Navigating in Educational Contexts
Identities and Cultures in Dialogue

Anneli Lauriala, Raimo Rajala, Heli Ruokamo and Outi Ylitapio-Mäntylä (Eds.)

Navigating in Educational Contexts: Identities and Cultures in Dialogue includes selected papers from the 2009 Biennial Conference of the International Study Association on Teachers and Teaching (ISATT), held at the University of Lapland in Finland. This volume contains keynote addresses and papers based on the thematic presentations held at the conference: Identity, context and marginality, Professional development and learning, Context and teaching, and ICT in teaching and learning.

The articles open perspectives to the challenges in education and point to the need for dialogue between different racial, cultural, social and gender groups. The articles benefit educators, teacher educators and policy makers aiming to enhance equity and equality. Insights into teachers’ professional and personal knowledge are combined with wider social, cultural and global issues, and through experiences of learning both in Real Life and Second Life. There are many inspiring and promising ideas and approaches of how to promote quality teaching and learning. Under network-based education the topics of ICT skills and experiences, models of ICT integration, virtual reality and a simulation-based learning and online tutoring are being described and assessed.

The book is rooted in the studies, practises and arguments of researchers, teachers, educators and students navigating in diverse educational contexts. It will fascinate all those involved and interested in challenging educational practises and thinking.
Navigating in Educational Contexts
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FOREWORD

This book perfectly fits ISATT’s tradition of providing a wide range of approaches to gaining a meaningful understanding of the processes of teaching and learning. These are aimed at uncovering, through doing research, of what Dewey called the significance of what we see, hear, and touch. During our 2009 conference, so beautifully organized in Finland’s far north, the theme “Navigating in Educational Contexts” was brought to life in the presentations and during the debates. An organization with members from all parts of the globe, is very well positioned to provide a platform for ongoing dialogue about research in education. This book contains some important contributions to that dialogue, “Teachers matter,” and books about these teachers matter to everyone aiming to educate teachers and to improve teaching in all levels of education.

This book further shapes ISATT’s mission to promote, present, discuss and disseminate research on teachers and teaching and contribute to theory formation in this field. It points at lines of research that are being developed at this moment, such as teacher identity, ICT in education, and new ways of addressing and assessing teachers’ learning and development. It also underlines the creativity of ISATT’s members in approaching research in more dialogical ways, where teachers and students are treated not just as research subjects, but as participants, informants, and even as co-researchers.

The collection of papers in this book is a source of inspiration for all researchers who take a more holistic view of research in education, in which a dialogue is sought between researchers, teachers and students. It addresses key issues in education, captured in four sections that cover the conference contributions. This book follows a tradition of highly cited books, and I am confident it will equally influence further research.

Paulien C. Meijer
ISATT chair

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ACKNOWLEDGEMENTS

This book would not have been possible without the participation, support and work of many contributors. Above all, we would like to thank all who came, from 33 different countries, to present papers at the ISATT conference. The conference themes were brought to life through your animated presentations and inspiring discussions.

Our sincere thanks go to the ISATT executive, to Michael Kompf, Pam Denicolo and Daniela Hotolean for their support and advice throughout the whole process. The Conference Services of the University of Lapland were of invaluable aid. Secretary Marja-Leena Porsanger, along with her assistants, guaranteed that everything went punctually and smoothly.

The conference organization is to be thanked for working for two years with commitment and sincere enthusiasm. Many international and national reviewers generously ‘blind reviewed’ the submitted papers; their professional expertise and feedback aided the editors in their final selection process and assisted in the revision of the articles.

Many graduate students from the Faculty of Education, as well as from the University of Applied Sciences, worked during the conference in different capacities, giving their help to conference participants. The University of Lapland and the Faculty of Education provided their services and facilities, for which we are grateful.

We owe thanks, also, to the town of Rovaniemi for organizing the wonderful welcome evening in the town hall and to the Finnish Academy, the OKKA-foundation, the Finnish Work Environment Fund, and the Microlinna Company for their financial support of the conference.

Thanks go also to Master of Arts, Paula Kassinen, who has been responsible for the lay out and illustration of the book and to Michel Lokhorst of Sense Publishers. He has guided us in the preparation and production of the book.

Anneli Lauriala, Raimo Rajala, Heli Ruokamo and Outi Ylitapio-Mäntylä
PREFACE

The articles presented here are based on the invited keynote speeches and the accepted paper presentations of the 2009 ISATT conference held in Rovaniemi, Finland.

The location of the conference, near the Arctic Circle in Lapland, attracted participants from 33 different countries and from all continents. There were over 250 delegates. In addition, 32 post graduate students attended a two-day pre-conference based on authentic atmosphere and a genuine discussion on what defines good and worthwhile research. This event turned out to be a most inspiring and instructive experience for all.

With the main theme of conference Navigating in Educational Contexts: Identities and Cultures in Dialogue, we wanted to point out how learning and growth are dependent on and embedded in contexts. The changing contexts of education, locally, nationally and globally challenge educators at all levels to reflect, update and transform their views and practices. There are urgent questions: What are the core values and principles underpinning good pedagogy? How do teachers cope with the complexities of their work and manage to sustain their pedagogical ideals? What does equity, caring and inclusiveness mean in different contexts and situations?

In a world of globalization, mobility and multiculturalism, issues of identities and cultures have become more and more meaningful; hence, enhancing and sustaining a sense of cultural and personal identity becomes of paramount importance in educational contexts. There were important paper presentations that dealt with the kinds of contexts, relationships and practices that enable students, teachers and researchers to develop their personal and collective identities. One urgent question emerging from the presentations concerned how professional identities are shaped by dialogue and tensions between personal, professional and contextual knowledge.

Besides different topic areas, the main theme of the conference was addressed from different methodological stances, since different research approaches, types or strategies were represented in the keynotes and in paper presentations and symposia. The following sub-themes indicate the special foci under the conference main theme.

At the beginning of the book, the keynote speeches held at the conference will be presented. They address the issues of identity and challenges of education, and as well individual learner, learning communities as varying contexts of learning, from classrooms to virtual worlds.

PROFESSIONAL DEVELOPMENT AND LEARNING

Life-long learning and continuous professional development pose challenges for teacher education and school leadership. It is important to ask how we may
enhance professional development in different career phases and transitions and in changing contexts. We need to deepen our understanding on what characterizes teacher learning, what constitutes the critical elements for teachers to develop and transform their thinking and practices and what fosters teachers’ well-being, sense of competence, motivation and commitment to learn. The following articles present some effective approaches for enhancing teacher growth and learning.

Lisa Gross and Susan Gilbert from the USA describe in their article how pre-service teachers’ prior formative schooling experiences affect and give shape to their perceptions of teaching and their self-images as teachers. Gross and Gilbert’s research shows the importance and need for reflective practice, where time is allotted to examine early experiences and to become conscious of one’s motivations.

