relationship of

empathy and dialogue between people. According to Freire, a dialogue is based on a relationship of love, hope and mutual trust, in which all the actors can speak for themselves to name the world (Freire 2005a). This means that oppressed groups need to exercise their right to speak for themselves, because dialogue, says Freire (2005a), is possible only when all the participants reflect on the same purpose of changing and “humanizing” the world, and nobody names the world on behalf of the other.

Central to Freire’s thinking is the concept of educational *praxis*, thinking that education and learning is tightly connected with the critical awareness of social reality and taking action to change or transform the world based on critical reflection (Freire, 2005b). Empirical knowledge about social reality, and about peoples’ actions within this reality, is the key to gaining insight and creating such theoretical thinking that supports making positive changes in the world (Morrow & Torres, 2002)

In addition, connecting education with students’ lived experiences and local phenomena is supported by a wide variety of educational scholarship. Knowledge that is closer to the students’ life-worlds, and hence closer to the students’ spontaneous concepts, is assumed to help students relate to the more abstract knowledge and scientific concepts that traditionally prevail in schooling (Bransford and al. 2004; Esteve and al. 1999). The theory of situated learning understands learning as a dimension of social practice. During the learning process, a newcomer to a community of practitioners becomes increasingly involved in the everyday practices of the community in question (Lave and Wenger 1991). Jean Lave ([1988] 1993, 14) claims that everyday activity and “knowledge-in-practice, constituted in the settings of practice, is the locus of the most powerful knowledgeability of people in the lived-in world”. Educational philosophies such as place-based education (Gruenewald & Smith, 2014; Smith, 2002) also emphasize the close connection between educational practices and locality, meaning the local, natural, social, and cultural environment. Researchers of Alaska native education argue that place-based educational practices can be beneficial for all students in any setting, particularly for Indigenous peoples because of their relationship with the land (Barnhardt and Kawagley, 2005) or nature. At the same time, the literature related to culturally relevant (or culturally responsive) education by proponents of multicultural education and Indigenous education argues that education that is connected with students’ life experience and previous knowledge has a positive influence on, for example, students’ academic achievements, self-esteem and identity (Bishop et al., 2007; Castagno & Brayboy, 2008; Demmert, 2001; Gay, 2010; Kanu, 2007; Ladson-Billings, 2009). The goal of culturally responsive education is to further the academic success of minoritized students while maintaining their cultural integrity (Castagno & Brayboy 2008; Gay 2010; Ladson-Billings 2014; Paris 2012). Furthermore, previous research in North America suggests that incorporating Indigenous knowledge and culture into the curriculum is associated with decreasing dropout rates (Demmert 2001). To support culturally relevant

teaching, educational programmes should implement a curriculum that incorporates the knowledge that derives from the students' cultural background (Shadduck-Hernández 2006).

A multitude of educational programmes for Indigenous peoples around the world have adopted diverse ways of incorporating Indigenous knowledge in education. Australian scholar McConaghy (2000) claims that multicultural or bicultural programmes for the Indigenous peoples tend to see the "Indigenous" primarily within the realm of culture, and the "Western" as leading the way in terms of educational ideologies, theories or pedagogic practices. However, this juxtaposition is artificial, since Indigenous knowledge could equally as well contribute to education theories and teaching methodologies (See Aikman 2003; Barnhardt and Kawagley 2005). The Kaupapa Maori education system in New Zealand, based on Maori thinking and theorizing, is a prominent example of applying Indigenous philosophy and values to educational theory and practice (see for instance Bishop and Glynn 1999; Smith 1997). Other aspiring educational initiatives include, for instance, the Alaska native education (Barnhardt & Kawagley, 2011) and the Hawaiian medium schools and teacher education programme (Wilson & Kawai'ae'a, 2007). What is common to these educational initiatives in different locations is the aspiration of incorporating Indigenous knowledge into the fundamental principles of the curriculum. That is, Indigenous knowledge is not included in the curriculum on only special days or cultural events; it guides the instructional practices and other everyday practices of the school.

Based on the literature, it seems essential to strive towards an in-depth understanding of the implications of Indigenous philosophies for educational theory and practice. Without such a profound understanding of Indigenous thinking, there is a great risk of adopting an overly simplified understanding of incorporating Indigenous knowledge into the curriculum and educational practices. For instance, understanding Indigenous knowledge as only empirical, practice-oriented knowledge may limit the thinking regarding appropriate instructional practices for Indigenous students. Bishop and Glynn (1999) pointed out this problem, claiming that in New Zealand, many Maori and non-Maori teachers take it for granted that the Maori prefer hands-on activities to dealing with abstract concepts. According to Bishop and Glynn, this is a myth created based on the idea of white supremacy. White supremacy thinking does not recognize that within Maori cultural contexts, such as the Kaupapa Maori education system, Maori children learn effectively, and teaching is conducted "within and through abstract concepts, metaphors, allusions and imagery" (Bishop and Glynn 1999, 29). In a similar vein, Prada Ramírez (2009), a researcher of education in the Bolivian Amazonia, criticizes the understanding that Indigenous people would prefer only empirical ways of learning. He notes that the abstract thinking of the Amazonian *Tsimané* and *Moseten* people escapes the eye of the non-Indigenous scholars and educators, who connect abstraction with the existence of alphabetic writing.

### **3.4 EPISTEMIC POWER RELATIONS AND BROADENING THE HORIZONS OF KNOWLEDGE THROUGH ITS INTERCULTURAL CO-CONSTRUCTION**

Postcolonial and decolonial theories form one central theoretical basis of this study. These theories recognize and analyse the implications of the historical fact of colonial power relations that have produced privileged position of the Western knowledge and epistemology and subaltern position of other knowledges, including Indigenous knowledges (Mignolo, 2000; Santos, 2007). Western knowledge and ways of knowing and viewing the world prevail in academia, and the criteria determined by Western disciplines have become the basis for what counts as legitimate knowledge (Smith 1999; Spivak 1988). Furthermore, the Western tradition of knowledge tends to see itself as something neutral or objective, and does not recognize itself as only one point of view among others (Grosfoguel 2009). Critical voices within Western academia argue for a more nuanced understanding of knowledge, and of the relations between knowledge and power. Post-structuralist theory, for instance, recognizes that science is only one knowledge-producing system of discourse among other such systems. Thus, science should not be seen as a better system for producing knowledge than the other knowledge-producing systems of discourse (Davies 2004).

In the thinking regarding epistemic power relations, I rely particularly on the postcolonial and decolonial theorizations. Within this field, Santos (2007) speaks about the epistemic dominance of the West described above as “abyssal thinking”. He describes abyssal thinking as a system of visible and invisible distinctions that divide social reality into two realms: “this side of the line” and the “other side of the line.” In abyssal thinking, everything that falls on the other side of the line is produced as non-existent, meaning that these things are not considered relevant or comprehensible when looked at from “this side of the line” (Santos 2007). With regard to Indigenous and Western knowledge, abyssal thinking privileges Western epistemology and, particularly, modern science. In addition, Western philosophy and theology are located on “this side of the line,” whereas Indigenous knowledge, among others, is on the other side of the line; it is incomprehensible to Western ways of knowing and, thus, non-existent to the West (Santos 2007). Santos (2007) claims that abyssal thinking has produced an epistemicide, a destruction of non-Western knowledge. To go beyond abyssal thinking, says Santos (2007), one has to recognize the persistence of abyssal thinking, break with modern Western ways of thinking, and instead, “think from the perspective of the other side of the line” (p.66).

In Ecuador, Walsh (2012, 22) underlines the importance of thinking “from ‘other’ philosophies, epistemologies and knowledges” as well as speaking with – rather than about – the “other”. By “other” Walsh (2012, 14) refers to, specifically in the Ecuadorian context, the Indigenous peoples as well as afrodescendants, those who have “lived the colonial wound”. The

decolonization of knowledge is included in the political project of the Ecuadorian Indigenous movement and is expressed particularly in the concept of “scientific interculturality” which could, alternatively, be named “epistemic interculturality” (Walsh, 2012). The idea of epistemic interculturality is to relate Indigenous and non-Indigenous knowledge “within and from difference”, to challenge the Western understanding of knowledge and philosophy, and to promote “intercultural co-construction of diverse epistemologies and cosmologies” (Walsh, 2012, 17).

As mentioned above (p.22), Ecuadorian Indigenous scholar, Ramírez (2001), argues that this co-constructive relation between Indigenous and non-Indigenous knowledge in the academe can contribute to academic thinking and “broaden the human horizon of knowledge”. This broadening of the horizons is supported by Mignolo (1998, 2000), who suggests that the cultures of scholarship are changing in the face of the emergence of border epistemology and “barbarian theorizing”. By this he means that people whose knowledge has been subalternized by the colonizer think and theorize in the bicultural, bilingual (or bilanguaging, as Mignolo puts it) location in between the Western and the subalternized epistemologies, and generate new ways of knowing. In border thinking the “locus of enunciation” is dislocated from the mainstream to the subaltern; in other words, knowledge is created from the subaltern perspective. Furthermore, in the concepts of border thinking and border epistemology, Mignolo (2000) ties knowledge and language together in an intimate relation of “an other thinking”, “an other logic”, and “an other tongue”. Mignolo and Tlostanova (2006, 211) argue that border thinking is decolonial thinking, and requires “dwelling in double consciousness<sup>15</sup>” – a condition that emerges from the experience of being colonized.

Grande (2008) deliberates on such new ways of knowing from the perspective of an Indigenous scholar who works in educational research, and settles on “red pedagogy”, Indigenous pedagogy that “operates at the crossroads of Western theory – specifically critical theory – and Indigenous knowledge” (p.234). Red pedagogy, says Grande (2008), is a “space of engagement...the luminal and intellectual borderlands where Indigenous and non-Indigenous scholars encounter one another, working to remember, redefine, and reverse the devastation of the original colonialist ‘encounter’” (p.234). Grande (2008) presents the borderland as a space of engagement for Indigenous and non-Indigenous individuals, while Mignolo and Tlostanova (2006) speak of an in-between space of encountering epistemologies in the thinking of an individual. Both views demand, first and foremost, that Indigenous scholars are involved in the academic discussion, and secondly that these scholars draw on Indigenous knowledge instead of adopting

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<sup>15</sup> Mignolo and Tlostanova (2006) refer to double consciousness as conceptualized by W.E.B. Du Bois. According to Dickson (1992), Du Bois referred to double consciousness, most importantly as “an internal conflict in the African American individual between what was ‘African’ and what was ‘American’” (p. 301).



Western academic traditions. Both Indigenous knowledge as well as “border knowledge” (related to bilingualism, biculturalism, and the ability to cross borders between Indigenous and non-Indigenous epistemologies) are valuable resources for the Indigenous scholar.

Mignolo’s concept of border thinking borrows from Anzaldúa’s (1999) thinking and writing on borderlands and the emerging new (Mestiza) consciousness. Anzaldúa (2002, 1) describes the borderland as an “unstable, unpredictable, precarious, always-in-transition space”, which lacks clear boundaries and is located in between different worlds, different realities, different consciousness. Borderlands can be a positive link to new ideas and new worlds, but at the same time, a threatening space of discomfort and change. Moreover, Anzaldúa highlights the bridges across the borderlands, bridges that take one to “unfamiliar territory”, to other realities, other consciousness. Anzaldúa sees herself as a bridge or a mediator between cultures (Anzaldúa 2002). Such mediators or cultural brokers are needed in multicultural schools (Weiss 1994). Particularly in the education of Indigenous people, teachers should be able to help students cross the cultural borders between (Western) school knowledge and Indigenous knowledge (See Aikenhead 2001; Cajete 2008).



## 4 RESEARCH PROCESS

My first exploratory visits to Ecuador took place in March and June 2006 in connection with the EIBAMAZ development collaboration project. EIBAMAZ was a regional Andean project to strengthen the IBE for the Indigenous peoples in the Amazon region. The project was conducted during the years 2005–2012 in three countries: Ecuador, Peru and Bolivia. EIBAMAZ focused on collaboration with regard to intercultural bilingual teacher education, the production of educational materials and supporting research related to IBE in Amazonia. The project was coordinated regionally by UNICEF Ecuador in collaboration with the UNICEF offices in Peru and Bolivia. It was funded by the Finnish Ministry for Foreign Affairs. The network of local collaborating partners included universities and Indigenous organizations in Ecuador, Peru and Bolivia. EIBAMAZ had a bottom-up approach in which Indigenous organizations, communities and individuals played a particularly important role as partners and experts in the planning and implementation of the project. (Castro & Pallais, 2015; EIBAMAZ 2009). The University of Helsinki offered support services for the EIBAMAZ project as an academic partner in Finland. This collaboration triggered my doctoral research project. However, this research was not conducted as part of the international collaboration, but as a separate individual research project.

During my first two exploratory visits I studied IBE in Ecuador and Peru and Bolivia, the concept of interculturality within the field, and how Indigenous ontologies and values are taken into account and supported in the IBE curricula, educational materials and classroom practices. During these exploratory trips, I visited the educational ministries and various institutes offering IBE and teacher education in Ecuador, Peru and Bolivia. I conducted interviews with Indigenous educational authorities, researchers and teacher educators, as well as some representatives of NGOs working in the area of Indigenous or intercultural education.

After the exploratory visits I reformulated my preliminary research questions and selected one IBTE institute in Ecuador for an ethnographic study. I chose this particular institute for several reasons. First of all, it was an interesting intercultural environment because its students represented different ethnic and linguistic groups. Importantly, the institute was willing to participate in the study and it was accessible in terms of transportation. Furthermore, the political situation in the region at the time of initiating this study was in favour of choosing a field site in Ecuador rather than in Bolivia or Peru. After my initial visit and the first interviews there in 2006, I contacted the institute to formally ask for approval to conduct the study (see Appendix 1). Thereafter, I conducted fieldwork at the institute and in its affiliated elementary school during two field visits, one in November–December 2007 (six weeks) and the other in July 2009 (two weeks).

## 4.1 RESEARCH ETHICS

A researcher has to ensure compliance with the ethical principles and responsible conduct of research throughout the research process. The first steps of the responsible conduct of research include the principles of “integrity, meticulousness, and accuracy in conducting research, and in recording, presenting, and evaluating the research results” (TENK, 2012). I have strived towards these aims and considered ethical questions throughout the planning and realization of this study, as well as when publishing the findings. The study follows the guidelines of the Finnish Advisory Board on Research Integrity (TENK), including the general ethical guidelines for good scientific practice and procedures (TENK, 2002) and the particular ethical principles of good scientific practices in the humanities and social and behavioural sciences (TENK, 2009).

These ethical guidelines do not cover the specific concerns related to research involving Indigenous peoples. The main shortcoming in the mainstream guidelines such as TENK (2002, 2009) is that they tend to focus on individual research participants and the ethical concerns related to the integrity of the individual. In contrast, from an Indigenous perspective, the ethical guidelines should consider the collective; the ethical concerns related to the self-determination of the Indigenous community (Heikkilä & Miettunen, 2016). Therefore, in this study I deliberated on research ethics from the perspective of individual research participants as well as of the Indigenous community.

This study used qualitative research methods and involves direct interaction between the researcher and the research participants. I recognize that the relation between researchers and research participants is always a relation of power. The researcher makes decisions related to the research approach, topic and data-producing activities. In an interview and other data-producing activities, the researcher directs the interaction and discussion towards certain goals or topics. The research participants have limited possibilities, as either individuals or as a community, to affect the research process and the interaction in an interview or in other data-production activities (Kuula, 2006; Tolonen & Palmu, 2007). In this vein, the responsible conduct of the researcher is of utmost importance during the research.

As Kuula (2006) argues, the researcher has to make sure that the participants are treated in a respectful way. Furthermore, as Battiste (2008a) notes, a researcher has to respect the Indigenous communities with regard to what knowledge can be shared with others and in what contexts this knowledge can be shared. This is a question of both ethics and how we understand Indigenous knowledge. As an ethical question, this relates to the Indigenous people’s self-determination with regard to what aspects of their knowledge are researched, how the research is conducted, what is written about these knowledges and how and where the knowledge is used (Kuokkanen, 2000; Smith, 1999). In this study, I approached the Indigenous

community and asked for their approval to conduct the study. The Indigenous community leader approved the study and my stay in the community. While conducting the field study, I followed the ethical guidelines by respectfully both approaching and interacting with the participants, as well as by respectfully presenting the findings in research publications. Although I am aware that some of my findings are not pleasing to the research participants, the research publications related to this study do not reveal any issues that may cause mental, social or financial harm to the participants or to the community (TENK 2009).

Respectfulness also means that the findings discussed in the research publications are based on rigorous research (Hirvonen 2006). Pietarinen (2002) and Hirvonen (2006) argue that researchers' responsibilities reaches further than the way in which they write about their findings. They claim that researchers should also try to influence how their findings are used. I find this an interesting point of view, but very difficult to tackle in practical terms. As a researcher, I have no control over the ways in which other people read, interpret, cite or use the findings I have made public in international journals.

#### **4.1.1 PARTICIPANT AUTONOMY AND THE COMPLEXITY OF RESEARCHER-PARTICIPANT RELATIONSHIPS**

One of the central ethical principles in the humanities as well as in the social and behavioural sciences is related to the autonomy of the research participants, meaning that their participation in the research is voluntary and based on informed consent. According to these guidelines, informed consent can be obtained through either oral or written communication. (Kuula, 2006; TENK, 2009). At the beginning of the first field visit I understood that in order to conduct a study at this teacher education institute, it was of vital importance to first be accepted by and have the informed consent of the Indigenous community of the area in which the institute was located. Naturally, I also needed to be accepted by the school community, but that was secondary to the acceptance of the Indigenous community. I had discussed my research ideas earlier with the DINEIB officials, and obtained their approval to continue and conduct the study at this particular teacher education institute. In addition, I had been at this institute before for a short visit and interviewed some of the teacher educators before I started the first fieldwork period. But the actual moment when my field study was approved was during one of the first days of my first actual fieldwork stay in the community, when I was walking on a road with my Kichwa host, Sabina, and some other people from the institute. Sabina saw the leader of the Indigenous community passing by and she introduced me to him. I spoke briefly with the community leader, explaining my project. At the end of our conversation he nodded and said it was not a problem if I wanted to stay in the community, walk around talking to people, conduct interviews and take photographs for the study. It was an informal conversation in the middle of a road, and no papers were signed, but this approval, this

informed consent mattered in the community more than any approval by DINEIB officials or the administrators of the teacher education institute.