Riitta Jyrhämä and Eija Syrjäläinen from Finland base their article on teaching practice supervision, which they examine in the framework of a didactic/pedagogic triangle developed by Kansanen. The model entails different levels of thinking linked to different types of didactic and pedagogical relations. Their research aims at outlining various views of supervisory roles and their development during the supervision course. The article illuminates the many roles of a supervisor in teacher education involving both empathy and rigor.

Helena Koskinen from Finland presents research on and the development of a five-step approach to enhance teachers’ reflective skills. The participants are adults who, after graduation in different scientific fields, are doing their pedagogical studies, based on cumulative and blended learning. The studies involve both on-campus courses and off-campus e-learning and individual work. The focus of reflection shifted, in the five-step path, from describing one’s prior experiences, teaching process, and personal know-how to critical reflection of learning processes and assessing the training in whole. The model can be seen as a useful tool in strengthening the development of students’ teacher identity and expertise. The author points to the importance of paying attention to adult students’ different learning strategies and the need for flexibility in the studies.

John Loughran, Amanda Berry, Allie Clemans, Stephen Keast, Bianca Miranda, Graham Parr, Philip Riley and Elisabeth Tudball from Australia explore the nature of teachers’ professional learning. Their article points to the difference between traditional professional development and professional learning programs. Instead of doing things to teachers (PD), professional learning refers to working with teachers to help them to develop skills, knowledge and abilities that are responsive to their own needs, issues and concerns and to the specific conditions where they work. Case writing is used as a method for sharing and learning about experiences. Creating a collaborative, trusting environment is shown to be a corner stone for learning. It is presented as one way of recognizing and responding to teachers’ needs, in order to create conditions conducive to genuine professional learning.

Ian Mitchell’s and Julia Mitchell’s paper focuses on the development of teachers’ metacognition skills through an action research project. Their findings show that four types of knowledge are needed to inform purposeful teaching and to promote quality learning and metacognition. The study highlights the value of long-term teacher research projects, owned by teachers, when aiming at meaningful changes
in teacher learning and in learning to learn. Further the study points to the significance of teachers sharing experiences with peers, as well as collaboration with academics in analysing their actions and articulating their experiential knowledge.

CONTEXT AND TEACHING

The section, Context and Teaching, comprises articles which analyse changing contexts of teaching and learning. Teaching and learning take place to a great extent in the world of globalization. What is understood as a right to education is complicated by many things in a new global world and education needs to regard learning through engagement with the environment as a viable form of learning. In teaching practice, there is both an ethical and a behavioural aspect in the teacher-student relationships of a caring teacher. Emotional intelligence is an important part of teachers’ interactive behaviour.

Christine Arnold and Michael Compf analyse policies and procedures of Canadian universities in credit transfers. Their conclusion is that systems of higher education cannot work in isolation from one another. In the future, sharing local and global resources and knowledge is important. Jude Butcher, Anne Benjamin, Chris Sidoti, Antony Steel and Dawn Casey present new foundations for schools and communities from the perspective of the right to education. The Universal Declaration of Human Rights has not been effectively realized in different national and geographical contexts. They explore the challenges the right to education poses on governments and school systems. Actions need to be undertaken at the local level of teachers and administrators. Those working in education need to be educated with regard to the extended right to education.

Patrick Dillon and Phil Bayliss present an ecological framework for education. Sociocultural theory explains how cultural patterns are associated with settled, largely urban lifestyles. Western educational situations, structures, contexts and schemata are substantially pre-defined and things are ‘context-dependent’. They see the Mongolian situation as a challenge to some premises of western theory. In Mongolia both meaning and context emerge from people’s interactions with their environments. The presented ecological framework attempts simultaneously to embrace both interpretations.

Wendy Moran considers caring teachers. The profile of a caring teacher has ethical and behavioural aspects. Defining a teacher as caring is an easy task, but the personal factors that are related to a caring teacher need exploring. In this article, personal and teaching-related mindsets are described based on a survey and interview data. Lefkios Neophytou, Mary Koutselini and Leonidas Kyriakides make an attempt to analyse the relationships between teachers’ personal beliefs, teachers’ emotional intelligence, quality of teaching and effectiveness of teaching. Quality of teaching was found to mediate the effects of both emotional intelligence as a mixed trait and teachers’ beliefs on effectiveness of teaching at the teacher level and at the level of students’ performance in math. In conclusion, better teaching is associated with improved understanding of Personal Theory.
As a part of a NBE meeting, an *ICT of Teaching and Learning* subtheme was established. Under this theme four reviewed articles were accepted for publication. The first one of them deals with the relationship between students’ perceptions of their problem-solving and ICT skills and their ICT experience as part of their teacher education program. In the article *Shukri Sanber and Marea Nicholson* also presents the ICT integration model. The results of the study clearly indicate that student teachers can graduate possessing working proficiency in ICT that would enable them to use the technology in the classroom. At the same time they are able to further their skills and to adapt with changing environments.

In the second article *Carolyn Broadbent, Maureen Boyle and Jo Brady* discuss professional links and professional support: How does it promote the development of quality pedagogy and teachers’ self-efficacy in the use of ICT within a supportive professional learning community. Results of the study suggest that collaborative partnerships between universities, schools and the wider educational community are to be encouraged as they have the potential to revitalise teachers’ professional learning. They also create avenues for the construction of new knowledge and development of skills, and, through purposeful and mutually reciprocal engagement, can lead to more equitable and sustainable outcomes for all.

*Tuulikki Keskitalo and Heli Ruokamo* present a designed model for virtual reality and a simulation-based learning environment for healthcare in the third article. The developed pedagogical model is based on the characteristics of meaningful learning. The preliminary results of the study show that the characteristics that were strongly supported were experiential, experimental, socio-constructive, collaborative, active, responsible, reflective, competence-based, contextual and self-directed. But in the future we must consider how the *emotional, critical, goal-oriented and individual* characteristics could be fully realized, since they are crucial points in promoting meaningful learning.

Last of the ICT in Teaching in Learning subtheme’s articles, *Leo Pekkala, Päivi Hakkarainen and Harri Heikkilä* study online tutoring for media education and how it intern in practical training. The results of the research show some positive effects of online tutoring in relation to supporting meaningful learning. The students have been able to collaborate and communicate within each other during the training. They have been able to communicate with their academic tutor, which has not been possible before online. In this study the elements of meaningful learning processes have been recognised. A specific online environment and a selection of social media communication tools have encouraged students to communicate informally and reflect spontaneously.