Considering the prevalence of oral rather than written communication within the Indigenous community, I was advised not to require the research participants to sign written consent, but to use oral communication instead. In fact, there was no particular reason to require written consent from each of the participants, as this study did not use register data on the participants, discuss sensitive topics or involve children. Moreover, the data and the participants' privacy were protected, and the data were not stored for further use in a form that included identifiers (Kuula, 2006). Therefore, in this case, informed consent means, in brief, that the research participants were informed about the research and were willing to participate (TENK, 2009).

In this study, the research participants received information about the research and my role as a researcher on several occasions. First of all, during my first days at the main research site, one of the teacher educators introduced me to the community elders as well as to the students and teachers at the teacher education institute where I conducted my main data gathering activities. At the institute, the introduction took place during a Monday morning assembly at which all the students and educators were gathered. Meeting the community elders and the introductory words at the morning assembly did not offer the opportunity to discuss the study in detail, but it was a way to inform everyone that I was a doctoral student from Finland residing in the community and conducting a study at the institute. I introduced myself and my study to the second-year teacher education students when I began participant observations in their classes. Secondly, I asked people for their consent to interview them and started each interview by briefly explaining what the study was about, that it forms part of my doctoral dissertation, and that the name of the interviewees would not be mentioned in any publications. I had also printed out written information sheets (see Appendix 2) that included a brief description of the study and my contact information. Furthermore, if anyone asked me more about my study or my role as a doctoral student and researcher, I tried to explain it as clearly as possible. Thus, research participants and other people of the community were informed about the research.

This was an ethnographic study, and part of the research data derived from participatory observation at the institute and in the community. On many occasions I decided to write notes in my research journal later, so that I could focus on participating in the events. For instance, when I was asked to join a group of Shuar students to learn and perform a Shuar dance, I accepted the invitation. For me, such participation was a way to simultaneously gain experiential knowledge, show respect for local traditions and events, and give something of myself to the interaction instead of keeping a distance and taking a non-participant observer role.

I agree with Coffey's (1999) argument that a researcher may have multiple, changing roles while doing fieldwork, and that the researchers' engagement

with or immersion in the community can be productive as long as it does not lead to over-rapport or over-identification. At the same time, I recognize that there are ethical concerns related to participant observation in particular, and that the role of a researcher as a stranger-observer or a familiar-participant is, in general, blurred (Coffey, 1999; Murphy & Dingwall, 2001). The researcher's engagement helps build rapport with the research participants which, again, helps data production. A good rapport can also create situations in which the participants do not remember that the researcher is gathering data for certain research purposes (Soria 2014). Therefore, I have carefully examined the observation data and deliberated whether they contain any sensitive information that might be harmful to someone, whether anyone has talked to me confidentially or as a friend (see Kuula 2006, Soria 2014), or whether the data include Indigenous knowledge that the Indigenous community may not wish to share with others (Kuokkanen, 2000; Smith, 1999). In the publications, I do not cite any data that in my view might be considered sensitive.

The research interviews were more formal discussions during which I told the participants about the research, used an audio recorder, and wrote notes. In other words, the interviews were clearly demarcated from everyday conversations, even though the discussion in the interviews often took an informal tone. A relaxed atmosphere and a flowing conversation may indicate that an interview was successful and produce interesting data. However, if the interviewees forget that they are in an interview, they may reveal things not intended for a researcher. They may also say things "off the record" (Kuula, 2006, Spradley, 2016). While processing and analysing my data, I deliberated carefully over all the interview data and field notes with regard to what could be included in the analysis and in the research publications, so that my research did not reveal sensitive issues or violate the interviewees' rights or interests.

I am aware that some of the participants, particularly some of the students, may have felt that they were expected to help me, a visitor from afar, by participating in the research. As Kuula (2006) mentions, it can feel difficult for a person to refuse when the researcher invites them to participate in research, particularly, if the invitation is presented in a face-to-face situation. To avoid possible pressure to participate, I tried to arrange interviews during the interviewees' free time, in their homes or in a community space whenever possible, instead of using school hours or school premises. I also tried to be alert to and respect the sometimes discreet ways of refusing. For instance, if a person said they were too busy or feeling unwell when I asked about possibly interviewing them, I generally asked politely again on another occasion, but did not insist if someone seemed to be reluctant to participate. It is also important that participants can refuse to participate in any part of the research process even if they have initially agreed to be interviewed or participate in some other way (Kuula, 2006). I believe it can be difficult for an interviewee to withdraw in the middle of an interview or say outright that they no longer

wish to participate. Therefore, again, I think the researcher should observe and respect discreet signs of refusal. During this study, I once sensed that an interviewee was uncomfortable about the issues we were discussing. I made the interview with him very short, and afterwards, based on the perceived unwillingness of the interviewee in question, decided not to transcribe this particular interview for further analysis.

#### **4.1.2 QUESTIONS OF PRIVACY, CONFIDENTIALITY AND SELF-REPRESENTATION**

I considered confidentiality issues, protecting the privacy of participants, and the self-determination of the Indigenous peoples from the very beginning of the research process. However, at first, I did not question the general understandings of the ethical principles of confidentiality and the protection of privacy to the extent that I perhaps should have. To begin with, I did not discuss the confidentiality principle with the research participants in detail. This brings about the uncomfortable question of power relations and a privileged (white) doctoral researcher conducting a study with marginalized (Indigenous) peoples (cf. Brear 2017). I agree with Svalastog and Eriksson (2010) that the issues related to confidentiality and privacy of the participants should be carefully deliberated on together with the research participants instead of adopting the default practice of using pseudonyms. On the other hand, if the full name of any of the research participants had been revealed in this study, the confidentiality of all the other research participants, including educators and students, would have been at risk.

Therefore, I assured the interviewees that their names would not appear in the research report or in any publication. All the interviewees are thus referred to by a pseudonym and detailed information about them is not included in either this dissertation or the other research publications. By using pseudonyms, this study follows the principle of confidentiality and the guidelines on protecting the privacy of research participants (TENK, 2009). In Ecuador, some Indigenous people have, and use, Indigenous names, whereas others have common Spanish names. I chose to select pseudonyms for all the interviewees from common Spanish names to further protect confidentiality. In addition, I assumed that for international readers of the research publications, Spanish names would be easier to pronounce and remember in comparison to Indigenous names. The disadvantage of using Spanish names is that the pseudonyms do not reflect the ethnicity of the research participants and do not honour the rich tradition of Indigenous names (cf. Brear 2017).

Using pseudonyms contradicted the wish of one of the research participants, a Spanish-speaking teacher educator, who asked to be referred to in the research reports by her own name. The Finnish Advisory Board on Research Integrity (TENK) guidelines recognize that in some cases it may be justifiable and ethical to present research participants by name, and specifically mention studies that are based on interviews with experts (TENK,



2009). In this study, several of the interviewed teacher educators were experts in teacher education, and several of them experts in Indigenous knowledge. The Indigenous teacher educators could even be considered “living libraries<sup>16</sup>”, who transmit and produce knowledge orally, instead of using the written form of producing articles or textbooks. Moreover, in the interviews, several of the Indigenous educators expressed a concern about the lack of written material on Indigenous knowledge, as well as their own lack of time or opportunities to study and write. I think that in other circumstances, some of the educators that I interviewed could have produced textual material that I could have referred to in this study, in which case their names would have been included in the reference list. However, in this study, as in academic studies in general, only the people who had the privilege of writing their thoughts are referred to by their real names. The educators who had expertise through experience are presented through pseudonyms.

Therefore, using pseudonyms protects the research participants’ privacy but, at the same time, produces the research participants as others in relation to the researcher, who is produced as the knowing subject (Hakala 2007). This is a particularly problematic ethical dilemma in a study with Indigenous research participants. General guidelines on research ethics tend to see that vulnerable people, such as Indigenous peoples, should be protected in research through confidentiality and anonymization. On the other hand, such a demand can be seen as paternalistic. I agree with Svalastog and Eriksson (2010) that the researcher should ask what is more important to the Indigenous research participants, the protection of their privacy or receiving recognition for their knowledge and contribution to the research? The general guidelines on research ethics do not necessarily recognize the particular need to decolonize research and support Indigenous self-representation and self-governance in research (Svalastog & Eriksson 2010).

## **4.2 POSITIONING THE RESEARCHER’S SELF**

I visited the IBTE institute in Ecuadorian Amazonia for the first time briefly in 2006, in connection with collaboration between the University of Helsinki and UNICEF within the framework of the EIBAMAZ project. During this first visit, I met and interviewed some of the teacher educators and administrators at this institute. During 2007 and 2009, I visited this institute and its affiliated primary school several times. The institute and primary school were located in the Amazonia region, in a community in which the majority of the residents were Kichwa. However, other Amazonian Indigenous peoples as well as Spanish-speaking Mestizo also resided in the area. The students from different parts of the Ecuadorian Amazonia were an addition to the ethnic diversity in

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<sup>16</sup> Several interviewees talked about the Indigenous elders as “living libraries,” but did not use the living library metaphor about themselves.

the community; the Kichwa were a minority among the student teachers, whereas the Shuar formed the largest and the Achuar the second largest group. All of the students studying at this IBTE institute were Indigenous to Amazonia.

At the primary school affiliated with the institute, nearly all the teachers were Kichwa, whereas Mestizo were the majority among the teacher educators. The Indigenous directors of the institute claimed that they would rather hire Indigenous people, but that the shortage of Indigenous job applicants with adequate higher education degrees resulted in a high number of Mestizo teacher educators at the institute. The directors and teacher educators told me that the institute had a high turnover of teaching staff. They partly blamed the low salaries and inadequate infrastructure, but tensions between the Indigenous and non-Indigenous faculty also came to the fore. Some of the Mestizo teacher educators claimed that the IBE policies and Indigenous administrators discriminated against Mestizo by not giving the Mestizo staff equal opportunities to advance in their careers or earn extra income. At the same time, some of the Indigenous staff argued that the Mestizo were working at the institute due to necessity only, and were not committed to IBE. Both Mestizo and Indigenous staff occasionally made critical remarks on the working methods or behaviour of one another. At the institute, the Indigenous and the Mestizo teacher educators all dwelt in the borderlands between the Indigenous and non-Indigenous realm, where they experienced feelings of discomfort and uncertainty (Anzaldúa 2002).

During my fieldwork at the institute, I lived with a Kichwa host family in the community and participated in all the activities at the institute and the community. Sabina, the mother in my host family and a teacher at the teacher education institute, was a key person and introduced me to the Indigenous community leader, other Indigenous authorities and community members, and to the school community. Soon after Sabina and I got to know each other, she started to introduce me to other members of the community by describing me as a person who “eats everything” or who “eats with her hands”. According to Eduardo Viveiros de Castro (2000, 470-480) it is typical of the Amazonian Indigenous people to see identity and difference emerging from habits or processes, such as eating habits, which have an effect on the constructing or shaping of the body. People who eat the same kind of food belong to the same group, and those who eat differently belong to the “others”. I do not claim that “eating everything” made me part of the community, but I felt that Sabina and the other community members were pleased to notice that I respected and liked the local food and adapted to the eating habits of the family.

At the teacher education institute, I spent most of my time with the second-year students. At the beginning of the fieldwork period, some of the students seemed shy or reserved towards me, while others were curious and eager to get to know me from the beginning. With time, nearly all the students seemed to become accustomed to my presence and I got the impression that some of them started to treat me as a fellow student. This confidence was built through

common experiences: I sat in the classroom and followed the classes together with the students, spent time with them in the courtyard during breaks and took part in student dance rehearsals and performances on festive occasions. Outside school hours I visited students' and community members' homes, chatted with people, went to the river or to the communal water tank to take my bath and wash my clothes together with the others, and sometimes went to the catholic mass on Sundays with my host grandmother. Furthermore, some specific episodes seemed to be important ice-breakers. For example, learning a Shuar dance and performing it together with a group of Shuar students on an occasion with important visitors at the institute was an enjoyable experience of togetherness with the students. At the same time, some students and teachers seemed to take it as a positive sign of my will to involve myself in the community activities.

On the other hand, my status at the institute was not clearly defined. The researcher is an outsider and an exception in a school environment and its hierarchical structure, where principals, teachers, other staff, and students are the usual social actors (Palmu 2007). Furthermore, my position as an outsider and an exception in the local context was evident, as I am a white woman of European heritage from an urban middle-class background, speaking Spanish with a foreign accent. The students and teachers wondered about my position as a married woman who had no children, who was traveling without her husband in a country far away from home for a long period of time. I had no evident role or place at the institute, and I dwelled somewhere between the students and the teacher educators. This kind of ambivalent role has been discussed by researchers before (e.g. Berg, 2010; Coffey, 1999; Palmu, 2007).

In this study, I deliberately tried not to take either the side of the students or of the teacher educators, because the focus of the study was on both. Therefore, although I spent more time with the students than the teachers at the institute, I also interviewed the teacher educators and sometimes sat in the staff office for this purpose. In addition, the students were mostly young, in their early 20s, male, and studying for their first degree after upper secondary education, and in contrast, at over 30, I was considerably older than them, a woman, and studying for a doctoral degree after having spent some years in working life. I was the same age as some of the teacher educators. My age, and the fact that I was a married woman, created some distance between myself and the young adult male students but, at the same time, we shared the experience of being students. With the teacher educators I shared the experience of being a teacher because in Finland I had been working as a Spanish teacher and had some experience of teaching at the university. Therefore, in relation to the people in the school community, I felt a mixed sense of familiarity and strangeness towards the students and the teacher educators. This complexity of familiarity and strangeness in relation to the research participants can contribute positively to the research process, helping to keep an analytical distance and avoid over-identification with the participants (cf. Coffey 1999).

While contemplating my fieldwork experiences and personal relationships with diverse people in the community, I found myself relating well to Coffey's (1999) discussion of the complexity of the researcher's roles and identities during the research process. As Coffey (1999) argues, the researcher may have multiple, changing roles and identities while in the field, and these roles and identities may be chosen, imposed or negotiated between the researcher and the participants. One example of my rapidly changing roles during the fieldwork periods at the teacher education institute was that of a teacher, even though I did not teach at the institute. For instance, once, when a teacher educator had to leave the classroom in the middle of an English class to solve some issues at the school office, he turned to me and quickly asked me to step up and teach the lesson while he was away. For me the situation was most unexpected, and the students saw my confusion when the teacher educator quickly walked out of the classroom. I left my notebook on my desk in the back row and stood up. I looked at the students, they looked at me and we laughed and then continued with the translation task that had begun earlier. Surprisingly, I felt that this momentary change of roles and my confusion about stepping out as a teacher for a moment seemed to increase the students' sympathy towards me.

On another occasion, in contrast, two students approached me with their English task and were not at all pleased when, without thinking, I switched to a language teacher role. The students were asking me to give them the right answers to a fill-in test, whereas I reacted by asking them questions and dropping some hints so that they could figure out the answers themselves, like a teacher would do. In all, I agree with Coffey (1999) that a researcher's roles and identities are complex; they are inseparable from the other roles and identities that the researcher has outside the research field.

Furthermore, coming from a European country, with my European heritage and culture, and having been schooled in European universities, my body and mind was not accustomed to live or think Amazonia. In intercultural encounters between a non-indigenous researcher and indigenous participants it is crucial to acknowledge the underlying interests and assumptions deriving from diverse ways of thinking and feeling (Ermine, 2007). For this reason, and as an ethnographic researcher, I needed to critically examine my observations and my thinking. I needed to be particularly aware of and alert to the global power relations and the global knowledge hierarchies that affected the relationship and understanding between me as a researcher and the research participants (Brear, 2017; Tolonen & Palmu, 2007).

### 4.3 STITCHING THE METHODOLOGICAL PATCHWORK

The fieldwork at the teacher education institute and in the surrounding Indigenous community involved diverse research methods, such as observation, photography, the collection of written materials, and individual and focus group interviews with student teachers, teacher educators and elementary school teachers. In addition, living with a local family in the community meant I was immersed in the community life 24 hours a day. Therefore, I also had many opportunities for informal discussions and to observe and participate in activities with the students, teachers, teacher educators, neighbours, and other community members outside school hours. The fieldwork periods were thus very intensive and generated versatile data.

Clifford Geertz (1973) claims that an ethnographic researcher uses multiple ways to gather data in order to construct a multifaceted description of the research topic. This “thick”, that is to say versatile and well-contextualized description, helps the researcher get a grasp of the research topic and reach a well-grounded interpretation of it. Geertz emphasizes the interpretative nature of ethnographic research: “what we call our data are really our own constructions of other people's constructions of what they and their compatriots are up to” (Geertz 1973, 9). In other words, both the researcher and the research participants are constructing an interpretation of the social reality.

Research also has a performative aspect, as do other social actions. By social action I do not mean only what people do, but also what they say, because as Atkinson & Coffey (2001) argue, talk is also action, it is made of speech acts. This means that when people talk, for instance in a conversation or in an interview, the talkers enact certain narratives and construct themselves and others through these narratives. Furthermore, an interview is a special kind of communication situation, and such a situation produces a special kind of speech acts. In an interview, even the most open type, the interviewer directs the course of the speech acts. And the interviewees make assumptions about the interviewer and the topic under discussion. In addition, the interviewees can be more or less conscious about their role, as well as about how they construct themselves and others via the narratives that they are telling. Therefore, Atkinson and Coffey (2001) argue that an interview is a series of speech acts that can be used as a way to elicit what people *say they do* or what they *say they think*. My interest in this study was only partly in what the research participants said they did or thought. For the purposes of this study, as for most ethnographic studies (see e.g. Walford 2001), it was important to observe what people actually did – how they acted.

Participant observation is another form of social action, which in turn generates other kinds of accounts or narratives compared to interviews. In participant observation, all the participants, including the researcher, actively take part in and construct the social world. Within the social world and its continuous stream of social activity, the researcher observes events – episodes

that have an internal structure, a beginning, a middle, and an end (Atkinson & Coffey 2001). In my ethnographic study in a teacher education institute, the events that I was observing included, for instance, lessons, breaks, meetings, festivals, or other gatherings or everyday events such as the visit of a neighbour, going to the plot of land to fetch *yuca*, cooking dinner, treating a sick person, and so on. Atkinson and Coffey (2001) remark that essentially, such events have a narrative form. While observing or soon after observing an event, the researcher writes down a description, a narrative of this event. When a real-life event is flattened to a written narrative, written down by one observer, it is inevitable that a great deal of information related to this event is lost. In the first place, the observer perceives only a slice of all that there is to perceive in the series of activities in that particular moment. The observer tries to make sense of the observed social action, and pays attention to certain things while other things may escape her eye. She may simply not understand the importance of some of the activity or some features of the event. Furthermore, as the observer makes notes, she manages to capture only part of all the things that she perceives in her writings and drawings on the notebook page. What is left after this highly selective process is not a complete record of an event, but an account of an event (Atkinson and Coffey 2001; Emerson, Fretz and Shaw 2001).

Atkinson and Coffey (2001) argue that both observable actions and speech acts, such as interviews, are performative by nature. Therefore, one should not be understood as being more truthful to reality than the other. On the contrary, data elicited via interviews and observations are equally good as **accounts** of the social world. As accounts, they may be different and provide diverse viewpoints regarding the phenomenon that is under research. Therefore, the use of multiple methods in a single study, sometimes called methodological triangulation, is a commonly used strategy for increasing the richness, complexity and rigor of the study (Denzin, 2012; Flick, 2007).

I made the methodological choices in this study by taking the Amazonian Indigenous cultures and the local conditions into consideration. Classroom video recordings, for instance, were dismissed, because I assumed this would be an impractical and disturbing recording method in a local setting where technical equipment such as cameras and computers were not commonly used in classrooms, and where the distribution of electricity was not reliable. I paid special attention to accommodating the data collecting activities to the local Indigenous cultures. Generally speaking, the literacy tradition among the Amazonian Indigenous peoples is fairly recent and narrow. Visual ways, in contrast, play an important part in knowing and learning in the Amazonian Indigenous cultures (Lopes da Silva 1999, 261; Turner 1995, 153), and visual expression can be particularly pertinent to these students. Visual material, such as drawings, have been successfully used as data in research with Amazonian Indigenous youths in Brazil, for example (Virtanen, 2012). Therefore, although I collected written materials, I did not consider examining the students' writings about their thoughts on knowledge and learning.

Instead of asking the students to write, I asked them to use visual expression and take photographs. Thus students' photography was included in the data collecting methods, together with observations and interviews.

Early anthropologists already used photographic equipment as fieldwork tools, and Mead (1970) performed pioneering work in ethnographic photography in her research in Bali as early as in the 1930s when she used photographs as primary data. However, in social sciences, photographs have most commonly been used as illustrations or for documentation rather than as data (Banks 2001; Holm 2008b). In ethnographic studies, photographs have many times served as notebooks to help the ethnographer remember, illustrate or testify the ethnographic description. Photographs can also help as a way of communication by adding different dimensions to verbal story telling (Banks 2001; Orobitg Canal 2004). Moreover, photographs have been used in interviews in order to elicit information about the interviewees' views, beliefs and memories (Banks 2001; Holm 2008a). Although visual research methods were scarcely used and often understated in social sciences (Pink 2007) until the 1990s and the early 21st century, in recent decades, visual research methods have become increasingly popular (Banks 2001; Pink 2007).

Denzin (2012) sees the researcher as a *bricoleur*, a maker of patchwork. Research patchwork is stitched together from various patches. As a methodological bricoleur, the researcher combines a variety of research methods. At the same time, as an interpretive bricoleur, the researcher comprehends that research is an interactive process, and as a narrative bricoleur, she realizes that she is telling stories about the topic of research. As a result, the work of a researcher bricoleur "is a complex, quiltlike bricolage, a reflexive collage or montage, a set of fluid, interconnected images and representations. This interpretive structure is like a quilt, a performance text, a sequence of representations connecting the parts to the whole" (Denzin 2012, 85).

In this study, the methodological patchwork was made of diverse research methods such as observation, photography, the collection of written materials, and individual and focus group interviews with student teachers, teacher educators, and elementary school teachers. These methods were employed in order to produce a thick description of the research topic. In the following sections I describe these patches of the methodology framework.

### **4.3.1 PARTICIPANT OBSERVATION IN THE CLASSROOMS AND BEYOND**

The data that I gathered for this study include classroom observations that mainly took place with the group of second-year teacher education students. This was a group of 25 students, two females and 23 males. The distribution according to first native language was 13 Shuar, 10 Achuar and 2 Kichwa. The students' ages ranged between 19 and 33. Generally, the tuition took place in one and the same classroom, with the exception of information technology lessons, which were held in the computer lab, and some occasional lessons that were held in the library/media room or outdoors. The schedule of classes was organized according to six class-hours per day, 50 minutes each, between 7:40am and 13:00 pm with a 20-minute break after the third class-hour. The curriculum of the second-year students during the period included 15 subjects: research, English, serigraphy, statistics, genesis mythology and vision, project management, curriculum management, pedagogy, didactics of mathematics, information technology, human education, cultural anthropology, educational administration and legislation, production technology, and family education. The main fieldwork period of classroom observations was in 2007 and included 27 schooldays. During these days I observed in all 127 class-hours, of which 79 were regular tuition classes with the teacher educator present, 18 class-hours with the teacher educator absent, and 30 class-hours with other activities such as dance rehearsals, community festivities and student council elections.

During the complementary fieldwork period in 2009, the former second-year students were in the final stages of their third year and about to complete their studies. Therefore, in 2009, I focused on observing demonstration lessons (N = 5) and oral examinations (N = 3) by the students whom I had interviewed earlier in 2007. I also observed one ordinary lesson at the institute and some lessons at another elementary school nearby.

Classroom observations were registered as pen and paper notes in notebooks. In the classroom observation notebook each school day formed one section that was divided into subsections according to the timetable of the institute, with lessons, breaks and sometimes other activities. Each subsection was given a title according to the time, name of the lesson or activity (e.g. statistics lesson, workshop, break), and the name of the teacher or leader (if available). The title was followed by the observation place (e.g. classroom, library, school yard) and those present, and sometimes additional information such as the topic of the lesson or the reason why a regular lesson was cancelled. These titles provided a rough division into episodes. Otherwise I did not follow any pre-formatted outline for the observations, but wrote down as much as possible about everything that was going on and what was said in the classroom. Quite often a great deal went on, and I was unable to document it all and had to select what to focus on. My focus was set on certain things based on the preliminary research questions that I had at the back of my mind while



observing. In addition, the observations and interviews gave me new insights and foci.

In the classroom observations I sometimes wrote down excerpts, word by word, of what people said, but more often I wrote down the topics that were discussed, working methods, interactions between participants, and the language that was used. Sometimes I also copied what the teacher was writing or drawing on the whiteboard, but most often I rather tried to concentrate on documenting what happened in the classroom. Sometimes I stayed in the classroom writing after the class was dismissed to describe the activities or overall atmosphere. I wrote most of the accounts in Finnish, my mother tongue, combined with word by word citations in Spanish, the language of instruction. Most of the communication in class was in Spanish, but sometimes either the students or the teacher used one of the Indigenous languages. Since I do not speak or understand Shuar, Achuar or Kichwa, I documented these conversations or exclamations by stating which language was used and its context, purpose or tone.

As I lived in the community during the fieldwork periods, I participated in the activities of the teacher education institute as well as the surrounding community on weekdays as well as at weekends. Therefore, participant observation was not restricted to the classroom or the institute; it took place in the community every day, including the festivities, *mingas* (community collaboration work), and diverse everyday living situations. As the mother and father of the family with which I lived were both teachers and teacher educators, fellow teachers sometimes visited them at home, which meant that interesting conversations related to IBE and teachers' work often took place around the kitchen table or in the backyard of their house in the evenings and at weekends. These conversations gave me invaluable insights into the everyday life and concerns of Amazonian Indigenous teachers and teacher educators. I understood the importance of learning through living together when, for example, I once asked Sabina, the mother in my host family, questions about some local tradition. She told me very briefly about the tradition and stressed that I should extend my stay in the community to participate in an upcoming celebration related to it. That moment and several other incidents made me realize that instead of asking so many questions and writing so many field notes, I was supposed to live the reality together with the people, and through this common experience, form an understanding of what was occurring. As McGregor (2004, 391) and Simpson (2004, 381) put it, Indigenous knowledge "must be lived". Therefore, an important part of the fieldwork and my understanding of the research topic was related to what I lived in the community.

Many members of the community guided me, especially my host Sabina and her extended family and friends. They took me to neighbourhood parties or to fetch *yucca* and *naranjilla* from the *chakra*, the plot of land in the forest. The children took me to play basketball in the school yard and to wash up at the well. With my host family, we went to buy chicken from the local farmer or

shopping in the nearest town. With my local friends I learned about diverse ways of treating illnesses. For instance, when I felt nauseous, my hosts cured me with an egg, some alcohol rubbed onto my skin and clouds of cigarette smoke blown all over my body. On some occasions, the community members taught me about medicinal plants. On another occasion I went with a local family to the nearest town to visit their family member who was hospitalized for treatment of an illness.

Most of the informal conversations and observations when participating in everyday life were not recorded by an audio-recorder nor written down word for word. However, in addition to the classroom observation notebooks, I used other notebooks, fieldwork journals, to document these conversations and events. In these fieldwork journals I wrote notes about any interesting conversations or events that I had witnessed during the day, as well as about all kinds of ideas and feelings whenever there was time and a need for some reflection. The downside of the intensity and the collective living and sharing a room with several family members was the lack of privacy and lack of peaceful moments for reflecting and writing my notes. Sometimes I wrote lying on the bed with children jumping around me and over me and asking me questions. Sometimes I wrote late in the evening while watching football or soap operas on TV with the host family and their friends. Therefore, the journal was the most informal of the notebooks that I used. It includes not only accounts related to the research topic, but also personal observations, sentiments and emotions. These personal accounts are not necessarily relevant for the research topic, but they reflect the ups and downs of an intensive fieldwork experience and remind me of the fact that research does not exist in isolation from everyday life.

### **4.3.2 INTERVIEWS**

Interviews with teacher educators and students form an important data set in this study. The main empirical data for this study were gathered during a fieldwork period in 2007. During this time, I conducted semi-structured thematic interviews mainly with second-year students and teacher educators who were instructing second-year students during this fieldwork period. In 2007, the total number of second-year teacher education students was 25. These 25 students participated as a group in two discussions held during class-hours about the research theme. Of the whole group, I interviewed 19 students during the fieldwork periods in 2007 and 2009. The interviews were conducted individually or in groups of two to four. Some of the students only participated in the individual interview, some only in the group interview, some in both the individual and group interview, and some took part in two group interviews. The ethnic distribution of the interviewed students was 10 Shuar, 7 Achuar, and only 2 Kichwa. This follows the ethnic distribution of the whole group of second-year students. The majority of the students were male, and their ages ranged from 20 to 26. There were only two women in the group,

aged 21 and 33. I also conducted interviews with one third-year Kichwa student and two first-year Kichwa students, to obtain a more nuanced picture of the Kichwa students' viewpoints. Therefore, the number of interviewed Kichwa students was five, and the total of all interviewed students was 22.

I interviewed a total of 16 teacher educators at this particular teacher education institute: three Kichwa, three Shuar, and ten non-Indigenous, six of whom were women and ten men. Their ages ranged from 28 to 45, and teaching experience from two to over 20 years. I interviewed some of these teacher educators only once, during the fieldwork period in 2007. But with two of the teacher educators, I had already conducted an initial interview during the exploratory visit in 2016 and had also interviewed them more extensively in 2007 and again in 2009. Altogether, the interviewees included nearly all of the teaching staff working at this IBE institute at the time of the fieldwork periods in 2007 and 2009. In addition, I interviewed four Kichwa elementary school teachers, three women and one man, who supervised student teachers during their practical training.

The interviews with the students and teachers centred on the interviewees' understandings of knowledge in general and Indigenous knowledge in particular, teaching and learning in Indigenous communities and in the teacher education programme, the relationship between educator and student, and the evaluation of and prospects for IBE. I used a predetermined set of interview topics as a guide (see Appendix 3) for the individual interviews, and tried to lead the discussion towards these topics in all the interviews. I started each interview with the same introductory explanations and questions, but after this, each interview followed their own path depending on how the interviewees reacted to the initial questions and the topics that I introduced. In addition to the interview topics, I had listed some more detailed questions related to each of the topics. Having this set of topics, general questions and detailed questions at hand was helpful during the interviews. In some of them, the discussion flowed easily and my role as the interviewer was mainly to listen, pose follow-up questions and occasionally introduce another topic to discuss. But in some cases, when the research participant answered the initial questions very briefly, or when the discussion seemed to be drifting too far away from the actual topics of the study, the set of predetermined questions were a good guide.

For the focus group interviews, I prepared another, more visual group discussion guide (see Appendix 4). This included a visual presentation of questions related to the main topics: learning and knowledge/wisdom. It also presented the task to portray learning, knowledge or wisdom in pictures, either through drawings or photographs.

All the students were considered bilingual in their native language and Spanish. This was a formal prerequisite for enrolling as a student at the IBE teacher education institute. Indigenous teacher educators and elementary school teachers were bilingual in their native language and Spanish, whereas all the non-Indigenous were Spanish-speakers. Spanish was the *lingua franca*

in the institute, as Shuar-, Achuar- and Kichwa-speaking people do not mutually understand each other's native languages. I conducted all the interviews in Spanish and audio-recorded the interviews with a small personal recording device. In addition, I dedicated one of my notebooks to writing notes during or after each interview. I used the interview notebook partly as a back-up in case some technical problem would have occurred with the audio-recording. Therefore, I tried to write down the most important and interesting points during the interview. Afterwards, these notebooks served as an aid to remember what was discussed in each interview. It was useful to have them as a reference that helped me remember what I had already discussed with each participant and what I might want to ask them next time. The interviews, and the notes about the interviews, also helped me direct my attention to certain aspects during the classroom observations. In all, the notebooks served as a tool for the preliminary organization and analysis of the interview data.

Later, the audio-recordings of the interviews were transcribed into text files. The interview transcriptions mainly represented the words that were spoken, but some additional information was included when it helped explain the meaning or tone of an utterance [laughing] or the course of the interview [phone rings]. But, in most cases, I did not register the pauses, sighs, or hmms that are typical of speech in the transcriptions. The interviews were transcribed in Spanish, the language used in the interviews. For publication purposes, I translated selected excerpts from interviews into standard English.

### **4.3.3 PHOTOGRAPHY AND PHOTO ELICITATION**

This study incorporated photography alongside participant observation and interviewing. During the fieldwork periods I took many photographs. At the beginning of the fieldwork period I was hesitant about taking my camera with me and taking photos in the community out of respect for the people and their privacy. Therefore, I first only took pictures of objects, places and landscapes, and avoided photographing people. I did not want to be the researcher-tourist, looking at people and events through the lens of the camera. However, at times, the locals asked me to take pictures of them. My host, Sabina, for instance, specifically asked me to fetch my camera to take pictures of people when we went to a *minga* at a neighbour's house. When I hesitated about taking pictures inside the house, Sabina claimed that taking pictures was understood as showing an interest and respecting people and what they were doing, and the neighbours nodded approvingly. They started pointing out things, activities and people that they wanted me to look at and photograph. I tried to be very conscious of peoples' reactions towards the camera, and always asked permission before taking pictures of them. Such photographs of people, places and objects provide a way to "return" to the field after leaving. The photographs also help me remember people, places and events, weather conditions, moods, feelings, tastes, and smells. They illustrate the

environment and the conditions of the community in which I conducted my fieldwork, and thereby provide contextual information about the research.

Moreover, in this study, I also used photographs to elicit information from the students and to give the students an opportunity to participate in the research process in a more active way than is customary in traditional interviews. I chose a participatory visual method because visual expression plays an important part of knowing and learning in the Amazonian cultures (Lopes da Silva 1999, Turner 1995), and therefore a visual research method may be particularly pertinent to the students. I conducted photo-elicitation interviews (PEI). Generally, in the PEI method, the interviewer introduces photographs that are produced either by the researcher or the research participants. The way in which I used PEI in this study can be described as auto-driven photo elicitation: a strategy in which participants are asked to take the photographs and then later these photographs are introduced in an interview with the person who took them (Clark-Ibañez 2004; Felstead, Jewson and Walters 2004; Samuels 2004). The benefit of the auto-driven PEI is that it provides participants with an opportunity to reflect on their own views and to express what they themselves find interesting about the theme under examination (Samuels 2004). This method has been particularly successfully with children and marginalized people (Cappello 2005; Clark and Zimmer 2001; Clark-Ibañez 2004; Cook 2007; Samuels 2004; Bolton, Pole & Mizen, 2001).

I employed photography after I had spent a couple of weeks in the field, when I already knew the second-year students to a certain extent and started doing interviews with them. After an individual or group interview, I asked the interviewees to either draw or take photographs to illustrate what learning, knowledge and wisdom meant for them personally. The task was not delimited to a certain kind of knowledge or learning, such as “Indigenous knowledge” or Indigenous ways of learning. Since the students had no prior experience with cameras, photographic expression or composition, I gave them basic instructions on how to use the camera. But I did not give them advice on where or what to photograph. This strategy allowed the students to explore their own views on knowledge and learning, and to speak for themselves through images: they chose what to focus on, what to include and what to exclude. In other words, the students became researchers of their own culture (cf. Bolton, Pole & Mizen, 2001).

A total of 11 students decided to take photographs, and none of them opted to draw. Among these photographers, five were Achuar, four Shuar and two Amazonian Kichwa. Two were women aged 21 and 33, the other nine were men aged between 20 and 26. As none of the students had a camera of their own, they all took their photographs with the camera that I lent them. This device was a compact live-preview digital camera with a zoom. Usually each student had about a day to take the photographs. Thereafter, I interviewed each student about the photographs. During this interview, we viewed the photographs, assigned them titles and discussed them. The data consisted of

85 photographs taken by the students. Most of the students gave their photographs the title of knowledge, learning or wisdom, as requested.

During the interviews, some of the photographers searched for ways to verbally express the meaning of one or more of their photographs. It can be argued that visual expression through photography gave the students the freedom to express ideas that were too difficult to be expressed with words alone. In other words, some knowledge and some aspects of coming to know or learning may simply be beyond the scope of the spoken or written word. As Jones (1999, 307) claims, “most important in educational dialogue is not the *speaking voice*, but the *voice heard*”. I argue that in research, we need to diversify our ways of hearing these voices, and that this is also a question of methods that we employ for producing data. Using visual methods such as photography is one alternative for research participants to be involved in the research process and to express themselves. When combined with other research methods, photography helps the researcher achieve a *thick* description of the research topic. The data achieved via visual methods, i.e. the photographs themselves as data, as well as the interview data that were elicited by photography, enriched and lent rigor to this study.