Anneli Lauriala, Raimo Rajala, Heli Ruokamo and Outi Ylitapio-Mäntylä
IDENTITY, CONTEXT, MARGINALITY
In many traditions, teachers are honored as holding a place of central importance to the development of society. However, there are signs that teaching as a profession is increasingly being marginalized in society: research studies as well as statements in the public forum tell us that teaching has become a more and more difficult job over the years. The frequent use of terms such as “deskilling” (Apple, 1987) and “intensification” (Woods, 1999; Ballet et al., 2006; Hargreaves 1994, 2003) reflect this. Research on teaching often looks at the negative side of the ledger rather than the positive, focusing heavily on topics such as teacher stress and burnout (Vandenberghhe & Huberman, 1999; Wilhelm et al., 2000). Teachers complain about being under constant pressure to respond to reform initiatives, in particular to outcome-oriented and standards-based programs that demand many changes in teachers’ work without always delivering the hoped-for gains in student achievement; in many countries teachers are poorly rewarded for their efforts, paid low salaries and offered few opportunities for advancement. Overall, rapid changes in the work of teaching have left many teachers “grieving for a lost self” (Nias, 1993), struggling to make sense of the latest reform and wondering whether it is worth their effort to invest in mandated new programs (Gitlin & Margonis, 1995).

It is worth asking why teaching is being so marginalized. One reason may be that the work of teaching is closely tied to its social and cultural context: teachers work in what Clandinin and Connelly (1996) term a “professional knowledge landscape” that is in many respects unique to the time and place where it is embedded. Contemporary global and globalizing culture, on the other hand, values skills that can be decontextualized and transported from place to place in a competitive global market fed by the ever-growing emphasis on economic values. Teaching, it is well known, does not create marketable products, and in an economic frame of reference children are valued mainly as potential consumers; yet teachers insist on relating to children as individuals of unique worth (Estola et al., 2003). Under postmodernism, too, knowledge and intellectual goods are seen as relative and open to doubt, thus undermining the status of those who convey them. As a result, schools and teachers come to be seen as anachronistic, almost unchanging entities within a context of rapid social and cultural change. Furthermore, the social emphasis on what Giddens (1991) termed the “reflexive project of the self” would seem ill-suited to teachers who are primarily concerned with the welfare of others. In addition,
the steadily increasing feminization of teaching contributes to the devaluing of teaching as ‘women’s work’; interestingly, though, Griffiths (2006) argues that “the feminization of teaching, insofar as it exists, is to be welcomed because it provides a space for resisting hegemonic masculinity (p. 387).”

Almost by definition, the marginal would seem to be of lesser value and interest than what is in the mainstream of society, but this is not necessarily the case: the logic of qualitative inquiry often suggests that the margins and forgotten corners of society may have the potential to illuminate what is central. Huber and Whelan (1999) suggest that a marginal story may be seen as a place of possibility. Following this logic, the main question to be considered here is, what can be learned from teachers’ life stories about how they experience and live out their apparent marginality? How does marginality appear in teachers’ stories (if at all)? How are teachers’ lives ‘emplotted’ (Polkinghorne, 1995)? And what are the lessons for the teaching profession, for teacher education and for research?

I will start by sketching out the background to this inquiry; I begin with some comments about the status of the teaching profession in Israel today, and then take up the question of social and gender influences on the profession. Following that, I will outline the methodology of the inquiry, and then present and interpret the stories of two teachers. Finally, I will discuss the implications of these stories for the questions indicated above.

THE TEACHING PROFESSION IN ISRAEL

In Israel, the teaching profession was established early on, well before the establishment of the state, and teaching was regarded as one of the highest forms of contribution to society. The Israeli Teachers’ Union was established in 1892 and housed in a large building (now a museum) that stood out, and is still an impressive structure today, in the town of Zichron Yaacov. Currently, however, teachers work in a contested environment, characterized by constant reform initiatives, large heterogeneous classes, increased parental criticism and demands paired with eroding teacher authority, difficult working conditions (Arieli, 1995) and relatively low salaries (Naphcha & Nir, 2008). Some years ago a special education teacher published a satiric account of her work in a local newspaper, detailing the impossible demands of her job – to be a policewoman, learning difficulties diagnostician, mother, psychologist, conflict mediator, stand-up comedian and cleaner as well as teacher; the article, entitled “story of a dishrag”, was talked about for weeks in teachers’ lounges as well as in university classrooms.

A teachers’ strike in 2007–8 that lasted for many weeks and ended in only minor gains for the teachers underlined the difficult situation. Today there are fewer applicants to teacher education programs, and teaching shortages are projected for the years ahead. Still, teaching has somewhat higher (but also eroding) status in the Arab/Palestinian community (Eilam, 2002), and among immigrants to Israel (Elbaz-Luwisch, 2004). In the traditional Arab culture, teaching is viewed as an appropriate and honoured profession for women, while immigrants from the former
TEACHING AND MARGINALITY

Soviet Union bring with them the high status accorded to teachers in their countries of origin; the latter usually become teachers of mathematics, English and the sciences, subjects which also confer higher status.

TEACHERS’ NARRATIVES: CAREER, GENDER, POWER

Narrative as both phenomenon and method (Clandinin and Connelly, 2000) offers a rich theoretical backdrop against which to view teachers’ lives and careers. Teachers’ narratives highlight time and place – cultural, historical, geographical and experiential (Conle, 1999), and their impact on the teacher’s life and work. Theorists attend to the impact of voice (Bakhtin, 1981; Goodson, 1992), the effects of power (Davies and Gannon, 2006; Phelan, 2001), and conformity and resistance to social/cultural norms (Brown & Gilligan, 1992), all of which can be crucial to the understanding of teachers’ careers.

The development of career from a gender perspective gives rise to some important insights. For example, Heilbrun (1988) suggested that women tend to focus on family first, and only invest in their careers later in life; she found uncertainty and an absence of ambition in women’s narratives. Bateson (1990) similarly found that women’s narratives were characterized by interruption, discontinuity and evidence that women tended to respond and adapt to external circumstance in the shaping of their careers. In a more recent study of young women’s career narratives, Plunkett (2001) found that serendipity and agency are woven together: chance and circumstance still play a role in the shaping of women’s working lives, but young women story themselves as playing an active role in the development of their own careers.

These developments are further illuminated by the feminist theory of practice elaborated by Griffiths (2006), who argues that practices in general are both embodied and embedded in social relations. They are not discrete forms of activity that can be sharply differentiated, but rather are fluid, ‘leaky’, and have permeable boundaries. Thus, like other forms of practice, “the practice of teaching leaks into the practices of mothering, fathering, managing, facilitating, counselling, and philosophizing – and vice versa (p. 396).” It will be interesting to note how this “leakiness” is expressed in the teachers’ autobiographical writing.

METHODOLOGY

The present study is a narrative inquiry focussed on interpretation of the written autobiographical narratives of two teachers, students in an advanced qualitative methodology course, “Narrative inquiry in a multicultural context”. As part of the work of this course, students produced a piece of autobiographical writing, seven to ten pages in length; they were invited to write descriptively about their lives, and were not given specific guidelines beyond the encouragement to write concretely and focus on specific episodes and events. The students also interviewed one another, and interpreted one another’s life stories. A previous study in this setting
examined 6 autobiographies (including the two to be discussed here), looking at
the authors’ sense of place; themes of displacement, origins, and vocation were
identified in those stories (Elbaz-Luwisch, 2009).

In recent years, personal writing has earned a central place in teacher education
and in professional development activities for teachers, serving as an important tool
in fostering teachers’ professional growth in both pre-service and in-service settings
(Conle, 1996; Connelly & Clandinin, 1996; MacLeod & Cowieson, 2001;). Through
autobiographical writing, teachers can reflect on the sources that have influenced
their current practice, assess their own learning, and imagine the future (Raymond et
al, 1992; Heikkinen, 1998). Such writing thus serves as a window onto the teacher’s
life and work, and autobiographical texts, where available, are important field texts
in the study of teaching. Like any other field text (interview protocols, field notes of
conversations etc.), autobiographical texts are written with some audience in mind,
even when the author does not intend for that audience to actually read the text. In
the present case, the autobiographical writing was produced as a course assignment,
and students knew that not only the course professor but also fellow students would
be reading their texts. Students were invited to provide an extra copy of their writ-
ing for my research purposes, and about half of the students did so.

In interpreting the life stories I draw on diverse modes of narrative analysis
(Clandinin and Connelly, 2000; Brown & Gilligan, 1992) paying attention to time
and place (Conle, 1999), to the relationships of the teller to others in her setting
and to herself, to voice and to the effects of power, and conformity and resistance
to social/cultural norms (Brown & Gilligan, 1992). In addition, the way the sto-
ries are told or written (plot, characters, language and metaphor) are attended to.
My intention in all this is to listen carefully to personal voices, and at the same
to pay attention to the ways that culture, history and politics shape the narratives
(Goodson, 1992). I look for a critical distance from which to read, that might en-
able a broader and deeper understanding of the narratives.

In looking for the way the marginalization might be expressed in teachers’ nar-
ratives, I paid special attention to the place of teaching and work in the life story
as a whole, to the connections between self and ‘others’ in the narratives, to the
role of other teachers as characters in the story (whether cast as helpers or en-
emies), to perceptions of shared tasks and shared ideals in descriptions of teaching
as work or as vocation. Also, I looked for any specific content that might be related
to marginalization.

Participants

The two teachers whose life stories will be examined here are Ariana and Marie
(pseudonyms). Ariana is 40 years old, married with two children, and works as a
teacher of high school physics. She is Jewish, and was born in the former Soviet
Union; her family immigrated to Israel when she was 10 years old, somewhat
earlier than the most recent large wave of immigration from countries of the former
Soviet Union that began in 1990. Marie is in her late 20’s, married with one child;
she teaches English as a Second Language in a private school in the Arab sector of the Israeli school system. Marie belongs to the Christian community, was born and lives in Haifa. These two teachers were chosen for the intrinsic interest of their stories; neither of them belongs to what is usually thought of as the ‘mainstream’ of Israeli society (i.e. Jewish, native-born Israelis) yet both are very much a part of the place where they live and their stories have something to say about marginality in teaching.

ARIANA’S STORY

Speaking of her early life, Ariana describes a happy childhood in one of the smaller republics of the former Soviet Union: her family lived together with her maternal grandparents in a small neighborhood with many friends nearby; she was a good student and enjoyed school. Upon immigration, she experienced a very difficult adjustment to life in Israel (see Lieblich,1993): as a student who liked science, got high marks, and played the piano, she was considered “not cool”! Ariana struggled socially throughout elementary and high school, and then, along with her age mates, came the time for military service; for Ariana this period of living on a military base away from home signalled the beginning of her independence. After completing her stint in the army, she went on to university, managing to combine work and studies like many young Israelis. Ariana’s first job after graduation was as a guide at a science museum, work she described as inspiring and fun, but it did not seem like a path to a future career. She went on to work on a university research project, a job she described as involving challenge and creativity, but this did not promise a future either, so Ariana finally accepted a teaching position.

Ariana’s teaching career

One thing I knew throughout my childhood was that I would not be a teacher; and here I am, a teacher.

Not only was Ariana surprised to find herself a teacher, she was shocked by the low level of studies in high school science; she found it difficult to deal with students’ lack of understanding, and what she saw as self-indulgence and unwillingness to learn. It seemed to her that students “blame their difficulties on me as their teacher.” Nonetheless, she felt that “the three years after university were the happiest time of my life.” But the social pressure to find a partner and get married weighed heavily on Ariana. She had almost resigned herself to remaining single, when Ariana met her future husband; within the year she had agreed to move with him to a distant city where he was sent by his employer. She spent five unhappy years far from family and friends, teaching in a school she did not like, and meanwhile two children were born to the couple.

At the time of the study, Ariana had recently returned ‘home’ to the north, to
the school and colleagues she left behind. She commented that “at the end of my fourth decade, I find myself at a central crossroad in many respects. The teachers’ strike last year opened my eyes to the insignificant status of the teacher in our society, and to the government that is deaf to the wishes and needs of the public.” However, beginning graduate studies seemed to have opened a “period of many changes and new beginnings” for Ariana. She concluded her autobiography in an optimistic tone, saying that “today I look upon all the events with relative equanimity; I am enjoying graduate studies and hope for good things in the future.”

Flashback: how this story begins…

I was born in a small town in a far-off country that no longer exists. The place is still there, of course, but the ‘ bosses’ were replaced, the name was changed, the house was destroyed and in its place apartments were built. Everything changed. Then, in 1968, at the end of the legendary 60’s, in one of the states of the former Soviet Union, in the small town of O-----, in the local hospital, my mother gave birth to me – a complicated birth.

From this opening passage, we can see how Ariana’s story is told with a mythic beginning, in “a far-off country that no longer exists”. Loss is a central motif in the story: the country no longer exists, the house was destroyed and everything about the place has been changed. Ariana tells us that even her name is a mystery: “It’s not clear how or where, in those years of the Iron Curtain, they found my name – “Ariana”, a name that is familiar and even common in other parts of the world, places that at that time were closed to my parents – Italy, Argentina, perhaps Spain.” Ariana relates to her birthplace and early life in a nostalgic tone, lovingly recounting the details of her early life in “the legendary 60’s.” Her story tells of disconnection from the world, at a time when the Iron Curtain blocked travel to other places, and of tenacity: her birth was difficult, she was hungry and came down with pneumonia, but “Soviet medicine was victorious” and she recovered and thrived.