#### 4.3.4 DATA ANALYSIS

The literature on ethnographic research suggests that ideally, the recorded interviews and hand-written notebooks are transcribed into text files as soon as possible (Lappalainen, 2007). However, as described in a previous section, during the fieldwork at the teacher education institute, my opportunities to withdraw from the company of others to write full field notes and transcribe. In addition, sometimes it impossible to use the computer because of power failures, which were rather common in the community. As a result, I often had no time, place or possibility to “turn(ing) away from the field toward the worlds of research and writing” (Emerson, Fretz and Shaw 2001). However, despite few chances to write and analyse the data while in the field, the process of reflection on the observations and interviews was ongoing during the fieldwork periods. Each observation and interview gave me new viewpoints and helped me elaborate and reorient the following observations, interviews and research questions. Therefore, the data analysis already began in the field with my every (conscious or unconscious) decision regarding what to focus on when moving around in the field, what to write in my observation notebooks, what to ask in the interviews, how to respond to people, and how to react to events (cf. Palmu 2007).

I transcribed some of the observation notes while still in the field, but most of the notes and interviews were transcribed later, when I had returned home. I transcribed part of the interviews, and a research assistant in Peru transcribed the rest. The research assistant was a native Spanish-speaker, but she had not been present in the interviews and was not familiar with some expressions or words that the Amazonian Indigenous peoples in Ecuador use

in their speech. Therefore, I revised all the transcriptions for possible misunderstandings or misinterpretations. Transcribing and reviewing the interviews offered an overview of the interview data. After this, I started to systematically read the interviews through different frames. I made a summary of each interview to obtain a picture of the main issues that they dealt with. In a second reading of the full transcriptions I arranged the interview data according to the original thematic interview questions, comparing what the interviewees had answered, and looking for similarities as well as diversities in their responses. The original research questions formed another frame that I used when reading the interview transcriptions and categorizing the data. After the first rounds of reading and arranging the data, I returned to the full interview transcriptions and started looking for interesting topics and themes with fresh eyes, coding and rearranging the data. During this process, I made new linkages between codes that were related to each other, and found new questions on which to focus.

I started the systematic reading of the observation data later, after several rounds of reading and coding the interviews. Therefore, the interview data and the categorizations based on the interviews guided me in the reading of the observation data. However, when reading the observation data, I also returned to the interview data, looking for accounts that were related to the observed events. In the beginning, I arranged the interview and observation data into different files on my computer, but later, as the data analysis proceeded I started to construct more thematic files that included excerpts from the interview and observation data.

At the same time as reading and arranging the interview data I also arranged the photographs produced by the students. I first organized these 85 photographs into categories according to the titles that the photographers had given to their photographs. Most of the students gave their photographs a title according to the three topics I had given them: *conocimiento* (knowledge), *sabiduría* (wisdom or lore) and *aprendizaje* (learning). However, one of the students gave several photographs the title *enseñanza* (teaching), and another student gave one photograph the title *reconocimiento* (recognition). Initially, I had included the terms *conocimiento* and *sabiduría* in the photography task in order to understand whether or not the students perceived these two as different categories. Only three students entitled some of their photographs *sabiduría*. It was evident that one of the students clearly connected *conocimiento* to schooling and *sabiduría* to informal ways of learning. However, many of the students entitled their photographs *conocimiento* instead of *sabiduría*, even when referring to practical skills and values that were passed on in a family from generation to generation. Hence, the majority of the students preferred to speak in terms of *conocimiento* instead of using a special vocabulary to differentiate between the concepts of, for example, lore, wisdom and knowledge. McGregor (2004) cites Battiste and Henderson when claiming that according to Indigenous thinking, knowledge is not fragmented into discrete categories such as science, art, religion, philosophy, or aesthetics.

In this light, it seems contrived to separate *conocimiento* and *sabiduría*, and I opted to refer to both as *conocimiento* (knowledge), the term that the students used most often.

In addition, I arranged the photographs into different categories according to what was the activity pictured (e.g. agriculture, domestic work, studying), the setting (e.g. classroom, nature, road), the main subject in the picture (landscape, object, people), and the people pictured (children, adults, women, men, teachers, students). I counted the number of photographs in each category to obtain an overview of the themes and issues that were most (and least) commonly represented. After the initial thematic grouping of the students' photographs, I analysed these photographs together with the interviews about the photographs to see how they exemplified or symbolized the students' perceptions of knowledge and learning. The concepts of knowledge and learning were intertwined. When analysing the photographs and related interviews, I grouped the photographs into knowledge and learning, according to the division made by the students. However, the photographs named "knowledge" by the students often also related to learning, and vice versa. I detected no differences according to the ethnic background (Achuar, Shuar, Kichwa) of the students. Therefore, the photographs and the accompanying interviews of all the participants were discussed together. In the analysis the photographs under the main categories "Knowledge" and "Learning" were grouped according to the themes that emerged from the photographs and the related interviews.

As described above, I alternated between different analytical approaches while reading the data. On one hand, I read and coded the data through the framework of the research questions, the thematic interview scheme and the instructions that I gave the students in connection with the photography task. On the other hand, I tried to keep my senses open to new ideas and viewpoints emerging from the data as I read and coded it, in order to interpret the meanings and find new themes and categorizations. I did not go through this interpretative analysis process "intellectually empty-handed" as Geertz (1973) puts it, meaning that researchers always base their interpretation on the data as well as on the theoretical ideas based on related earlier studies. In this study, before entering the research site, I had read previous research on topics such as Indigenous knowledge and education, and intercultural education. Between and after the fieldwork periods, I continued reading and searching for new theoretical perspectives to analyse the themes that occurred in the data. Furthermore, before the main data producing fieldwork periods I had done preliminary field visits and conducted interviews with a number of people who worked in the field of education for the Indigenous peoples in Ecuador, Peru and Bolivia. In the present study, the interpretative analysis formed a reciprocal process with theory construction and data generation. I agree with Geertz (1973) in that the analysis of ethnographic data is an ongoing process that is never complete.



## 5 FINDINGS

This dissertation consists of four peer reviewed articles and the summarizing report. In this chapter I will first briefly introduce each of the four articles, and then move on to discuss their findings and how the articles answer the research questions.

On the whole, the study and these four articles examine the ways in which Indigenous knowledge guides IBE policy and practice. The first research question (RQ1) of this study explores the teacher education students' and teacher educators' perceptions of Indigenous knowledge and Indigenous ways of learning and acquiring knowledge. The second research question (RQ2) scrutinizes how and in what ways the Shuar, Achuar and Kichwa Indigenous knowledge and Indigenous ways of acquiring knowledge and learning are incorporated into the instructional practices of an IBTE programme in Ecuadorian Amazonia. As its third research question (RQ3), this study examines what aspects hinder the incorporation of Shuar, Achuar and Kichwa Indigenous knowledge and the Indigenous ways of acquiring knowledge and learning into the instructional practices of this IBTE programme.

**Article I**, *The perceptions of knowledge and learning of Amazonian Indigenous teacher education students* (Veintie & Holm, 2010), answers RQ1 by discussing how the Amazonian Indigenous teacher education students visually portrayed knowledge and learning during their studies at the IBE teacher education institute. The discussion of this article is based on the data attained through the photo-elicitation interviews (PEI) and on the photographs themselves as data. It also explores the suitability of photography as a data collection method among Indigenous young adults<sup>17</sup>.

**Article II**, *Practical Learning and Epistemological Border Crossings: Drawing on Indigenous Knowledge in Terms of Educational Practices* (Veintie, 2013), examines student teachers' and teacher educators' understandings of the importance of Indigenous knowledge in terms of educational practices in IBE schools and institutes in Ecuadorian Amazonia. Firstly, the article answers RQ1 by discussing what is pertinent knowledge in terms of educational practices in the student teachers' Indigenous communities. Secondly, the article elaborates on RQ2 by asking how this knowledge can be incorporated into schooling. This article draws primarily on individual and focus group interviews with student teachers, teacher educators and elementary school teachers. However, the analysis is informed by the whole set of ethnographic data, including interviews, observations, photography, and the collection of written materials.

**Article III**, *Coloniality and Cognitive Justice: Reinterpreting Formal Education for the Indigenous Peoples in Ecuador* (Veintie, 2013), deals with

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<sup>17</sup> A more detailed methodological discussion is included in the methodology section.

RQ2 and RQ3, as it discusses the reterritorialization of the globalized model of education through the case of IBTE in Ecuador. This article discusses the everyday practices at the IBTE institute that exemplify attempts to break from the Western ways of thinking and understanding knowledge. The article uses the Monday morning assembly in the school yard as an example of a negotiation between adopting and customizing Western ways in the institute's everyday practices. The article draws especially on the observation data and the data attained through interviews with teacher educators and elementary school teachers.

**Article IV**, *Thinking from Another Perspective in an Intercultural Bilingual Teacher Education Programme* (Veintie & Holm, in press), focuses on RQ2, and scrutinizes the ways in which teacher educators actually integrate Indigenous knowledges into their instructional practices. The article elaborates on four teacher educators' ways of dealing with Indigenous knowledges in instruction. This article also touches upon RQ3 by discussing some of the issues that prevent teacher educators from incorporating Indigenous knowledges into their instruction. The analysis is based on classroom observations and interviews with teacher educators and the educational materials they use.

In the following sections, I discuss the three research questions in the light of the findings of the abovementioned four articles.

## **5.1 TEACHER EDUCATION STUDENTS' AND TEACHER EDUCATORS' PERCEPTIONS OF INDIGENOUS KNOWLEDGES AND LEARNING**

The data discussed in Articles I, II and IV show that young Amazonian Indigenous teacher education students have substantial understanding of Indigenous knowledge and Indigenous ways of knowing and learning. Many of these students are knowledgeable about, for instance, traditional Indigenous medicine and medical practices (see Article IV). Furthermore, these students discuss learning in the Indigenous communities via, for example, discussions with elders or observation and practice in various everyday activities such as fishing, going to the mountains, canoeing on the river, working, or making a *changuina* (reed basket). The students also talk about the spiritual dimensions of knowing and being (see Aikman, 1999; Chacón, Yanez, & Larriva, 2010; Dei, 2002), and explain how knowledge can be acquired through visions or dreams or via specific ways of connecting with the spirits.

Article I argues that the teacher education students in this study primarily conceptualize knowledge and learning through their everyday domestic lives, and that schooling appears to play a secondary role. This is quite surprising, considering that the participants of this study were full-time students at the teacher education institute, and that most of them lived far away from their

family and home community and were only able to visit their families during vacations. Under these circumstances, it could be presumed that a major part of the photographs would represent knowledge and learning related to the context of school or studying. However, three quarters of the photographs represented domestic life, work and livelihood. The most common group of photographs depicted practical knowledge that was useful in the domestic environment and everyday life. The people in the photographs knew how to take care of their clothes, how to dress, how to do handicrafts, how to build a house, how to work in agriculture, how to make a living, or knew what to eat and how to prepare food. As McGregor (2004, 391) and Simpson (2004, 381) point out, Indigenous knowledge is not just “something one knows”, but also “something one does”, and that Indigenous knowledge “must be lived”. In this article, the photographs taken by the students show many examples of how the students or the Indigenous community members are actually doing or living this knowledge.

With regard to schooling, and what is pertinent to Indigenous knowledge with regard to educational practices, some of the student teachers highlighted the importance of leaving the school premises to observe things in nature, and referred to the surrounding nature as a “classroom”, as discussed in Article II and supported by place-based education (Barnhardt and Kawagley, 2005; Smith, 2002). Most of the student teachers generally spoke of “practice” as opposed to “theory”, and presented theoretically oriented instruction as a deficiency in present-day schooling. Article II observes that the main concern for most of the student teachers lay in learning through observation and practice, hands-on activities, and manipulative educational materials. The use of manipulative educational materials was among the most common research themes in the students’ *tesina* (diploma work).

The data discussed in Article I also showed that the students understood learning as an interactive process that commonly involves observing and practising. In this process, parents, older siblings or other knowledgeable people provide the learner with opportunities to participate in the social practices of their community. Through such a learning process, as seen in the Situated learning theory (Lave and Wenger 1991), a newcomer to a community of practitioners becomes increasingly involved in the everyday practices of the community in question. If we look at the teacher education institute as a community of practice, the photographs illustrate that the main instructional practices portrayed by the students were traditional classroom instruction with reading and writing tasks. Ten of all the 85 photographs show students with their notebooks or textbooks doing homework, one shows a teacher educator with notebooks, and one a student in the classroom in front of a computer.

Article II notes that the teacher educators generally shared the student teachers’ concern related to theory-oriented education and hands-on activities. Moreover, some of the teacher educators recognized that Indigenous knowledge could provide further contributions to educational practices. The

data showed that some of the Indigenous teacher educators recognized that teachers and teacher educators have to generate further ideas on how to implement the intercultural education policy in an adequate way. They note that educational practices should comply with Indigenous philosophies, ontologies and epistemologies, and also help the students cross the cultural borders between (Western) school knowledge and Indigenous knowledge (see Aikenhead, 2001; Cajete, 2008).

Article II notices that the concern about theory-oriented education and the discussion on hands-on activities and manipulative educational materials are important issues. Both the teacher educators and the student teachers discuss these issues to highlight how important it is to replace teacher-centred instruction, dictation and rote instruction, which have been common educational practices in schools in Ecuador, as well as in other Latin American countries (e.g., see O. García & Velasco, 2012; Kleyn, 2010; Lucas, 2000). However, this article argues that an emphasis on hands-on activity may create an overly simplified picture of integrating Indigenous knowledge into educational practices. For instance, Prada Ramírez (2009), a researcher of education in the Bolivian Amazon, criticizes the understanding that Indigenous people would prefer only empirical ways of learning. He notes that the abstract thinking of the Amazonian *Tsimané* and *Moseten* people escapes the eye of the non-Indigenous scholars and educators, who connect abstraction to the existence of alphabetic writing.

Therefore, Article II emphasizes the connections and dialogue between teacher education and the Indigenous communities and wise people or other knowledgeable Indigenous community members, as suggested by the teacher educators, as well as the written documents that guide IBE teacher education (DINEIB, 2005) and IBE in general (DINEIB, 1993; Ministerio de Educación del Ecuador, 2013). For example, in their interviews, some of the teacher educators highlighted learning through exploration or through observing community practices and conversing with knowledgeable Indigenous community members. The interest in conducting research and recording Indigenous knowledge is partly related to an aspiration to revive Indigenous knowledge or to rescue it from oblivion. However, based on my observations, learning through exploration, observation and conversations with Indigenous community members is not among the common practices of the teacher education institute.

## 5.2 REVITALIZATION OF INDIGENOUS KNOWLEDGE AND CULTURAL RELEVANCE IN THE CLASSROOM

Article IV focuses on what the teacher educators did in class to include Indigenous knowledge in their instruction, and how these educators explained what they did in their classes in the interviews. This article focuses particularly on observations and interviews with four teacher educators who stood out because of their efforts to integrate Indigenous knowledges in their instruction. For example, one of these educators, Jimena, was teaching a course related to different *cosmovisiones*, or worldviews<sup>18</sup>. This course specifically aimed to discuss Indigenous and other ways of viewing the world. Therefore, while teaching this course, Jimena took the opportunity to teach through her own *cosmovisión*, and in this way directly integrated Indigenous knowledges into instruction.

The four educators discussed in Article IV were committed to reasserting Indigenous knowledges. Furthermore, these four educators saw the recognition of Indigenous knowledges as an important resource in confirming Indigenous identity. The educators invited the students to bring in their Indigenous knowledge via discussions, hands-on activities and group work. Through these instructional practices, the four educators presented Indigenous knowledges as a serious theme to discuss in class, and thus created spaces in which Indigenous knowledges were valued and revived. In this way, the educators contributed to reversing epistemicide (Santos 2007). Furthermore, they perceived their students, the learners, as “sources and resources of knowledge and skill” (Ladson-Billings, 2014, 79). Such a perception of students as sources of knowledge is one of the critical components of culturally relevant pedagogy. It adds an emancipatory and empowering element to instruction, as the students can maintain their cultural integrity and continue to draw on their Indigenous knowledges and Indigenous epistemologies in the context of formal education inside the classroom. (Castagno & Brayboy 2008; Ladson-Billings 1995; cf. also Rival 2000).

Jimena, and another Indigenous teacher educator, Fernando, who had their own life experience of and knowledgeability regarding Indigenous knowledges and ways of knowing, used their experience, knowledges, stories, and personal narratives in class to teach and give advice to students. Using narratives for instructional purposes can be considered a culturally relevant instruction method in the Amazonian Indigenous context. As Fernando, an Indigenous teacher educator, notes, Amazonian Indigenous parents tend to tell stories to educate their children (Article IV). Oral traditions and using stories as educational practice are also central among other Indigenous

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<sup>18</sup> *Cosmovisión* derives from the words cosmos and vision and is commonly understood as a synonym for world view.

communities (e.g. Archibald, 2008; Battiste, 2002, 2013; Geia, 2013; Kovach, 2009; Lomawaima & McCarty, 2006).

The non-Indigenous teacher educators Lorenzo and Maria, in contrast, were not knowledgeable about Indigenous knowledges or languages. While the Indigenous educators drew on their own Indigenous cultural capital, these non-Indigenous teachers sought Indigenous knowledge from books, the community and their students. The non-Indigenous teachers made efforts to find ways to connect their instruction to Indigenous knowledges by, for example, discussing everyday life issues or special events in the community in order to help the students discover bridges between book knowledge and their own life experiences. In addition, they both recognized that some methods of instruction are culturally more relevant than others. Lorenzo, for instance, claimed that by favouring group work and hands-on activities he allowed the students to use their cultural knowledge as well as their creativity, which he found characteristic of Indigenous students. Making connections with the students' experiences is very much in line with the IBE model, which stresses that the educational content should be, first of all, related to the students' reality, including family and community circumstances (*Ministerio de Educación del Ecuador*, 2013 44). The wider literature in culturally responsive education, Indigenous education and place-based education shows that connecting instruction to the everyday life and reality of the students is beneficial in many ways. It can, for instance, improve learning and school achievement (Bishop et al., 2007; Castagno and Brayboy, 2008; Demmert, 2001; Gay, 2010; Kanu, 2007; Ladson-Billings, 2009) and decrease dropout rates (Demmert 2001). Here, importantly, the Indigenous students can experience academic success while maintaining their cultural integrity as Indigenous peoples. In other words, the students do not need to choose between academic success and Indigenous identity (cf. Castagno & Brayboy, 2008; Hermes, 2007).