It is noteworthy that the past takes up two-thirds of Ariana’s autobiographic text, detailing her childhood, adolescence, and military service, as well as her years at university. The description of her teaching career is minimal, confining itself to the bureaucratic details of where she worked and rather terse judgments about the school and her classes. All this is interwoven with information about the birth of her children, ongoing family difficulties, acclimatization to different settings in which she lived, and, finally, the return to her home town and initial teaching position. The basic plot of this story seems to be one of a journey or quest, beginning in a far-off place and time, with the heroine going through a series of struggles and difficulties, and concluding at the ‘crossroads’ where Ariana now finds herself, waiting with optimism and hope for the future, and the expectation of a period of changes and new beginnings.
Marginality in Ariana’s story

In this story, teaching is portrayed by Ariana as something that ‘happens to her’ along the way. During her studies and just afterwards, she has ‘exciting’ and ‘creative’ work which she leaves to become a teacher, even though “One thing I always ‘knew’ was that I would not be a teacher, and here I am, a teacher.” Notably, Ariana encourages her husband to advance in his career (in part, hoping for a transfer back to the north) years before beginning graduate study herself. Although Ariana is a committed teacher who has undertaken graduate study to develop her professional knowledge base, there is in her story little description of her actual work, pedagogy or teaching approach. It seems that the unsuccessful teachers’ strike left her disillusioned and even disconnected from her career: she sees the status of teachers in society as “insignificant”, a clear expression of her marginality as a teacher, yet in her own life she is at a “central crossroads”, where it seems that the landscape opens out in front of her in several directions. It seems from this account that Ariana has come to see herself as unique, the heroine of her own life story as journey; family, colleagues and friends play an important role in Ariana’s story but it seems that she is on her own unique path.

MARIE’S STORY

I was born in Haifa in July, 1980. I lived for 25 years, till I got married, in a small, simple house in the Wadi Nisnas area. I loved my home… and the neighborhood, a poor area, full of warmth and love… and the room I shared with my older sister and two younger brothers. My parents worked hard and didn’t earn much, but we kids didn’t realize that. They always bought us what we wanted and often what we didn’t want, and we didn’t complain.

Telling about her education, in a prestigious private school run by nuns, Marie remembers that she was “one of the top pupils in the class… there were always competitors”. From the fifth grade, Marie attended a special class for gifted children once a week, an experience that left a strong impression on her: “I’ll never forget the trip to the Weitzman Institute in Rehovot and to Chaim Weitzman’s home, the big house and the black car that I’d seen only in old movies… the nitrogen refrigerator, the colour wheel that we made… I remember that I didn’t understand anything we were told, I just looked and took in impressions without understanding.” Marie explains that in the 5th grade, her understanding of Hebrew was limited, because “in school the teachers didn’t speak Hebrew to us in the Hebrew class, nor did they speak English in the English class.”
Injustice and discrimination

In 8th grade, Marie studied French and took part in an essay contest. She was one of the finalists, yet the prize, a trip to France, was awarded to a less talented pupil whose father happened to be a wealthy patron of the school. “I and quite a few other pupils always suffered from discrimination that favored the rich pupils. But I always pitied the rich kids because only the teachers liked them.”

At the graduation ceremony, Marie was singled out by the principal who claimed her outfit was not modest enough. She was forced to change into borrowed clothing, felt humiliated, and was inconsolable until she wrote a letter to the principal explaining how she felt. However, a few years later when Marie returned as a teacher to the school, there was a chance encounter in which the principal apologized for hurting her feelings.

Thus Marie’s autobiography includes two stories of injustice: one in which the wrong was made right, the other not.

Adult life: Becoming a teacher, seeking a partner

After finishing high school, Marie worked in her father’s store to earn money, then applied and was accepted to study English and Education at the university. During her studies she worked part time at several jobs, took part in a volunteer program which gave her a partial scholarship, and completed her degree. All this time Marie was meeting many people and looks for a partner but “each time it didn’t work out;” she experienced many of the complexities of courtship and marriage in the Palestinian-Israeli community, as discussed in a critical light by Erdreich (2006).

While still completing her teaching diploma, Marie already found work and began teaching, at the school where she did her practicum (“although during the practicum I felt that no one even noticed me”). She came to the school with high expectations, sure she would “come into an ideal system – education, values, devotion to the work, supportive relationships…I waited for the moment when I would be able to carry out everything I had been taught.”

Discovering little had changed since she was at school, Marie decided to do what she believed in: “I went back to the articles and notebooks from the university, applied many new ideas, looked for topics on the Internet… I related to each pupil as an individual, especially the weaker and quieter ones, introduced new methods of teaching English (according to the new curriculum which had not yet been applied in the school). I prepared materials at home, printed, cut and pasted…I just wanted to do good for the pupils.”

At the end of her first year of teaching, Marie was told that the teacher she had replaced would be returning. Marie quickly prepared a CV, applied to other schools as well as to graduate studies at the university. She was accepted to the MA program, got a job at the school where she had been a student, and was then asked to continue teaching in her first job. “And I – I went for all of them!” And then, Marie met her future husband.
Marie and her husband were engaged, married a year later, and their son was born in 2006 – just weeks before the 2nd Lebanon War. Marie describes this experience in a list of words, suggesting that the logic needed to form a coherent sentence was simply not available at that time: “Fear, terror, nerves, tears, updates, near, far, shelter, and the baby.” Only a month after the war ended, the school year began; Marie returned to her classroom, feeling unprepared because she had spent her spare time completing university assignments. She “worked while the baby slept… I hardly slept because the baby woke up during the night, and I understood why people say it’s not easy…but it’s fun, it’s beautiful, it’s love, warmth, and that’s it.”

Back to the beginning

As quoted above, Marie’s story began simply with her birth in Haifa and her attachment to the city, the neighborhood, the house where she grew up, her room and the people who mattered. Whereas in Ariana’s story the opening passage holds important clues to understanding how she tells about her life, in Marie’s case it is a sort of “coda” that proves significant. Near the end of the semester, in a discussion of “what is not said” in interviews, Marie volunteered more information: Her father was born in Ikrit, a village in the Galilee that was evacuated during the war of 1948 (when he was 5) and later destroyed by the Israeli army. Her family remained connected to the former residents of Ikrit, participated in demonstrations and legal battles, held picnics on the site of the village. So, Marie added, “actually, I am from Ikrit.”

Marie’s story is elaborated around a series of themes: relationships are central to the story, as is Marie’s connection to her community; hard work, effort and determination pay off; education matters, and teaching is interesting and worthwhile work. Injustice exists; Marie has experienced it in small ways and has sometimes found strategies to resist.

Marginalization in Marie’s story

Marie has developed a number of ways to story her experience that seem to help overcome marginalization. For one thing, it seems that all her stories have two (or more) sides, and she avoids falling into polarized positions on the difficult issues that mark her life. Her family story is an example of this. Marie belongs to the small Christian Arab community in Israel, a community that might be perceived as doubly marginalized; but she talks about having many friends, and about meeting many possible partners until she finds “the one”. Her family lost their land and village, but preserved a strong sense of belonging to a community, which Marie shares. The story of Ikrit is not included in her written autobiography, but is told spontaneously in the multicultural setting of the course. In writing about her experiences as a new mother during the Second Lebanon War, Marie speaks about
“fear, terror, nerves…”, but almost in the same breath says “it’s fun, it’s beautiful, it’s love,” a statement which reflects her optimistic and resourceful attitude.

Marie’s memories of the past also have two sides. As a schoolgirl visiting the Weitzman Institute, she did not understand the explanations in Hebrew, and could easily have felt marginalized by this Israeli-Zionist landmark, but as a curious and open child she was fascinated and still retains detailed memories. At school she saw and experienced discrimination based on economic status, but early on Marie already felt sorry for the rich kids and was able to see the many sides of their privilege.

Marie’s story is told from a teacher’s perspective: looking back at how she was taught languages, she relates this to the way that second languages are now taught and to her own initiatives in the classroom. Thinking back on the discrimination she experienced at school, she focuses on ways to do things differently in her work, to help weaker pupils to learn. As suggested by Drake et al. (2001), subject matter is central to her elaboration of her teaching identity, and is related clearly to her personal purpose of providing more opportunities for the less advantaged students in her classes.

ARIANA AND MARIE: TWO WAYS OF COPING WITH MARGINALIZATION

Both Ariana’s and Marie’s stories focus on childhood and include difficult experiences from which the writers have learned; we can see how taking stock of the past helps them make sense of the present. There are some commonalities in the two stories which reflect aspects of the shared situation in which they live and work. Both women “never imagined they would become teachers”, yet both are committed and serious about their work (though only Marie writes about it in detail). Both teachers mention good colleagues (as well as others they do not get along with), but for the most part they seem to work alone and without a strong professional community in their schools. Family and friends are central to both stories; and both accounts are elaborated against the implicit or explicit background of longing for another place, yet living clearly grounded in the here and now. Both women story their lives as busy and intense, Ariana with more interruptions and obstacles than Marie. Both are sharply critical of the school system, but do not dwell on what is wrong; each tries to improve things in her own work setting. Graduate studies and professional learning are important to both; Marie, not yet 30, has completed her MA, while Ariana at 40 is still working on her thesis.

It would seem that Marie’s story allows her to overcome marginalization and to make a place for herself that is central, first in her family and in her community, and even to a degree within her school as a teacher who goes the extra distance for her students and who is respected by her principal. Ariana’s story, on the other hand, seems to be one that accepts marginalization as a “place of possibility” (Huber & Whelan, 1999): learning to cope with the difficulties that being on the outside has brought her over the years, she has become a strong individual who is now able to chart her own path.
As Andrews (2007) suggests, the writer is inevitably at the centre of her autobiography. Thus, if we didn’t already know about the marginalization of the teaching profession, these stories might not be the best place to learn about it. However, the stories do highlight strategies used by teachers to deal with the marginality of teaching: we see them fostering and maintaining good personal relationships with colleagues and pupils, acting locally to overcome discrimination by attending to weak pupils, investing judiciously in new programs and methods, seeking out higher education and working towards their own professional development. There is in these particular stories no evidence of teachers organizing with colleagues to change work conditions, to research their practice or to seek out ways of having an impact on the wider school system, strategies which seem to depend on the existence of strong professional communities in the schools (Vescio et al., 2008; Olson & Craig, 2001).

Gender interacts with many other factors that create the marginalization of teaching: in Ariana’s story we note the postponement of her studies in favor of her husband’s advancement. In both stories we see personal and family concerns competing with the teacher’s career (although Marie manages to juggle both very adroitly). We see teaching as a ‘leaky’ practice overlapping with mothering and caring (Griffiths, 2006), in ways that contribute to the significance of both teachers’ work.

_Putting teaching at the center_

If we can learn from these two quite particular stories, there are a number of lessons for teacher educators. Teacher education programs can be more proactive in raising awareness, by encouraging the reading, writing and interpreting of teachers’ stories as part of the teacher education curriculum. Fostering skills of collaborative work, and making more space for the study of social/political and organizational aspects of teaching, would also contribute greatly to educating teachers who are more aware of their own place in the system and their potential role as agents of change.

_Marginalization and teacher research_

Not unlike teachers, researchers on teaching – especially those who aim to study teaching close up and from the perspective of teachers and students themselves, are increasingly being marginalized by policy-makers and funding agencies. Qualitative research, and narrative methods in particular seem remote from the growing demand in many countries for random-based trial research, for generalizable studies, and for evidence-based practice. Like Ariana, we can accept marginalization and continue doing our work. Like Marie, we can look for ways to respond by identifying and highlighting the ways that our research speaks to practical concerns, by allowing for a clear understanding of teaching as practice,
by highlighting the ‘dark corners’ of schooling, and by viewing teaching as a career that develops and changes over time (Griffiths, 2007). Probably we would be wise to learn from both teachers’ strategies, making this story of marginalization a ‘place of possibility’ by continuing to seek for ever more adequate understandings of teaching from the inside, while at the same time continuing to initiate dialogue on the central issues of teaching that concern teachers, researchers, and policymakers, as members of society.

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TEACHING AND MARGINALITY


CHAPTER 2

INNATE TEMPERAMENT Explains Too Much FROM A STUDENT’S SCHOOL ACHIEVEMENT?

Liisa Keltikangas-Järvinen and Sari Mullola

INTRODUCTION

A contribution of temperament in schooling started with quite a simple and innocent question of some young researchers. They asked teachers what are the children like who are actually having trouble in school, and what are the children like that are getting well (e.g., for review see Martin, 1989). The teachers did not respond with cognitive terms, but described the students’ temperaments. They didn’t attribute an academic success or lack of it to motivation, intelligence or cognitive skills but to a student’s temperament.

Temperament refers to a biologically rooted and innate behavioral style or behavioral tendencies that are present in early life, and are relatively stable across various situations and over the course of time (see e.g., Bates, 1989; Angleitner & Ostendorf, 1994; Goldsmith, Lemeny, Aksan, & Buss, 2000; Caspi, 1998; Caspi, Elder, & Bem, 1988). It contributes to the uniqueness of individuals and forms a core that provides a foundation for later developmental personality (for reviews, see Posner & Rothbart, 2007; Rothbart, 2007; Rothbart & Bates, 2006). Specifically, temperament answers to the question “how” but not to the questions of “what”, “why”, or “how well” (Tomas & Chess, 1977; Thomas & Chess, 1980). It tells how quickly a person takes a pen (i.e., individual’s unique adjustment to his/her environment), but it doesn’t tell why a person takes a pen or what he or she is going to write (i.e., the ability and/or motivation for the reaction). Thus, temperament is a style of a reaction, or a tendency to react in a certain individual way.

There are several temperament theories and definitions that vary somewhat in specifics and emphases (e.g., for review see Strelau, 1998). However, all theories share a high consensus that a content of temperament can be covered with the following five dimensions: (1) a general emotional tone, that is a tendency to be always cheerful, or a constant disposition to a bad temper, (2) a level of sociability and a tendency to have a positive mood, traits are usually related to an easy approaching of novel things and new people, (3) a level of adaptability and experience seeking, (4) person’s tendency to express fears and anger and his or her likelihood to get worried, and (5) a tempo, vigor and time frame of one’s actions (e.g., for reviews, see Keogh, 2003; Strelau, 1998; Kristal, 2005).