### **5.3 INDIGENOUS COMMUNITY INVOLVEMENT IN TEACHER EDUCATION**

As shown by the data discussed in Article IV, both the Indigenous and non-Indigenous teacher educators may be mediators between Western and Indigenous perspectives, and facilitate the connections between students and the local Indigenous community. Fernando and Maria, for instance, discussed the connections between teachers, students and the community, pointing out that a teacher has to *convivir* (live together or coexist) with, connect to and learn from the community. Furthermore, the IBE teacher education curriculum (DINEIB, 2005) recommends that Indigenous knowledges and thinking are also integrated into the teacher education programme through the participation of Indigenous *sabios* (wise people) and other members of the Indigenous community. However, moments of connecting with or learning

from the local community were not common during the school days at the IBE institute. Maria once took the class to visit a ceremonial house in the community, but this was the only example of a teacher educator taking the initiative to visit a local family with the students. None of the teacher educators invited members of the community into the classroom to share their knowledge or to take part in the instruction. Thus, according to my observations, the practice at the institute did not follow the recommendations of the IBE curriculum.

Furthermore, the IBE teacher education curriculum (DINEIB, 2005), states that one of the objectives of teacher education is to develop new teachers with *cultura investigativa*, a “culture of research” approach. According to the curriculum, the new teachers should “systematize [the Indigenous] wisdom, technologies and methodologies”, which can be useful for IBE (DINEIB, 2005, 13). Article II observes that some of the teacher educators discussed this “culture of research”; they claimed that teacher educators and students should conduct research related to Indigenous communities and knowledges and think and write about how to implement the IBE education policy in an adequate way. These teacher educators spoke about conducting research as part of their *tesina*. They also mentioned research in a sense of learning through exploration, as a way for teachers to acquire knowledge about the community and from the members of the community in which they work. This learning through exploration in the communities connects directly to the aim of the IBE curriculum to promote a “culture of research” among the students.

By using field visits or enquiries in the community, the instruction draws particularly on Indigenous community resources. In terms of “community cultural wealth” (Yosso 2005), these Indigenous community resources could be conceptualized as *familial capital*, meaning knowledge that is produced and nurtured in Indigenous families and communities, and *social capital*, the “networks of people and community resources” (Yosso 2005). Castagno and Brayboy (2008) show that community involvement is a commonly discussed topic in the literature on culturally responsive education for Indigenous youth. In addition, as stated earlier in this chapter, the Ecuadorian IBE teacher education curriculum (DINEIB, 2005) also speaks in favour of the close connections between teacher education and Indigenous communities.

Community involvement can contribute to a more comprehensive understanding of Indigenous knowledges and their incorporation into instruction, inasmuch as community involvement is seen as a dialogical relationship between schools and communities (cf. Freire 2005a). Dialogue means that community involvement is a two-way street in which educators should interact with community members and get to know the community in which they teach, and support their local community (Castagno & Brayboy 2008). Knowing the community and the challenges that the members of the community live with forms the basis for cultural critique towards mainstream society and mainstream education. According to Ladson-Billings (1995; 2014), this cultural critique is an integral part of culturally responsive education.

Social critique, or educators' as well as students' critical awareness of social reality, is a step towards social transformation; towards a more socially just society (Freire 2005b, McLaren 2007). The transformative aspect of education includes the requirement for educators to take action and promote social change on the basis of perceived social problems (Freire, 2005b Ladson-Billings 2014). Social transformation is an important aspect of the IBE model, which aims to support the construction of a "sustainable plurinational state with intercultural society" (Ministerio de Educación del Ecuador, 2013, 29). In the interviews, the teacher educators raised aspects of critical awareness of social reality and the teachers' role as transformative actors in the communities.

On the other hand, the dialogical relationship between schools and Indigenous communities also means that community members should be actively engaged in school activities and experience ownership of and sovereignty in schooling. This requires the school and the teachers to invite and welcome Indigenous community members into the schools, and requires Indigenous community members to assume responsibility of participating by, for instance, developing educational materials and taking part in instruction. (Castagno & Brayboy, 2008). As mentioned earlier, this type of community involvement is recommended by the IBE teacher education curriculum, but according to my observations at the teacher education institute, such community involvement did not form a visible part of the everyday practices at the institute.

The importance of community involvement and learning through exploration can be seen from the perspective of culturally relevant pedagogical practices. The findings of this study indicate that both the students and teacher educators perceive learning and teaching methods that are based on direct observation, practical training and hands-on activities as being particularly pertinent to the Amazonian Indigenous peoples. Earlier research on different Amazonian Indigenous peoples suggests that children and young people are expected to be responsible for their own learning as active observers, explorers, askers, and experimenters, whereas adults or knowledgeable people, instead of taking an active role as teachers, facilitate learning in subtle ways by demonstrating how to carry out different activities and by giving feedback and advice to those who are younger (Prada Ramírez, 2009; Rival, 2000). Therefore, we can argue that learning through exploration in the communities shares similarities with the learning methods that are common in the home communities of Amazonian Indigenous students. The photographic data also showed the importance of interaction between siblings and peers. In sum, we can see a resemblance with the findings of studies related to diverse Indigenous peoples. A review article by Castagno and Brayboy (2008) refers to a wide range of literature on Indigenous education, claiming that many North American Indigenous communities tend to assume that "education occurs by example, that skills are learned from siblings and peers, that learning occurs through observation and participation in everyday



activities [--]" (p.955). Therefore, many American Indigenous peoples seem to share some similarities in their approach to learning. This approach also resonates with the theory of situated learning by Lave and Wenger (1991). Lave ([1988] 1993) claims that everyday activity and "knowledge-in-practice, constituted in the settings of practice, is the locus of the most powerful knowledgeability of people in the lived-in world" (p.14).

In the theory of situated learning, Lave and Wenger do not specifically refer to the learning of Indigenous peoples. It is important to note that what is perceived as culturally pertinent and relevant to Indigenous or other minoritized students, such as black students in a predominantly white context, may be equally beneficial to all students (Barnhardt and Kawagley 2005; Castagno & Brayboy, 2008; Ladson-Billings 2014). This is to say that studying and learning from Indigenous practices of knowledge production, teaching and learning may make an important contribution to general scholarly understandings of and theorizations about knowledge, teaching and learning.

At the same time, it is important to note the underlying risk of simplification and essentialization with regard to Indigenous knowledge, and how this knowledge may (or may not) be incorporated into instruction. The IBE model, MOSEIB, encourages the use of teaching and learning methods that are related to the educational practices of each Indigenous culture (Ministerio de Educación del Ecuador, 2013, 33). Here it is important, first of all, to bear in mind that there is no such thing as Amazonian Indigenous knowledge or Amazonian Indigenous teaching and learning methods in the singular. There is a diversity of Amazonian Indigenous peoples and their ways of knowing, practising or living knowledges as well as gaining and transmitting knowledges. Furthermore, within the Amazonian Indigenous communities themselves, as within any community or group of people, there is a variation between the members of the community and their perceptions of knowledge and learning based on their personal experiences. This kind of epistemological complexity cannot be simplified into a certain set or mode or style of Amazonian Indigenous knowing, learning or teaching. This is to say that Indigenous knowledge should be understood in its complexity and not essentialized as, for instance, empirical and practice-oriented knowledge. The following section discusses the teacher education programme as a space for creating Indigenous knowledge.

## 5.4 THINKING AND CREATING KNOWLEDGE FROM INDIGENOUS PERSPECTIVES WITHIN TEACHER EDUCATION

Article IV argues that as the teacher educators stressed the importance of reviving Indigenous knowledges, at the same time they seemed to accept the separation of ethnic groups and permitted students to work in single-ethnic groups. This way the educators provided the students with opportunities to study and revive their knowledge of their own ethnic group, to develop their thinking, and to create knowledge in their own language. This space for thinking and creating knowledge in Indigenous languages was limited, because Spanish was the language of instruction throughout this teacher education programme. However, as observed in Article IV, there are also other ways of creating knowledge from the Indigenous perspective. For instance, Fernando intertwined Western and Indigenous knowledges in his instructional practices. When he compared Western and Indigenous knowledges, he emphasized the relevance of the latter. He used metaphors, Indigenous stories and personal narratives, and he encouraged students to listen to and learn from knowledgeable Indigenous people in the communities. With these actions Fernando made himself an example of successful “border crossing” between the Indigenous and Mestizo worlds and acted as a mediator between different realities and epistemologies. In Fernando’s class, the locus of enunciation (Mignolo 2000) was mainly either in the Indigenous world or in between the worlds. In this way, his instruction opened up spaces for border thinking, meaning thinking and theorizing in the bicultural, bilanguaging location in between Western and sub-alternized epistemologies, and generated new ways of knowing. In such thinking, knowledge is created from the Indigenous perspective.

The interview data show that many teacher educators recognize, at least to some extent, the epistemological diversity among the Indigenous and non-Indigenous peoples at the teacher education institute. Furthermore, the educators acknowledge that the instructional practices at the institute do not necessarily reflect the Indigenous epistemologies. However, the educators confronted the epistemic dominance of the West by using diverse ways of incorporating Indigenous knowledge into their instruction, as discussed in the previous section. By bringing students’ knowledge into the classroom, using culturally relevant instruction methods and connecting with the Indigenous community, the teacher educators were communicating an important message to the students. These educators were showing that “book knowledge” and canonical Western sciences and epistemologies are not the only perspectives that matter in school, and that Indigenous perspectives are equally important and valid for discussion in the classroom (cf. Gay, 2010, Timm, 2014). In this way, the educators were contributing to reversing epistemicide (Santos, 2007), and taking steps towards cognitive justice (Santos, 2007).

Global cognitive justice involves the requirement to disentangle from modern Western ways of viewing the world and thinking and understanding knowledge, and to start thinking from other perspectives, from other epistemologies (Mignolo, 2000; Santos, 2007; Walsh, 2012). To further cognitive justice through education it is important, first of all, for teachers to recognize the epistemological diversity of their students (cf. Castagno & Brayboy, 2008). Furthermore, teachers who can manage both the majority and the minoritized epistemologies are needed as mediators or brokers between cultures and epistemologies. In other words, teachers should be able to help their students navigate across the epistemological diversities of the predominantly Western school knowledges and Indigenous knowledges (See Aikenhead, 2001; Cajete, 2008; Castagno & Brayboy, 2008). And, as discussed in Article IV, some of the teacher educators of this study did indeed act as mediators between Indigenous and non-Indigenous epistemologies.

The teacher educators also acknowledged that more could be done in IBE and in the teacher education programme to further develop intercultural, bilingual instructional practices from the Indigenous perspectives. To achieve this goal, some of the teacher educators argued that teachers and prospective teachers should do more research and writing about Indigenous knowledge in order to revive Indigenous knowledge or rescue it from oblivion, as well as to develop new ways of applying IBE in effective ways in the Indigenous communities. The emphasis that teacher educators place on writing about Indigenous knowledge suggests that the educators observe and conform to the canonical epistemic hierarchy (Hill Boone, 1996; Mignolo, 1996), in which literacy and written knowledge are seen as superior to unwritten knowledge. At schools and universities, the written word tends to be valued over other ways of transferring knowledge (Hereniko, 2000), and textbooks play an important role in defining whose knowledge is of the most worth and whose culture is taught in schools (Apple, 1993). Presenting Indigenous knowledges in written form can be problematic, if we understand Indigenous knowledge as being embodied as an integral part of a person. Acquisition or embodiment of such capital requires a personal investment of time (Bourdieu, 2004). Battiste (2008a) argues that “[T]o acquire Indigenous knowledge, one cannot merely read printed material, such as books or literature, or do field visits to local sites. Rather, one comes to know through extended conversation and experiences with elders, peoples, and places” (p.502).

Therefore, I am enticed to ask whether it would be possible to break with the epistemic hierarchy and the binary opposition between knowledge that is transmitted via written language and other ways of knowledge transmission. Could we build on the assumption that knowledge that is produced and transmitted by means of oral, spiritual, musical, and embodied practices could be equally valuable as knowledge communicated in writing? If Indigenous knowledge, which has earlier been transmitted orally in an Indigenous language or through other means of communication, is documented and written in the majority language, say, an academic language, is something lost

in translation? The likely answer is yes, something may be lost. Concern about the deterioration of knowledge is particularly important if one's purpose is to protect and maintain Indigenous knowledge. However, as discussed in Article II in particular, and as the interview data, the documents that guide IBE as well as literature by Ecuadorian Indigenous scholar Ramírez (2001) show, the purpose of IBE in Ecuador is to revive, regenerate and raise the status of Indigenous knowledge, thus furthering dialogue between Indigenous and non-Indigenous knowledges.

Therefore, according to Rival (2000), most of the Indigenous leaders in Ecuador are certain that using Indigenous languages in writing and at schools is important for Indigenous cultural heritage. Moreover, based on this study, the teacher educators seem to align with Ramírez (2001, 9), who has proposed that rigorous research on the knowledge of the Indigenous peoples should be conducted with the objective of creating "scientific knowledge based on Indigenous knowledge". Ramírez speaks about the concept of scientific interculturality, which means challenging the hegemony of the Western understandings of knowledge and philosophy, and promoting the "intercultural co-construction of diverse epistemologies and cosmologies" based on Indigenous and non-Indigenous knowledges (Walsh, 2012, 17). This intercultural co-construction contributes to the development of sciences, and therefore "broadens the human horizon of knowledge" (Ramírez, 2001, 2). Scientific interculturality bears a resemblance to the concept of border thinking, i.e. thinking and theorizing in the bicultural, bilanguaging location in between Western and subalternized or minoritized epistemologies, and generating new ways of knowing (Mignolo, 2000). As mentioned earlier, the teacher education programme offered very limited space for thinking and creating knowledge in Indigenous languages, because Spanish was the language of instruction throughout the programme. However, thinking in a bicultural (and to some extent bilingual) location was particularly encouraged by one of the Indigenous teacher educators, Fernando, who intertwined Western and Indigenous knowledges in his instructional practices.

Santos (2007) claims that resistance against global coloniality and against the cognitive injustice of abyssal thinking arises from initiatives and movements that constitute counter-hegemonic globalization, or "globalization from below". He proclaims that Indigenous people are the "paradigmatic inhabitants of the other side of the line," and that Indigenous movements are "those whose conceptions and practices represent the most convincing emergence of post-abyssal thinking" (p.10). In recent years, the political development in Ecuador has shown signs of opening up toward the "other side". Through the Kichwa concept of Sumak Kawsay (living well), Indigenous ways of thinking and viewing the world have been incorporated in the latest constitution of the country, since 2008. However, the persistence of colonial structures and canonical epistemologies complicates the process of decolonization, slows down the implementation of changes, and sustains cognitive injustice (see Radcliffe, 2012). Indigenous teachers, leaders, and

intellectuals continuously develop their thinking regarding alternatives in education. The University of Cuenca (in cooperation with the EIBAMAZ project) started a degree programme for research into Amazonian cultures in 2006 to train Amazonian Indigenous scholars. This research degree programme aims to operate in between the Western and Amazonian philosophies. Within this programme, the student researchers conduct fieldwork on, for example, themes related to Amazonian Indigenous *cosmovisiones* (worldviews), forms of knowledge, and mythologies (Chacón, Yanez, & Larriva, 2010). These young Amazonian Indigenous people have the potential to generate new ways of knowing and also to become an important resource in terms of the advancement of culturally relevant educational practices in IBE schools and institutes.

## **5.5 CHANGING THE SPATIO-TEMPORAL ORGANIZATION IN IBE**

The research questions specifically refer to the incorporation of Indigenous knowledge into instructional practices. However, the data gathered during the fieldwork periods also include observations that illustrate how Indigenous knowledge informs (or does not inform), for instance, the spatial organization at the institute, specific events that gather together teachers and students, and “formalities” at the institute. By formalities, I refer particularly to the practices discussed in the *Innovaciones educativas* (IE), a document explaining Amazonian indigenous innovations of education (DIREIB-A, 2006). This document, produced by the former Amazonian regional administrative unit for IBE, makes concrete suggestions for customizing traditional Western schooling practices to better meet the needs and aims of IBE, to conform to the Indigenous ontologies and to reinforce Amazonian Indigenous identities. Through this aim, IE suggests abandoning or modifying formalities that include, for example, ringing a bell to signal the start and end of classes, or standing or sitting in rows in the classroom or in the schoolyard. The elimination of bell-ringing is part of a general effort to modify the temporal organization of the school from the mainstream linear time of calendars and clock-times towards the Indigenous circular conception of time which involves interrelated cycles of time, space, nature, and human life (e.g., Chacón, 2012; DIREIB-A, 2006; Pari Rodríguez, 2009; Salgado, 2011). Bell ringing was abandoned at the institute after the IE recommendations. Issues related to diverse conceptions of time and time management would have been an interesting addition for understanding instructional practices, but this study did not analyse temporal aspects. However, Article III touches upon spatial organization.

As mentioned above, IE recommends modifications to the spatial organization of classrooms and what is known in Ecuador as the “civic moment”: the morning assembly that is held in schools all over the country. At

the IBTE institute, the morning assembly was every Monday, and all the students and teachers from the IBTE institute, as well as from the elementary school affiliated to the institute, gathered at this assembly in the school yard. According to IE, students should not be standing in lines in morning assembly nor be seated in lines in the classroom; they should be in a circle or semi-circle, facing each other. IE also suggests that in the classroom, the teacher should not have a separate desk in front of the students but should be seated among the students. Article III highlights how the Monday morning assembly was modified at the IBTE institute. In the first Monday morning assembly that I observed at the IBTE institute, the students stood in rows, but the following Monday morning, they were directed to form a semi-circle, facing each other. These modifications in the spatial organization relate to the attempt to shift from a teacher-centred model of schooling practices towards a more egalitarian approach that better conforms to the Indigenous views (DIREIB-A, 2006). Breaking away from the teacher-centred model of schooling is central for IBE in Amazonia, since the Amazonian Indigenous peoples typically emphasize the learner's, rather than the teacher's, active role (Prada Ramírez, 2009; Rival, 2000).

According to Sabina, a Kichwa teacher educator, standing in a circular arrangement in the morning assembly symbolizes equality across the boundaries of ethnicity and age. It is, indeed, a powerful shared moment when all the students, from the youngest primary school children to the second-year teacher education students, primary school teachers and teacher educators, the Kichwa, Shuar, Achuar and Mestizo, stand face-to-face in a large circular arrangement under a tin roof that shelters from the sun.

Furthermore, earlier research on the effects of different classroom seating arrangements on student behaviour, attitudes, interaction, achievement and group relations has shown that sitting in a semi-circle or circle can be beneficial in many ways. This arrangement fosters face-to-face orientation, eye contact and interaction among all participants, and lowers the hierarchical relationship between leaders and participants, or teachers and students. (Marx, Furher & Hartig, 1999; Creighton, 2005). One study on seating arrangements and question-asking concludes that children tend to ask the teacher more questions if they are seated in a semi-circle than when seated in rows (Marx, Furher & Hartig, 1999). Furthermore, if the arrangement is a full circle, and the instructor sits among the participants, this removes the "head of the table" notion, meaning that everybody is seated on equal ground. (Creighton, 2005) According to Falout (2014), the circular arrangement increases the possibility to foster dialogue, empathy, trust, and sense of belonging among class members.

Spatial organization, face-to-face contact and standing or sitting in a circular arrangement makes a difference. However, circular arrangement by itself is "not what brings people together; it is the people within this seating arrangement and how they feel, think, respond, and interact with each other, both inside and outside of the circle, that potentially brings them together"

(Falout 2014, 282). As mentioned before, there was some resistance among the teacher educators towards the suggested changes to everyday practices. Moreover, in the morning assembly I observed the persistence of the Spanish-speaking national symbols and identities. The national flag and national anthem were irremovable parts of morning assembly (Radcliffe & Westwood, 1996). The morning assembly programme at the IBE institute included the Ecuadorian flag, reciting prayers and singing the national anthem. In contrast to the mainstream schools and institutes, the national anthem was sometimes sung in Kichwa instead of Spanish. It is important to note that Spanish is no longer the only option, as it was in the era of nation-building after independence from Spain (Freeland, 1996; Langer, 2003). On the other hand, the anthem sung in Kichwa was still the Ecuadorian national anthem and the flag was the Ecuadorian national flag. Therefore, the programme of the morning assembly confirmed the colonial idea of unity among the imagined community of the Ecuadorian nation (Anderson 2006, Radcliffe and Westwood 1996), instead of inviting the participants to celebrate collective Indigenous or Amazonian Indigenous identities or the diversity of the Kichwa, Shuar, or Achuar identities and spiritualities (Langer & Muñoz, 2003). Thus, in this sense, IBE is in line with the Ecuadorian national primary school curriculum which, according to López (2017) presents interculturality as a cross-cutting issue but still prioritizes the development of a national Ecuadorian identity instead of supporting diverse identities within a plurinational country.

## **5.6 LACK OF RESOURCES AND “STAGNANT MINDS”**

In answer to RQ3, Articles II, III and IV discuss the aspects that hinder the incorporation of Shuar, Achuar and Kichwa Indigenous knowledge and the Indigenous ways of acquiring knowledge and learning into the instructional practices of the IBTE programme. Evidently, the application of modifications to educational programmes depends on the teacher educators and elementary school teachers, and their preparedness and willingness to break from coloniality and strive for alternative ways of acting and thinking. Modifications to educational policies, whether small or large scale, are constantly negotiated in the everyday practices of educational institutions. As Article III mentions, teacher educators' cultural, linguistic and educational backgrounds vary somewhat, as does their commitment to IBE. The Spanish-speaking Mestizo were the majority among the teacher educators at the institute. In addition, the Spanish-speaking educators, as well as some of the Indigenous educators, had been educated in mainstream Spanish-speaking schools and universities. Moreover, the Spanish-speaking educators claimed that they had received very little if any in-service education related to IBE. In other words, the teacher educators, particularly the Spanish-speaking educators, were not well prepared for working at an IBE institute, and quite frankly, the teacher

educators who were supportive of IBE were not quite sure about how to act out IBE policy and transform their ways of thinking and acting in the classrooms. For instance, how to incorporate Indigenous knowledges into their instructional practices? How to make their instruction more practice-oriented and culturally relevant? And what Amazonian Indigenous knowledges are relevant to teacher education?

The epistemological difficulty of taking action to incorporate Indigenous knowledge into instruction is discussed to some extent in all four articles. Articles III and IV address how Maria, a Spanish-speaking teacher educator, claimed that teacher educators had “stagnant minds,” meaning in practice that she and the other educators adhered to Western ways of thinking. She argued that she and other educators could not change the educational practices they had learned in the mainstream education system that they themselves had completed. Maria blamed the non-Indigenous teacher educators for not “doing enough”. But she also blamed the mainstream teacher education and the IBE in-service education for failing to provide the non-Indigenous teachers with the necessary knowledge or tools for working effectively with Indigenous students.

One of the challenges with regard to educators’ preparedness is related to the lack of educational materials and how the existing materials are not necessarily adequate in Amazonia. In Article IV Jimena claims that the textbooks provided by the national IBE directorate (DINEIB) represent the *cosmovisiones* of the Indigenous peoples of the highlands only and pay no attention to the diversity of the Indigenous peoples in Ecuador. The students at the institute were Amazonian, and the Amazonian *cosmovisiones* and everyday realities were not the same as those in the highlands. Therefore, Jimena argued that some of the DINEIB materials were unsuitable for the students at the institute. Many of the teacher educators shared the view of not having much educational material or other printed or written material related to the Amazonian Indigenous peoples and their knowledge. In Article II, Lorenzo, a Spanish-speaking math didactics teacher, claims that little has been written about Amazonian counting systems. This lack of books and other written materials related to Amazonian Indigenous knowledge means that teacher educators have only few materials to draw upon. Therefore, as discussed in Article II, current teacher educators, and particularly prospective educators, are at least to some extent expected to acquire an active role in conducting research in the Indigenous communities and in thinking about how to implement the IBE policy in an appropriate way.

Article II discusses how two Indigenous teacher educators, Carlos and Fernando, call for Indigenous people to do more research and write about Indigenous knowledge. Fernando suggests that writing is the (only) way to incorporate Indigenous knowledge into educational practices. After all, in schools and universities, the written word tends to be valued over other ways of transferring knowledge (Hereniko, 2000) while at the same time the lack of alphabetic writing has been seen as a deficiency (Hill Boone, 1996; Mignolo,



1996). Hence, textbooks play an important role in defining whose knowledge is of the most worth and whose culture is taught in schools (Apple, 1993). Books related to Indigenous knowledge could be used as educational material and benefit both the teacher education students and the Spanish-speaking teacher educators.

Books and educational materials, however, do not overcome the challenges related to the curriculum and how Indigenous knowledges and ways of knowing are reflected in the overall structures of the teacher education programme, including the timetables, courses and subjects of instruction. Article III points out that the teacher education programme provides inadequate support for the Amazonian idea of integrated science. The IBE schools in Amazonia are supposed to teach integrated science, meaning that instruction should present subjects and phenomena that appear in the world as interrelated, as a totality, instead of as fragmented, classified, or individual occurrences. Moreover, in integrated science, instruction should follow the Indigenous cyclical rather than the Western linear orientation with regard to understanding the relation between the present, past, and future times (DIREIB-A, 2006). Such an interpretation of integrated sciences reflects the Amazonian Indigenous epistemologies, which are described as holistic and relational, and are based on the interrelatedness of all the physical and spiritual elements of the universe (Chacón, Yanez, & Larriva, 2010; Reascos, 2009). However, the teacher education programme did not apply the integrated science approach. The instruction of sciences in the programme was compartmentalized into subjects, thus following the traditional Western model. At the same time, it alienated the students from the Indigenous ontologies and epistemologies. As the teacher education programme did not reflect the Indigenous holistic, relational way of viewing the world and understanding knowledge, the newly graduated teachers were confronted with difficulties when they tried to find a way in which to apply the IBE integrated approach to science instruction in elementary schools.

The findings of this study present evidence of the teacher education programme's adherence to the Western model of education. However, there did not seem to be much evidence of open, articulated resistance to the basic ideas of IBE among the interviewed students or educators. On the contrary, most of them, students as well as educators, voiced their support for IBE, Indigenous knowledges and of the incorporation of such knowledges into instruction, as mentioned in Article III and shown in Article IV. Therefore, the articles do not widely discuss students' or educators' open resistance to IBE. However, some of the educators at the institute resisted changing the ways of the mainstream Spanish-speaking education system. Article III mentions the example of Amelia, a Spanish-speaking teacher educator, who thought that formalities such as ringing the school bell and standing in lines served an important pedagogical purpose, and thus should not be changed. Furthermore, Amelia argued that such modifications were not radical enough to produce real change in the mainstream education model. In other words,

some of the educators were not motivated to change everyday practices or did not share the same views as the teacher education programme administrators regarding how to incorporate Indigenous knowledges into instructional practices.

Some resistance to the central considerations of IBE was also observed among the students. As mentioned above, the Indigenous students, as well as the teacher educators, were generally critical of theory-oriented education and spoke in favour of practice-oriented instruction, including hands-on activities and manipulative educational materials. However, in Article II, a young Achuar student, Claudio, questioned the legitimacy of the Indigenous traditions of teaching and learning. Claudio portrayed "practical" ways of learning as a thing of the past. Claudio stood out from the rest of the Achuar students not only because of these views, but also because of his appearance. He had cut his hair short, which, among the Achuar, can be understood as a sign of distancing oneself from the Achuar values and way of life.

## 6 DISCUSSION

Indigenous peoples around the globe bear different views regarding Indigenous knowledges, as well as diverse perceptions about the relations between Indigenous knowledges and the schooling of Indigenous peoples. In most cases, as in the case of the Amazonian Indigenous peoples, the Indigenous population has experienced colonialism, and schooling has been, or continues to be, a vehicle for colonizing Indigenous peoples. In the North American context, Canadian Anishinaabe scholar Simpson (2004) claimed a decade ago that Indigenous peoples' schooling continued to be detrimental to the transmission of Indigenous knowledges because the Western-based school tends to undermine the skills that are central for transmitting oral tradition. Without such skills, the children have less opportunities to learn from the Indigenous knowledge holders. Therefore, Simpson (2004) claimed, Indigenous people should not focus on documenting Indigenous knowledges in writing, but rather strengthen the oral tradition and provide opportunities for young people to connect with the elders and other knowledgeable Indigenous people. Canadian *Mi'kmaq* scholar Battiste (2008a) has also questioned the extent to which schools can assume responsibility for teaching Indigenous knowledges and languages, arguing that at least part of Indigenous knowledge and language learning should take place in the Indigenous communities, where learning occurs in the diverse and meaningful ways that are pertinent to each community. This is to say that the school cannot take the place of the Indigenous community and family as an environment for learning Indigenous knowledges. However, the school should also be decolonized, and made more supportive and appreciative of Indigenous knowledges and Indigenous families, communities and languages (Battiste, 2013).

In Ecuador, IBE has been designed and driven by Ecuadorian Indigenous and Afro-Ecuadorian social movements as an alternative to and resistance against a monocultural Western or colonial schooling system (Cuji 2012). As such, IBE is an alternative educational system, a reterritorialization of the globalized model of education. IBE acknowledges the family as the primary educational environment for a child and stresses that school should adjust to the premises and needs of families. The IBE policy is innovative and supportive of stimulating close connections between the school and the surrounding community, and of incorporating Indigenous knowledges into educational programmes. According to the MOSEIB (Ministerio de Educación del Ecuador, 2013), IBE holds the idea that the Indigenous knowledge holders, the elders and wise-people, should be part of the formal IBE education system and participate in instruction and the school community. The implementation of these supportive policies is a challenge, and IBE in Ecuador shares the same situation with its neighbouring country Bolivia, where “there is still a need to bridge the gap between Indigenous educational ideology and rhetoric and

effective bilingual or multilingual classroom practice” (López, 2014, 44). This study contributes to the discourse on IBE and classroom practices by focusing on teacher education, which has not been widely researched. Furthermore, this study highlights the Amazonian Indigenous Shuar, Achuar and Kichwa perspectives of teacher education.

The discussion section starts by discussing the findings of this study in terms of the relationship between Indigenous knowledges, schooling and teacher education, remarking also on the role of IBTE as a stepping stone to higher education and conducting research. It then focuses on the implications of the findings of this study for teacher education and instructional practices. Thereafter, the discussion continues with final methodological reflections and, finally, with suggestions for further study.

## **6.1 RELATIONSHIP BETWEEN INDIGENOUS KNOWLEDGES, SCHOOLING AND TEACHER EDUCATION**

As discussed in the findings, the IBE teacher educators in the observed teacher education institute in Ecuadorian Amazonia acknowledged the importance of recognizing, reviving and reaffirming Indigenous knowledges. The educators had differing reasons for taking such a stance towards Indigenous knowledges. Furthermore, the teacher educators’ own background as either an Indigenous or non-Indigenous person, either with or without experience of and familiarity with Indigenous communities and knowledges influenced whether they were in favour of the recognition, revival and reaffirmation of Indigenous knowledges. The findings of this study illustrate how Indigenous and non-Indigenous teachers use different strategies to incorporate Indigenous knowledge into their instructional practices. By using different strategies, the educators contribute to the revitalization of Indigenous knowledge and make their instruction culturally relevant and empowering for Indigenous students.

In Ecuador, the advocates of IBE are clearly not interested in only the effectiveness of classroom practices. IBE forms part of the political project of the Ecuadorian Indigenous movement, which strives for decolonization and for the Ecuadorian state as “*plurinacional e intercultural*”, meaning a state that consists of several nationalities<sup>19</sup> and is intercultural. With its aim of social transformation toward a more egalitarian society in which epistemological diversity is acknowledged, respected and cherished, IBE’s objective is to revive and regenerate Indigenous knowledges, and to raise the status of these knowledges and bring them into the social spheres that have been occupied by the dominant society, including the political and academic spheres. The findings of this study show that the Indigenous teacher educators at the IBE

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<sup>19</sup> Indigenous peoples in Ecuador prefer using the term nationality or Indigenous nation to Indigenous peoples or cultures.

institute support this objective, as they argued that Indigenous students and educators should conduct research and write about Indigenous knowledge. In the same vein as Geertz (1973, 30), who claimed that interpretive anthropology aims to include diverse knowledge in the “consultable record” of what people in different parts of the world have said, IBE also aims to bring Indigenous knowledges into this consultable record, to make it available to a wider society. And further, by aiming toward an intercultural society, the objective is not only to highlight the multitude of Indigenous knowledges, but to create a dialogue between diverse Indigenous and non-Indigenous perspectives, and knowledges and epistemologies, as in the concept of “scientific interculturality”, with its “intercultural co-construction of diverse epistemologies and cosmologies” (Ramírez 2001; Walsh 2012, 17). This is to say that researching and writing about Indigenous knowledges makes it possible to generate a dialogue between Indigenous and non-Indigenous academic knowledges.

This research showed that the teacher education institute provided some space for dialogue between Indigenous and non-Indigenous knowledge and diverse epistemologies. However, the opportunities for producing knowledge from Indigenous perspectives or for the intercultural co-construction of knowledge were limited. Would it be feasible and meaningful to create more space for intercultural co-construction between epistemologies within intercultural bilingual teacher education? Could a teacher education programme further develop the scope of academic knowledge (Ramírez 2001) and contribute to border thinking, generating new ways of knowing in a bicultural, bilanguaging location in between the Western and Indigenous epistemologies (Mignolo 1998, 2000)?

Decolonial scholars (Grande 2008, Mignolo & Tlostanova 2006) argue that generating new knowledge from an Indigenous perspective is possible when Indigenous scholars are involved in the academic discussion and have the opportunity to draw on Indigenous knowledges instead of purely adopting Western academic traditions. In the context of an IBTE programme in Ecuadorian Amazonia, the students and teacher educators are not very likely to be involved in academic discussions in, for instance, universities or scientific journals. In the context of a teacher education institute, the most burning question is whether the students have the opportunity to draw on Indigenous knowledge while doing their coursework and *tesina* that the students have to write at the end of their studies at the institute. Moreover, does an IBTE programme prepare students to draw on their Indigenous knowledge after graduation, when they start working as teachers in the Indigenous communities, or when they continue further with their studies at university?

The findings of this study indicate that it is difficult to break away from obstinate academic traditions in intercultural bilingual teacher education. Ecuadorian Kichwa researcher, Cují (2012), claims that even Indigenous people tend to conform to the exigencies of the Western traditions of scientific

research. This can be seen in a tendency to seek legitimacy for Indigenous knowledges by interpreting Indigenous knowledges into the language of the academe and by studying Indigenous knowledges using (Western) scientific methods, which again upholds the position of Indigenous knowledges as subordinate to academic knowledges. Furthermore, Hidrovo Quinónez (2015) argues that even if one tries to disregard the predominance of the mindset of science and create a harmonious relationship between diverse epistemologies, it is still necessary to follow the conventional rules of academic writing simply because currently no other language can be used if the intention is to discuss and disseminate within academia. Ultimately, Indigenous students, teachers and scholars are in contradictory positions – how can they be sufficiently (but not too) academic and, at the same time, sufficiently (but not too) Indigenous? If Indigenous students and scholars cannot speak the academic language, they risk not being understood in academia (cf. Hidrovo Quinónez, 2015), whereas if they speak the academic language fluently, they may be interpreted as less Indigenous (Moreton-Robinson 2006).

The findings of this study show how non-Indigenous teacher educators can also play a significant role as mediators and help their students navigate between Indigenous and non-Indigenous knowledge and epistemologies. This study did not analyse the collaboration and peer support between Indigenous and non-Indigenous teacher educators. Under ideal circumstances, joint work between Indigenous and non-Indigenous teacher educators could contribute to intercultural co-construction between diverse epistemologies. Many scholars have discussed the challenges of collaboration between Indigenous and non-Indigenous teachers, researchers or higher education faculty members. Molnar and Jessen Williamson (2015), for instance, discuss how they, two academics, a white male with a privileged family background and an Indigenous female with a non-privileged background, worked through a collaborative effort to introduce Indigenous knowledges to non-Indigenous student teachers. Their vivid example shows that collegial collaboration between two individuals in different positions with regard to privilege and worldview, requires a considerable amount of time, negotiation and sometimes difficult and painful interactions, before developing mutual trust, understanding and sensitivity.