Especially important in the current context is the fact that temperament is a...
tendency or style that is rather independent of intelligence or cognitive skills; only low or moderate correlations between IQ and temperament have been found (for reviews, see Strelau, 1998; Guerin, Gottfried, Oliver, & Thomas, 2003) and IQ has been shown to moderate a relation between temperament and school achievement (Oliver, Guerin, & Gottfried, 2007; Newman, Noel, Chen, & Matsopoulos, 1998). There is the same distribution of temperament traits at all levels of intelligence; i.e., there are intelligent and unintelligent active, sensitive and flexible people. If we agree with the evidently documented findings that temperament is related to student's motor activity and energy levels, ability to focus, persistence, reactions to novelty, and to sensitivity, it is also reasonable to agree with the statement that temperament contributes to how a student learns, adapts and experiences a school environment.

School demands may be differentiated into two categories: (1) Academic performance and achievement, and (2) Socially appropriate and interpersonal behavior. Both categories are highly contributed by temperaments (for reviews, see Keogh, 2003; Strelau, 1998; Kristal, 2005). Educational psychologists have developed a concept of “teachability”, which reflects the teachers’ view of the attributes of a model student, and is affected by three primary factors consisting of temperamental dimensions (for reviews, see Keogh, 1989; Keogh, 2003; Keogh, 1982; Keogh, Pullis, & Cadwell, 1982). The first of these is labelled “task orientation”, that is related to attention and to a way how a student approaches a learning task (Keogh et al., 1982; Martin, 1989; Caspi, 1998). It consist of three temperamental dimensions, that are Activity (e.g., frequency and intensity of motor activity), Distractibility (e.g. the ease with which a student’s attention, especially ongoing task-related school behaviour, can be interrupted by low-level environmental stimuli), and Persistence (e.g. attention span, and the tendency to continue seeking a solution to difficult learning problems) (Martin, 1989; Windle & Lerner, 1986). It is well-documented in the literature that a constellation of high distractibility, high activity, and low persistence is likely lead to an underachievement (for reviews, see Keogh, 1989; Keogh, 1994; Keogh, 2003). Underachieving doesn’t mean a drop out but too low school grades comparing with a student’s actual capacity. Temperament-related underachievement is the most probable among students who perform neither well nor worse, and a discrepancy between grades and capacities remains therefore often unrecognized.

The second category of teachability is “Personal-social flexibility”, which comprises an easy approaching of new and novel things, positive mood, and high adaptability in new and unexpected circumstances (Keogh, 1989; Keogh, 2003). Likewise an underachieving caused by high activity and distractibility and low persistence has been documented, so is documented a positive effect of personal social flexibility. Students’ with positive mood and high adaptability have been shown to receive higher school grades than might be expected on the basis of standardized achievement tests (Keogh, 1994).

The last category of “teachability” is Reactivity, that consists of Negative mood, Intensity of responses, and High reactivity (Keogh, 1989; Keogh, 2003). This kind of student is mostly in a bad temper, his or her threshold of reactions is very low,
and his or her reactions are very intensive. A person with high reactivity is always very present, and everyone knows when he or she is disappointed or unsatisfied. This temperament highly determines how much the teacher likes the student (Keogh, 1994) and influences the quality and quantity of teacher-student interaction and relationship (Rudasill & Rimm-Kaufman, 2009; Silver, Measelle, Armstrong, & Essex, 2005). It has been also documented that low-reactivity students are perceived mature, and high in cognitive abilities by the teachers, and consequently, high-reactivity students are seen as immature, and low in cognitive skills and capacity (e.g., see Keogh, 2003; Keogh, 1994; Martin, Olejnik, & Gaddis, 1994).

Because the role of temperament is really important in school context, its contribution to the school grades as well as to the teachers’ perceptions needs to be studied. The more the teachers’ personal expectations, opinions and values can influence the student’s grades, the more important is an understanding the basis of those expectations and values. This is of general importance, but especially true with Finnish school settings where the school grades are not based on national standardized tests but are based on teacher fixed examinations and model examinations offered by the authors of the school books.

Although the Finnish educational system may be internationally known, we will still describe it here again. The system consists of nine years of compulsory schooling at comprehensive schools that is followed by three years schooling at high schools or vocational institutions. Comprehensive school consists of primary school that takes six years, and is followed by the three year lower secondary school. Our system is very effective: 97% of each age cohort completes the comprehensive school, and 97% completes the secondary education. Approximately 7% of these students are under individual supervision, 2% in special classes, and less than 1% leaves without education. The Finnish comprehensive school gives the most appropriate frame of reference to the “real-life experiment”, because the whole age cohort can be contacted owing to the fact that there are no private schools or parallel school systems, or at least they all follow the same curriculum supervised by the Ministry of Education. Furthermore, all teachers are similarly educated and they have all the university education.

METHODS

Participants

As a part of a large and national study (Alatupa, Karppinen, Keltikangas-Järvinen, & Savioja, 2007) we examined teachers’ perceptions of students’ temperament and educational competence, and the contributions of those ratings to teacher-rated school grades at the second stage of the comprehensive school. We also asked whether temperament plays different roles in different school subjects, and whether a gender of a student or a gender of a teacher plays a significant role.

We took a geographically representative sample of 4255 students at the last stage of the comprehensive school. This is approximately 10% of the respective cohort.
As shown in Figure 1, Finland was geographically divided into five counties. From each county, 10% of the Finnish-speaking schools were randomly selected, a total of 64 schools. 11 schools rejected, and the sample was completed according to the original random list. The original sample comprised 5992 students, and the complete data was available for 4255 students. From the teachers, the home room teacher, and the teachers of Math and Mother Language were also asked to participate. This was a total of 274 teachers.

Figure 1. The sampling of the study.
Measures

The teacher-rated temperament of the participants was measured by four scales from the Temperament Assessment Battery for Children – Revised (TABC-R; Martin & Bridger, 1999) and two scales from the Revised Dimensions of Temperament Survey (DOTS-R; Windle & Lerner, 1986) comprising 41 items altogether rated on a five-point scale ranging from one (strongly disagree) to five (strongly agree). The temperament dimensions addressed in the TABC-R are Activity, Persistence, Inhibition, and Negative Emotionality. The temperament dimensions addressed by the DOTS-R are Mood, and Distractibility. The original factor structure of the TABC-R (Martin & Bridger, 1999) and DOTS-R (Windle & Lerner, 1986) was replicated in this sample. The Cronbach’s alpha reliabilities for the scales were .81-.96.