Another interesting viewpoint with regard to joint research work is offered by Jones (2011), a *Pākehā* (white, non-Māori) researcher with a long history of work related to Māori education in New Zealand. Jones describes her collaboration with a Māori researcher, and how their research and writing was “based on the productive tension of difference”. In more general terms, Jones (2011) discusses the political and philosophical tension between the *Pākehā* and Māori researchers in education, and how the *Pākehā* may be engaged in the *kaupapa* Māori education which, by definition of many Māori scholars, is “for Māori, by Māori”. In *kaupapa* Māori, the main focus is not on **excluding** the *Pākehā*, but **including** the Māori. In *kaupapa* Māori, the power relations are reversed: the Māori is the privileged, and the Māori knowledges and

practices are at the centre of the research, teaching, thinking and way of viewing the world. This leaves the Pākehā in a position that is new and disturbing to them. After all, the Pākehā are used to being the privileged, at the centre (Jones 2011). For all its challenges, however, Jones (2011) argues that joint Māori-Pākehā work is feasible and can be fruitful if the Pākehā researcher has a long-term engagement with kaupapa Māori and learns to be “at ease in Māori contexts, open to Māori knowledges and familiar with [the Māori language]” (p.107).

The Maori in New Zealand currently have an exceptionally established position within mainstream academia. In Ecuador, the tradition of Indigenous scholars is emerging. IBE is one of the few fields of study that are available in educational institutes close to the Indigenous communities as well as in some mainstream universities (Cují, 2012). Therefore, an IBE teacher education programme in the Ecuadorian Amazonia not only educates school teachers for Indigenous communities; it is also a stepping stone for Amazonian Indigenous students to access academia, to conduct further studies, and possibly, to create knowledge from Indigenous perspectives within academia.

One of the challenges within academia is whether Indigenous perspectives are understood in the evaluation of educational institutes. As a global phenomenon, higher education is increasingly subject to state regulation. As part of the development of new public management, numerous countries in the world have established a regulatory quality assurance system for higher education, including teacher education. National governments have used quality assurance measures as an instrument to reorient universities (Jarvis 2014). In Ecuador, during the last ten years, the leftist government of Rafael Correa (2007–2017) has steered the country from neoliberal tracks towards a “twenty-first-century socialism” or post-neoliberal political framework, which is characterized by the idea of a strong state that cares for its citizens (Kennemore & Weeks 2011).

In its caring role, the state aims to guarantee all citizens the right for quality education. To meet this aim, the Ecuadorian state, for example, regulates and assesses the higher education institutes, including the IBTE institutes, and suspends the activities of institutions that have not been successful in the evaluations (Rubaii & Bandera 2016). Mato (2014; 2016) discusses the evaluation of the Amawtay Wasi University, revealing discrepancies between the conceptions of the evaluators and the representatives of the Amawtay Wasi University regarding higher education. The evaluators adhere to the government’s policies and views on national development, whereas the representatives of the Amawtay Wasi University base their conception of university on the Indigenous *cosmovisión* and critique of the Western idea of development (Mato, 2016).

In principle, both Amawtay Wasi and the Ecuadorian constitution and policy documents are discussing national development in terms of *Sumaq Kawsay* or *buen vivir* (“good living” or “living well”) (Salgado & Morán 2014). Understanding the full meaning of *Sumaq Kawsay* and its multiple

connotations would require further study, but in simplified terms, the concept entails that the aim of a person and a community is to conduct a full life in harmony with nature, and to achieve happiness of the person, community, and nature (Salgado & Morán 2014). However, the public policies and practices in institutions such as universities or other educational institutes are not prepared to conform to the ideology of Sumaq Kawsay (Salgado & Morán, 2014; Walsh, 2010). Salgado and Morán (2014) suggest that higher education and the quality assessment of higher education should adapt to the principles of Sumaq Kawsay. Following this, they suggest that assessment should not be used as a regulation and standardization tool but rather as a tool for supporting fair and equal access to higher education institutes and for ensuring opportunities for students and teachers to fully develop their potential in a diverse and creative environment (Salgado & Morán 2014). In other words, assessment should support the diversity within educational institutes instead of streamlining or restricting educational options.

Based on comparative studies in several countries, Jarvis (2014) claims that “the quality debate remains principally a debate over values, politics and ideology” (p.164). Not only in Ecuador, but globally, we may ask in which ways the national and international educational policies with their regulatory practices, quality assurance systems and national and international rankings, affect diversity within academia? How does regulation and quality assurance limit the diversity of disciplines, fields of study, research frameworks and knowledges? Is there space for alternative thinking and alternative knowledges within the quality-assured academy? The word alternative may currently have negative connotations because of the recent rise of post truth politics and “alternative facts”. Nevertheless, I dare to speak in favour of alternative thinking in the sense that Mignolo (2000) and Santos (2007) write about alternative thinking of alternatives. In my view, it is short-sighted to constrict academia and ignore alternative thinking and the alternative knowledges deriving from Indigenous as well as other colonized or minoritized peoples. Acknowledging and tapping into the epistemological and ontological diversity in schools and higher education is both a challenge and an opportunity for education in our current multicultural societies.

Ecuador is an interesting example of such a multicultural society. If we look at the recent development in Ecuador from an optimistic viewpoint, we can see a country taking steps towards becoming an inclusive society that is constitutionally plurinational and intercultural. But if we take a more critical stance, we could argue that the Correa government imposed a recolonization of education by reducing the autonomy of the Indigenous peoples and their opportunities to participate in decision-making and by appropriating intercultural education and Indigenous concepts such as *buen vivir* and interculturality (cf. Cortina, 2014; Martínez Novo, 2013). Interculturality may not be an Indigenous concept, but Indigenous organizations brought the idea of interculturality to the forefront in Ecuador, with certain entailing connotations. According to Cují (2012) there are at least two different, and to



some extent contradictory, ways of understanding interculturality within the Ecuadorian Indigenous community. For part of the Indigenous community, interculturality means, above all, the recovery of Indigenous cultures and the self-determination and autonomy of Indigenous peoples. Others perceive interculturality as a relation and mutual learning between diverse cultures, and as the inclusion of Indigenous and Afro-Ecuadorian people in the Ecuadorian society.

This study shows that the teacher educators and the Shuar, Achuar and Kichwa students at the teacher education institute in Ecuadorian Amazonia contributed to interculturality, above all, in terms of the revival of Indigenous knowledge and the reaffirmation of Indigenous identities. Interculturality as mutual learning and the co-construction of new knowledge between diverse cultures was also raised, but to a lesser extent.

The following two sections discuss the implications of the findings of this study for teacher education and instructional practices.

## **6.2 IMPLICATIONS FOR TEACHER EDUCATION: NEED FOR EPISTEMOLOGICAL PLURALISM**

As discussed in the findings of this study, the impact of ideas such as interculturality and the incorporation of Indigenous knowledge into the instructional practices of an institution remains small if educators are not prepared or willing to work towards such goals. This implies that initial and in-service teacher education should prepare teachers to better understand and respond to Indigenous people's concerns, including Indigenous knowledges, epistemological and ontological pluralism and the epistemic power hierarchies. Moreover, all the educators need such education, but particularly the Spanish-speaking educators who do not have the same knowledge base or personal experiences as the Indigenous educators may have.

One of the challenges for teacher education is related to the educators' background and the persistence of Western thinking in educational programmes. Firstly, many intercultural educators belong to the dominant population. Secondly, even the educators who belong to a minority population have learned the dominant ways of thinking as well as the mainstream educational practices by attending mainstream schools and universities. And as St. Pierre (2006) notes "when we are entrenched in a particular way of thinking about the world, one in which we have been trained, one that seems to suit our ends and our dispositions, it is very difficult to hear others, to be *willing* to hear them" (p.257)<sup>20</sup>. This poses a challenge for teacher education. How can initial and in-service teacher education support teachers in learning to hear others?

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<sup>20</sup> In this context, I understand others as everyone belonging to a non-dominant group, based on, for example class, ethnicity, language, gender, religion, or place of residence.

Willingness to hear others is fundamental in intercultural education. This means that the educators should hear and see what they are “socialized not to” hear and see, and furthermore, act against hegemony (Gorski 2008). A counter-hegemonic intercultural approach leads the educators, together with the students, to deal with difficult knowledge regarding power and privilege. This can be painful and even self-shattering, particularly for mainstream students and educators who have to learn about and come to terms with their own privilege (Lanas 2014). Furthermore, a counter-hegemonic intercultural education requires some fluidity in the roles of educators and learners; that the educator can be a learner and that the student can be an educator. Spivak (2004) speaks of “children as my teachers” (p.546) claiming that “learning from the subaltern is, paradoxically, through teaching... working across the class-culture difference..., trying to learn from children, and from the behaviour of class-‘inferiors’, the teacher learns to recognize, not just a benevolently coerced assent, but also an unexpected response” (p.537). To successfully deal with such fluidity of educator-learner roles as well as with the difficult knowledge and difficult emotions related to knowledge, power and privilege, the educator needs to be able to accept and tolerate the uncertainty, insecurity and discomfort that both they themselves and the students experience (Lanas, 2014). Accepting and tolerating uncertainty can be difficult and uncomfortable, partly because the mainstream Western intellectual traditions tend to direct us in the opposite direction, to “maximize information and/or knowledge, and so reduce uncertainty or ignorance” (Smithson, 1988 p.2).

Certainly, there is no single unified Western intellectual tradition, but diverse traditions. Post-structuralist, post-modern and post-colonial thinking and theorizing, for instance, accept and encourage uncertainty and ambiguity, questioning knowledge and “truths” as thinkers such as Atkinson (2000), Deleuze and Guattari (2014), Derrida (1978) and Spivak (1988). There are Western scholars who write about ontological and epistemological pluralism, acknowledging that there are diverse ways or modes of being, thinking and knowing (Andreotti, Ahenakew & Cooper, 2011; Turner, 2010). In postmodern thinking, the essence of scientific research, for instance, is not a quest for validity or truth, but rather a “breakdown of certainty, a willingness to be unsure and to learn to thrive in the restless, rigorous confusion that is learning – *inquiry*” (St. Pierre 2006, 260-261). Postmodern research aims “to produce different knowledge and to produce knowledge differently” (St. Pierre 1997, 175). St. Pierre (2006) insists on the importance of engaging with other epistemologies “in order to move toward the unthought” (p.260). However, epistemological and ontological pluralism is not a trivial issue for mainstream academia, science and education. According to Turner (2010), mainstream philosophers today mostly disagree with the idea of ontological pluralism and do not acknowledge different ways or modes of being. Turner (2010) argues that philosophers tend to think that ontological pluralism is untenable or unthinkable and refuted, but this view is not based on solid arguments:

“having examined here every argument against pluralism we could think of, we found nothing to justify the dominant anti-pluralist attitude of the last half-century” (Turner 2010, p.34). Western mainstream epistemologies dominate in academia and in education, whereas Indigenous and other minoritized knowledges remain unnoticed (Santos 2007). Mignolo (2000) and Santos (2007) suggest changing the locus of enunciation altogether, and starting to think from the “Other side”, the subaltern or minoritized locations. In the same vein, Indigenous scholars such as Brayboy (Castagno & Brayboy 2008) argue for education that would change the locus of enunciation and make structural changes from alternative, minoritized perspectives.

Mignolo (2000) conceptualizes the changing of the locus of enunciation as “border thinking” and “barbarian theorizing”; generating new ways of knowing by thinking and theorizing in a bicultural and bilanguaging location in between the Western and subalternized epistemologies. Border thinking is a decolonial thinking that emerges from the experience of being colonized and “dwelling in double consciousness” (Dickson 1992; Mignolo & Tlostanova 2006). What is the role of border thinking in intercultural education? As discussed earlier in this study, the IBE teacher education programme in Ecuador involves some (rare) opportunities for border thinking. One of the Indigenous teacher educators particularly incorporated his thinking in the bicultural location in between the Indigenous and Spanish-speaking epistemologies into his instructional practices. This was because of his personal experience of and involvement in “dwelling in double consciousness”. Furthermore, the students had opportunities to develop their thinking and create knowledge in their own language when they did group work in single-ethnic groups. Group work studying the cultures of one’s own in-group was also encouraged by the non-Indigenous teacher educators. In this IBE teacher education programme, many educators belonged to the Spanish-speaking dominant population. Spivak (2004) recognizes the difficulties related to the common situation of having dominant group teachers teaching minoritized students. The task of the educator is to “learn to learn from below”, meaning to learn from minoritized peoples. Such learning, according to Spivak, can take place through teaching and using a method of “pedagogic attention, to learn the weave of the torn fabric in unexpected ways, in order to suture the two” (Spivak 2004, 548). This suturing requires long periods of time working closely together with the minoritized teachers and students on their own terms and learning to “move in [their language]...without remembering back to the language rooted and planted in [oneself]” (Spivak 2004, 548). Here, learning the language refers to learning in terms of linguistics as well as epistemology.

The bilanguaging aspect was not strongly promoted in the IBE teacher education programme, in which Spanish was the only language of instruction. The reason for using only Spanish was that the Spanish-speaking educators did not speak Indigenous languages and because the Indigenous students did not mutually understand each other’s native languages. Therefore, Spanish was the lingua franca for the Indigenous students. Although this justifies the

preference given to Spanish as the language of instruction, it limits the opportunities for developing thinking and theorizing from the Indigenous perspectives. To what extent can a teacher education programme support alternative minoritized epistemologies if it does not support the languages that are pertinent to these epistemologies? There is an intimate relation between the epistemic and the linguistic, between knowledge and language and between “an other thinking,” “an other logic,” and “an other tongue” (Mignolo 2000; Spivak 2004). In the same vein, translanguaging refers to bilingual peoples’ flexible use of linguistic resources; their fluid interactions in a new languaging reality that is independent of two or more “parent” linguistic codes (García & Leiva 2013).

In my view, it is important to note that translanguaging or border thinking do not develop by themselves as automatic responses to personal experiences. On the contrary, tolerance toward and the active use of translanguaging practices and border thinking should be supported in order to respond to the multicultural and multilingual realities of current societies. In this aspect, teacher education programmes play a crucial role in preparing pre-service teachers to respond to the multicultural diversity of their classrooms and their students’ families. Teacher educators and teacher education programmes should give space to alternative representations, enunciations, knowledges and theorizations. Border thinking requires an effort, also from minoritized people, to develop their critical awareness of reality and their commitment to act and change or transform the world based on critical reflection (cf. Freire 2005b).

Therefore, recruiting more educators from minoritized groups may be only part of the solution to changing education to better respond to the realities of multicultural societies. I argue that the future development of a counter-hegemonic intercultural education lies in nurturing the translanguaging practices and critical consciousness of all students, and in encouraging thinking from alternative, minoritized perspectives in all elementary schools and teacher education programmes. This concerns intercultural education not only in Ecuador but also in multicultural societies in general. Clearly, dealing with diversity in society is not a matter that concerns only “intercultural” teachers or students, or other such special groups. Dealing with diversity within a society, including diversity in the ways of knowing, being and thinking about the world is everyone’s responsibility (see e.g. Cuji 2012; Molnar & Jessen Williamson 2015). Therefore, intercultural education should not be diminished to a special day to celebrate at school or a school subject or course to be taught at university. Intercultural education should permeate educational programmes and induce change.

### **6.3 IMPLICATIONS FOR INSTRUCTIONAL PRACTICES: CULTURALLY RELEVANT INSTRUCTION AND INDIGENOUS COMMUNITY INVOLVEMENT**

As discussed earlier in this dissertation, in Ecuador the IBE teacher educators, despite good intentions, are not sure how to act out the IBE policy and change their instructional practices. The findings of this study indicate that teacher education students appreciate knowledge and learning activities that allow them to make use of their multiple intelligences, not only the linguistic and logical. The implication of this finding for the teacher education programme is that applying more hands-on activities and opportunities for cooperative learning would open up valuable possibilities for the students to also “live the knowledge” as part of their teacher education. This could make the education more culturally pertinent to them. The students in this study conceptualized knowledge and learning primarily through their everyday domestic life, while schooling appeared to play a secondary role. This implies that instruction could benefit from being more connected to the students’ everyday reality and surrounding community.

However, as mentioned before, Indigenous knowledge is a complex concept that should not be essentialized as empirical and practice-oriented knowledge. Some of the epistemological complexity of Indigenous knowledge and thinking can possibly be grasped through empirical or practice-oriented instructional practices. Here, the involvement of the Indigenous community is focal. As mentioned earlier, in the interviews, some of the teacher educators discussed community involvement through issues such as learning through exploration or through observing community practices and conversing with knowledgeable Indigenous community members. Based on my observations, the instructional practices mentioned above are not commonly used at the teacher education institute. If such practices played a more central role in the teacher education programme, as suggested in Article II, the students could draw on the Indigenous knowledge and epistemologies, the cultural resources that are embodied in their families, elders and among other members of the Indigenous communities.

In this way, studying could be more relevant to the students and support community involvement, which is commonly seen as an integral part of Indigenous education in Ecuador as well as in other contexts (Castagno & Brayboy, 2008; DINEIB, 2005). This study found that community involvement did not form a visible part of everyday practices at the institute. The teacher education programme could benefit from practices that support a dialogical relationship between the teacher education institute and the surrounding Indigenous community. As noted earlier in this dissertation, dialogue means that, on the one hand, teacher educators invite and welcome Indigenous community members into the institute and on the other, that the Indigenous community members assume some responsibility for, for instance, developing educational materials or taking part in instruction (cf. Castagno &

Brayboy 2008). Such dialogue could open up opportunities to create new knowledge based on Indigenous perspectives, contribute to the incorporation of Indigenous knowledges into instruction, and make instruction more culturally relevant for Indigenous students.

Ladson-Billings (2014), the initiator of culturally relevant pedagogy, notices that many teachers who claim to practice culturally relevant pedagogy may have good intentions but only a superficial notion of cultures and the socio-political dimensions of education. As a result, the critical edge of culturally relevant pedagogy becomes blunted in the educational practices. Therefore, theory and practice need to be reframed and reshaped to respond to current educational contexts and the social injustices in these contexts.

## 6.4 METHODOLOGICAL REFLECTIONS

As mentioned earlier in this dissertation, this research project was triggered by an international development cooperation project in which Indigenous peoples were involved in planning and defining the topics of interest for cooperation. This study deals with topics that were defined as important in this cooperation project. However, this study was not conducted as an integral part of the collaborative work within the international development cooperation project, but as a separate doctoral research project. This also means that the research design was not developed in collaboration with the Indigenous community. All the decisions regarding the research design and the methodological aspects were my personal responsibility.