The teacher-rated EC of the participants was assessed by three scales covering Motivation, Maturity, and Cognitive Ability. All the items were rated on a five-point scale ranging from one (strongly disagree) to five (strongly agree). The Cronbach’s alpha reliabilities for the scales varied from .86 to .90. Because the intercorrelations between these three scales were also rather high ranging from .62 to .67, we created one factor called Educational Competence (EC), which comprises them all. The Cronbach’s alpha reliability for the EC scale was .92. The factor analysis with Maximum Likelihood extraction and oblimin rotation also supported the one-factor solution. These procedures were followed in order to reduce possible multicollinearity between the study variables (Aiken & West, 1992).

The respective grades were taken from the students’ latest school report for ML and Math (range = 4-10; 4 is fail, 5-6 poor, 7-8 good and 9-10 excellent) they received at the end of each academic term and school year.

Statistical analysis

To investigate the research questions we conducted a series of linear hierarchical regression analyses (Aiken & West, 1992; Sobel, 1982; Baron & Kenny, 1986), and hierarchical linear modelling (HLM; Singer, 1998; Singer & Willett, 2003; Bryk & Raudenbush, 1992; Boyle & Willms, 2001) assuming a model building strategy suggested by Singer (1998) and Singer and Willett (2003). We used SPSS software, Version 15.0.

RESULTS

First we asked whether temperament correlates with school grades, and the answer is yes. As a result of a series of linear regression analyses (Aiken & West, 1992; Sobel, 1982; Baron & Kenny, 1986) we found that all temperament traits to be used here, i.e., Activity, Persistence, Distractibility, Inhibition and Negative Emotionality were highly correlated and significantly associated with both ML and Math grades,
explaining together 28% and 29% of the variance, respectively.

Secondly we asked whether temperament plays different roles in different school subjects. In our Finnish sample, no subject related differences existed but the variance to be explained was similar.

Thirdly we asked whether the association between teacher-perceived temperament and school grades would be mediated or moderated by teacher-perceived EC. When the teacher perceived educational competence was added into the regression model, it resulted in 8% increase (a total of 37%) when predicting ML, and 9% increase (a total of 39%) when predicting Math. It was shown that teacher-rated educational competence mediated an association between temperament and Math grade and between temperament and ML grade.

Furthermore, the regression analysis revealed a significant interaction between teacher-perceived educational competence and temperament for Math grade (figure 2). Activity and Distractibility were negatively and significantly related to the Math grade among students with high EC, but not among students with low EC. High negative emotionality predicted low Math grade among students with low EC. Instead considering persistence, low level of persistence predicted low Math grade among both high and low EC students.

Finally, our hierarchical multilevel modelling (HLM; Singer, 1998; Singer & Willett, 2003; Bryk & Raudenbush, 1992) results suggest a significant and systematic association between teacher’s gender and student’s gender on the relationship between the teacher perceived student’s temperament, EC (including the dimensions of cognitive ability, motivation, and maturity), and teachability. Male teachers rated girls higher in activity and negative emotionality and lower in persistence and educational competence when compared with female teachers.

Figure 2. The results of the linear regression analysis estimating the interaction between Activity, Distractibility, Negative Emotionality, and Persistence (respectively from top to bottom) and the Math grade as a function of high and low Educational Competence (EC).
DISCUSSION

We found that teacher-perceived students’ temperament was significantly associated with both ML and Math grades, explaining even approximately third of the variance of both subjects. Furthermore, high teacher-perceived EC (i.e., cognitive ability, motivation and maturity) predicted both high ML and Math grades: the teachers were likely to consider well-performing students high in educational competence or vice versa, to give high grades to mature and motivated students. Our results are in line with the results of previous studies (Martin, 1989; Keogh, 1994; Keogh et al., 1982) and support the role of “task orientation” in teachers’ perceptions (for reviews, see Keogh, 2003; Martin, 1989; Strelau, 1998).

It has been previously suggested that a task orientation (i.e., persistence, activity and distractibility) correlates especially strong with Math but not with ML (Martin & Holbrook, 1985), while conflicting findings exist, too (Guerin, Gottfried, Oliver, & Thomas, 1994; for a review, see Strelau, 1998). In our Finnish sample, no subject related differences existed but temperament traits together explained 28% of ML grades and 29% of Math grades variance when the findings were adjusted for within the correlations of temperament traits.

Furthermore, it was shown that teacher-rated EC mediated an association between temperament and both ML and Math grades; i.e., teachers were likely to interpret temperament traits as reflecting maturity and motivation. Our findings also showed that if a teacher rated a student high in educational competence (i.e., mature, motivated and high in cognitive capacity) and low in temperament activity, he/she was likely to give him/her high grades in Math. Because this was a cross-sectional study, an inverse explanation is also possible.

A contribution of task orientation to school grades has been shown in the previous literature (for reviews see Martin, 1989; Keogh et al., 1982; Keogh, 2003; Kristal, 2005). Our Finnish sample had however one specialty, that has not been shown previously. Negative emotionality (i.e., likelihood to express the feelings, especially negative ones, strongly and intensively) was seen as a handicap to the student in Finland. If it was associated with the low teacher-rated educational competence, it would be likely to lead to a low Math grade. This is not surprising in the Finnish culture where “control yourself”, is a very common and important guideline. However, it is justified to ask, what temperamental negative emotionality has to do with mathematics? At least, that significant contribution of negative emotionality as shown in our study has not been found in other cultures.

Considering gender differences teachers perceived boys higher in Activity, Distractibility, Inhibition, and Negative Emotionality, and girls higher in Persistence, Mood, and Educational Competence. All differences were statistically significant and mostly very large. This was particularly true with Educational Competence, Persistence and Distractibility. These findings rather clearly show how differently the teachers see the boys and the girls, and those perceptions are not evidence based but are likely to reflect the teachers’ own values and expectations.

Interestingly, male teachers seemed to be stricter or more critical on their perceptions of girls’ traits than female teachers. They rated girls higher in Activity and
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Negative Emotionality and lower in Persistence and Educational Competence when compared with female teachers. Our findings also indicate that male teachers were likely to underestimate girls.

CONCLUSIONS

To conclude, our findings suggest that teachers need more information about the influence of temperament in order to differentiate cognitive skills and behavioural styles, and consequently to ensure equitable treatment for all students. At least, teachers should recognize their own temperament-based attitudes and expectations. This is important for two main reasons. First, temperament differs from intelligence, cognitive ability, maturity and motivation. Teachers who do not understand how temperament affects a child’s behavior may misinterpret certain behaviors as disobedience which could result in classroom difficulties and negative interactions for both teacher and student. Secondly, the school report students receive at the end of their ninth year has a significant and far-reaching role in their future and in their academic lives. Thus, the determination of their school grades should be as unambiguous as possible. Higher sensitivity among educators to the temperament of students, including the very bright and the underachievers, would increase the quality of school experiences for both students and teachers.

REFERENCES