During the research process, I was painfully aware of my limitations as a white, Western researcher conducting research related to Indigenous knowledge. In the middle of the research process, about four months after a fieldwork period, I tried to unburden myself through writing:

*I feel anxious and disillusioned about my work. The more I read about post-colonial theories and texts by Indigenous academics, and the critical views on Western science, the less able I feel as a researcher working on Indigenous education. How can I justify my endeavour? Is there any chance I could somehow overcome the traditions of western anthropology and other sciences that have played a part in the process of reproducing the unequal power relations and Euro-centric language of science? (Personal note, 15.4.2008)*

Indigenous researchers such as Bishop (1998), Smith (1999), and Battiste (2008a) have carried out pivotal work in decolonizing research and bringing forward Indigenous methodologies from Indigenous perspectives. Indigenous methodology entails a profound deliberation of Indigenous epistemology and ontology, and a reconceptualization of research from an Indigenous

perspective (Bishop, 1998; Smith, 1999). Moreover, Indigenous methodologies are diverse, based on the varied perspectives of Indigenous peoples around the world. Indigenous methodology is a work in progress in Ecuador, where Indigenous people have recently been trained as researchers in order to conduct research within Indigenous communities and from Indigenous perspectives (Chacón, Yanez, & Larriva, 2010; UNICEF, 2012). This means that some literature is already available also about Ecuadorian and Amazonian Indigenous methodologies to inform current and future research projects.

Indigenous methodologies share some aspects with participatory research approaches. This study applied a participatory research method, as it involved a group of Indigenous teacher education students to examine their conceptions of knowledge and wisdom through photography. I argue that including a participatory visual method was culturally pertinent for the Amazonian Indigenous participants. For these students, the photo-elicitation interview method enabled freedom to express themselves visually, and an interesting way in which to study their own views. At the same time, participation in the photography task did not require very much time or effort from these students. They had to attend to their studies and other commitments, and the time they used for participating in the research was voluntary and did not provide them with any compensation in money or study credits. Therefore, the main benefit for the students was that their participation stimulated them to think about concepts that could be useful for them in their future jobs as teachers. During the process, the students may also have learned something about research methods that could be useful for them in both their studies and their thesis, or in their teaching work.

A more thorough participatory research approach would have demanded more time and dedication from the research participants, teacher educators and students. A participatory research approach in which participants are actively involved in the research, possibly as co-researchers, would be ethically more sustainable and recommendable, particularly in research involving Indigenous peoples. Therefore, conducting this study has led me to better understand that Indigenous self-determination and participation in the research process needs to be more carefully catered to and planned from the very beginning of the research process.

## 6.5 SUGGESTIONS FOR FURTHER STUDY

This study was conducted during the Correa government in Ecuador. Thereafter, a new government was formed as Lenin Moreno was elected in Ecuador's presidential election of 2017. Before his election, Moreno served as vice president during 2007–2013 under president Correa. Like Correa, Moreno represents the Alianza PAIS, a leftist social democratic party (CNN, 2017). However, after his election as the president of Ecuador, Moreno has taken steps to draw away from Correa's path in relation to Indigenous organizations. Moreno has restored a dialogue between the government and the CONAIE, the Indigenous Nations federation (Iza, 2018; Mazabanda, 2017). This most recent development may reshape the overall political situation of Indigenous peoples in Ecuador and affect the country's educational policies and IBE. Therefore, it would be interesting to study the current situation and upcoming changes in Ecuadorian educational policies and their implementation. Which perspectives will the current government adopt in relation to education and plurinationalism, interculturality and "living well"? To what extent will the new government's interests regarding plurinationalism, interculturality and "living well" converge with the Indigenous people's interests in these issues?

According to the interest convergence principle (Bell, 1980) the majority population tends to tolerate ideas and actions that advance equity and support minorities only as long as these ideas and actions converge with the majority interests, i.e. they are beneficial for the majority and maintain the status quo (Castagno & Lee, 2007). The interest convergence principle, together with an understanding of the persistent colonial structures and majority epistemologies (Radcliffe, 2012), may explain why the educational policies that are meant to benefit minorities, as well as the "good intentions" of teachers, often still result in educational practices that are more harmful than beneficial to minority students and their communities (Castagno, 2014). Therefore, I find it important to continue studying the implementation of the policies in educational institutes and the ways in which the discourses on plurinationalism, interculturality and "living well" affect IBE and the educational practices in schools and teacher education institutes.

"Living well" is one of the guiding concepts in an upcoming research project that will examine Amazonian Indigenous eco-cultural knowledge in the curriculum, educational materials, instructional methods, extracurricular activities, and physical learning environments in upper secondary schools in the Ecuadorian Amazonia. In this upcoming study, I will examine the ways in which upper secondary education supports young Indigenous people to "live well", in harmony with nature and Indigenous eco-cultural knowledge, develop their potentials and find their paths from upper secondary education to tertiary education or work. The further study is interested in the diverse resources that young Indigenous students may draw upon in the upper secondary school programme and the school community, including peers,



teachers and other adult people such as principals and study advisors. Here it is pivotal to also recognize the resources related to young Indigenous students' families and Indigenous communities, including knowledge, peer-support, skills, abilities, and networks. Such familial or communal resources have been analysed earlier by Yosso (2005) in terms of community cultural wealth in the context of Latina/o communities in the USA. Further examination of the community cultural wealth in the Ecuadorian Indigenous communities might be fruitful in that it would highlight the versatile cultural resources that are available in and worth recognition in these communities as well as in the schools and society in general.

Language issues are yet another aspect that would be fruitful for further studies. In the present study, I briefly touched upon language issues such as bilanguaging or translanguaging, and the use of Indigenous languages in the IBTE programme. Based on my observations, the dominance of Spanish as the language of instruction and as the lingua franca at the institute left only limited space for thinking and creating knowledge in the Indigenous languages. Cuji (2012) also affirms that the use of Indigenous languages in teacher education is insufficient. He argues that one of the reasons for this is the lack of teachers who speak Indigenous languages, partly due to the fact that Indigenous families may raise their children as monolingual Spanish-speakers, and do not want their children to learn Indigenous languages within the family or at school. Furthermore, the curricula and the educational materials are mostly in Spanish.

García (2009) argues that languaging in between two or more languages, which she calls translanguaging, involves a broad range of languaging practices of bilingual or multilingual people in different contexts and goes beyond linear language learning and code-switching. Yosso (2005) argues that the experience of using more than one language should be recognized as a specific resource among bilingual people and that they should be able to use this resource in educational contexts. Furthermore, Mignolo (2000, 313) argues that the socio-cultural practices of knowing and languaging form an intimate relation, and languaging in more than one language is necessary for creating new knowledges from new perspectives. Therefore, support of bilingualism and the use of Indigenous languages is necessary in order to promote Indigenous knowledge.

Based on my observations at the IBTE institute, the attitudes toward linguistic diversity and the use of diverse languages also hindered the use of Indigenous languages. I observed, for instance, situations in which a teacher educator spoke in an Indigenous language in the classroom, and the students, who did not speak the same language, did not tolerate the situation and quickly demanded that the teacher speak Spanish. Therefore, more research, as well as affirmative actions, are needed to support the active, varied use and development of Indigenous languages. This could mean, for instance, a further study, preferably a participatory action-research study, which would examine and support bilanguaging practices and the acceptance of the use of multiple

languages in schools, and contribute to Indigenous language revitalization as well as to the development of instructional practices that support bilingual practices.

In general terms, the thoughts mentioned above regarding further research in educational policies in relation to plurinationalism, interculturality and “living well,” as well as Indigenous eco-cultural knowledge and young Indigenous people’s resources and transitions from upper secondary to tertiary education and work, or supporting the use of Indigenous languages and knowledges in educational contexts in Amazonia, all have a common objective. This objective is to further epistemological justice and support Indigenous communities in thinking and theorizing from Indigenous epistemologies.

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# APPENDICES

## Appendix 1

### **Solicitud de Permiso de Estudio con Fines de Investigación Educativa en Formación de Profesores Interculturales Bilingües**

#### **Datos de la solicitante**

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#### **Actividad para la que se solicita permiso**

Investigación educativa en temáticas directamente relacionadas con los componentes de trabajo del proyecto EIBAMAZ, cooperación del gobierno de Finlandia con Ecuador, Perú y Bolivia. La temática de investigación está vinculada a la formación de profesores interculturales bilingües en la región Amazónica. Particularmente a los aspectos relacionados con epistemologías.

El objetivo del estudio es investigar visiones de los profesores sobre supuestos epistémicos de los estudiantes en la formación de profesores interculturales bilingües. El estudio está dirigido al Instituto Superior Pedagógico Intercultural Bilingüe [REDACTED]. Los métodos de recopilación de datos incluirán encuestas y entrevistas con profesores y estudiantes del nivel superior, observación de clases y otras actividades cotidianas del Instituto y revisión de materiales educativos.

#### **Confidencialidad y supervisión**

Los datos recopilados en forma escrita y no escrita podrán ser utilizados exclusivamente para fines de investigación. Toda información será tratada de manera absolutamente confidencial. Los datos personales de participantes no figurarán en ningún texto publicado.

Supervisores de la investigación son catedráticos Dr. Hannu Simola y Dra. Gunilla Holm y docente investigador Juan Carlos Llorente del departamento de Educación de la Universidad de Helsinki.

#### **Referencias**

[REDACTED]



Para información más amplia dirigirse a la solicitante o las referencias.

Helsinki, 3 de octubre de 2007

Tuija Veintie  
Investigadora



## **Appendix 2**

### **Estudio Educativo en Formación de Profesores Interculturales Bilingües**

#### **- Hoja informativa -**

#### **Ejecución del estudio**

Nombre: Tuija                      Apellidos: Veintie  
Institución: Universidad de Helsinki, Departamento de Educación  
Cargo: Estudiante de doctorado

#### **Estudio**

Se trata de un estudio educativo en el marco del proyecto EIBAMAZ, cooperación del gobierno de Finlandia con Ecuador, Perú y Bolivia. La oficina de UNICEF Ecuador es la institución coordinadora de las actividades del proyecto en Ecuador.

La temática de este estudio está relacionada con la formación de profesores interculturales bilingües en la región Amazónica. En concreto se refiere a los aspectos relacionados con conocimientos y aprendizajes. Objetivo del estudio es de obtener información que sea útil para formación docente y aporte beneficio para las futuras generaciones de estudiantes y profesores de la Formación Docente Intercultural Bilingüe en la región Amazónica.

El estudio está dirigido al Instituto [REDACTED]. Los métodos de recopilación de datos incluirán entrevistas con profesores y estudiantes, observación de clases y otras actividades cotidianas del Instituto, así como revisión de materiales educativos. Los datos recogidos solo serán utilizados para fines de estudio. Toda información será tratada de manera absolutamente confidencial. Los datos personales de participantes no figurarán en ningún texto publicado.

El estudio formará parte de doctorado de Tuija Veintie. Los supervisores del estudio en el departamento de Educación de la Universidad de Helsinki son catedráticos Dr. Hannu Simola y Dra. Gunilla Holm y el docente investigador Dr. Juan Carlos Llorente.

#### **Contactos**

##### *Ejecución del estudio*

Tuija Veintie  
Universidad de Helsinki

##### *Supervisión del estudio*

Dr. Juan Carlos Llorente  
Universidad de Helsinki



## **Appendix 3**

### **a) Interview topics - educators<sup>21</sup>**

#### **Background**

- How did you end up as a teacher and working at this institute?
- What is your role as a teacher educator?
- Which subjects/classes do you teach?
- How did you learn about the things that you are teaching?
- What does learning mean to you? How does one learn something new?

#### **Knowledge and learning in the subjects of instruction**

- What do you want the students to learn in your subject/class?
- Which knowledge or what kind of knowledge is related to your subject/class?
- How do you know what is true or trustworthy?
- Why is it important that the students learn the things related to your subject/class?
- How do the students in the class learn, and how do you teach them?

#### **Educando and educator**

- How do you know if your students are learning or not?
- What kind of learning difficulties do the students have in their studies, and how they can be helped?
- How do you get along with the students?

#### **Knowledge and learning in the communities**

- In addition to classes, where and how do students learn or gain knowledge that is useful for the subjects of instruction?
- Do you think learning is somehow different in different places?
- How do people learn and teach in the Kichwa or Shuar communities?
- Is the knowledge that is acquired in the communities different in some way to the knowledge acquired at the institute?
- What is knowledge and wisdom to you?

#### **Evaluation of the IBE system**

- What are the pros and cons of the current IBE system?
- What does interculturality mean in education, and at this institute?

#### **Future**

- What would be the ideal qualities or characteristics of a teacher working in the communities?
- How do you see the future of the students?
- What are your own professional plans for the future?

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<sup>21</sup> Translated from Spanish.

## **b) Interview topics - students<sup>22</sup>**

### **Background**

- Tell me about you.

### **Knowledge and learning in the communities**

- Tell me about the community where you were born and raised.
- Who have been your educators in the community, who has taught you in the community?
- Can you give me examples of what/how you learned in the community, how have you been instructed?
- Why these are important things to learn?
- How do you know that you have learned something?
- What does learning mean to you? How do you understand learning?
- How could the things you learn in the community be useful for you when you start working as a teacher?
- Do you think learning and teaching in the community is somehow different from learning and teaching at the institute?

### **Knowledge and learning in the subjects of instruction**

- How did you end up studying at this institute?
- How do you feel about studying and living here?
- Which subjects/classes do you like/dislike/think are easy/difficult? (Why?)
- What things do you study in the classes of... [subject]?
- How do you learn and how are you instructed in the... subject/class? (methods, tasks)
- Why is it important to learn these things?
- In addition to the classes, where and how do you gain knowledge about topics related to these things?
- What is knowledge/wisdom to you?
- How do you know what is true or trustworthy?

### **Educando and educator**

- How do you know if you have learned something or not?
- What do you do when it is difficult to learn something?
- What can the teachers do to help you learn things that are difficult to learn?
- How do you get along with the teachers at the institute?

### **Evaluation of the IBE system**

- What are the pros and cons of the current IBE system?
- What does interculturality mean in education, and at this institute?

### **Future**

- How do you see your future – where are you going to work, how are you going to live, etc.?
- What do you think your role as a teacher will be in the future?

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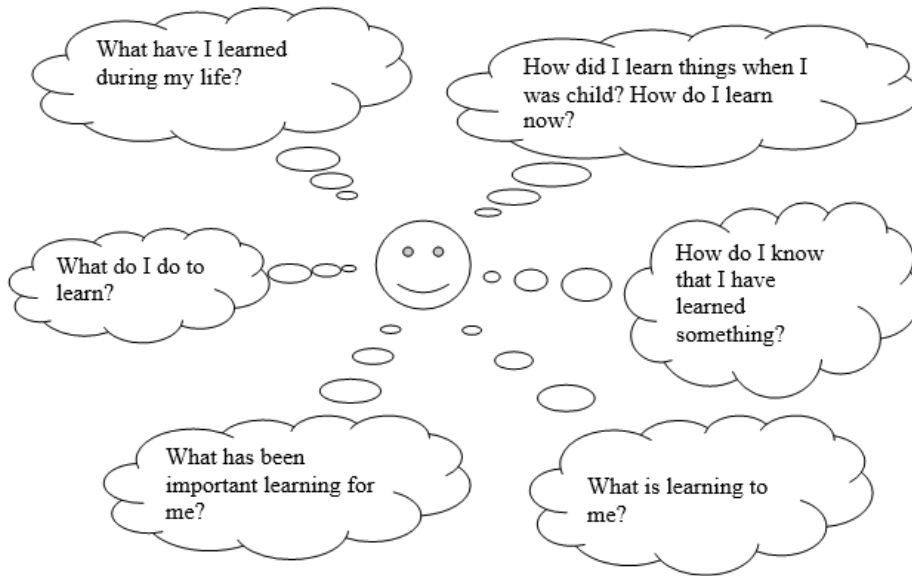
<sup>22</sup> Translated from Spanish.

## Appendix 4

### GROUP DISCUSSION<sup>23</sup>

The objective of the group discussion is to find our own criteria for **learning**, **knowledge** and **wisdom**. Instead of consulting books, writers or teachers, we consult our own thinking, our experiences, our memories from childhood to this moment. This exercise has no right or wrong answers, everyone has their own experience and personal viewpoint.

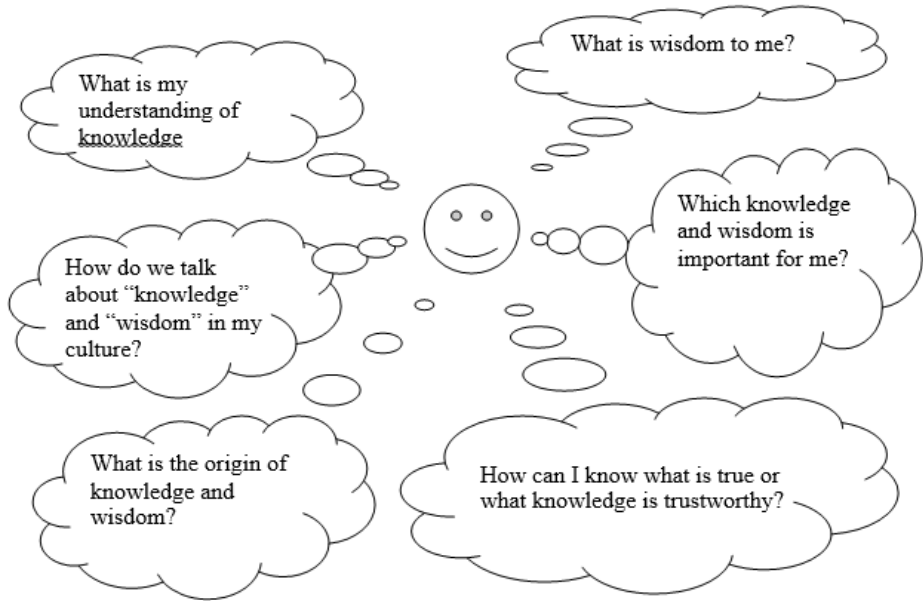
#### LEARNING



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<sup>23</sup> Translated from Spanish.

## KNOWLEDGE - WISDOM



## ILLUSTRATION

Let's use photography or drawing, to portray our concepts.

