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A Narrative Inquiry into Rural School Leadership in South Africa

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Abstract

This article attends to rural school leadership in two South African schools through the lens of the concepts of relational leadership and emotional labour. The inquiry draws on five years of guided conversations and observations that speak to leadership experiences of hope and anticipation as well as despair and disillusionment. I worked with one black male principal and one black female school principal from two rural schools in South Africa. Over time, the tone of their narratives changed from hope to hopelessness and resignation. The findings spoke to how commitment and care were overcome by the educational challenges, which involved hunger and poverty, orphaned learners, teen pregnancy, rape, departmental criticism and lack of support. Theoretically, this inquiry draws on the theories of relational leadership and emotional labour in rural education and empirical evidence was drawn from narrative inquiry.

Keywords: narrative inquiry, rural school leadership, relational leadership, emotional labour

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Investigación Narrativa sobre el Liderazgo en Escuelas Rurales de Sudáfrica

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Resumen

Este artículo trata el liderazgo de escuelas rurales en dos escuelas Sudafricanas desde perspectiva de los conceptos del liderazgo relacional y la labor emocional. La investigación se basa en cinco años de conversaciones guiadas y observaciones que indican las experiencias de liderazgo tanto de esperanza y anticipación como de desesperación y desilusión. Trabajé con un director negro y una directora negra de dos escuelas rurales de Sudáfrica. A través del tiempo, el tono de sus narrativas cambió de esperanza a desesperación y resignación. Los resultados indicaron cómo los desafíos educacionales superaron el compromiso y el cuidado, los que incluyeron el hambre y la pobreza, los alumnos huérfanos, el embarazo adolescente, la violación, la crítica departamental, y la falta de apoyo. Teóricamente esta investigación se basa en las teorías del liderazgo relacional y la labor emocional en educación rural y las evidencias empíricas se obtuvieron utilizando la investigación narrativa.

Palabras clave: investigación narrativa, liderazgo en escuelas rurales, liderazgo relacional, labor emocional

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More attention can been paid to leadership practices in rural schools in South Africa, given the complex challenges in the context of poverty, health issues and social difficulties, which influence the daily activities at these schools. This study, therefore, seeks to offer some insight into how rural school leaders perceive and experience their work. As such, the aim of this study has been to explore rural school leadership through the lens of the theories of relational leadership and emotional labour, in order to illuminate the perceptions and experiences of two rural school principals from South Africa. To this end, the guiding research question for this study was: How do rural school principals perceive and experience leadership and management work in their schools?

When a school is labelled "rural" in South Africa, the defining characteristic is undoubtedly poverty (Brown, 2010). According to van der Vyver, van der Westhuizen and Meyer (2014):

> In a democratic South Africa many schools still bear the scars of apartheid, even [21] years after the first democratic election. In rural areas, mainly populated by black African people, poverty prevails and schools still suffer despite efforts of the government to provide funding (p. 62).

This is supported by research conducted by Moletsane (2012), who argues that:

> Almost two decades after the demise of apartheid, rural communities in South Africa are still plagued by seemingly insurmountable challenges, with no change in sight for those who need it most, especially those who live, work and learn in rural, informal and other marginalised communities (p. 1).

The educational setting in which I conducted the inquiry is characterised by severe poverty and under-development. Authors such as Faulkner (2015), Lumby (2015), Maringe, Masinire and Nkambule (2015) describe such contexts in terms of multiple deprivation or as disadvantaged (Naidoo & Perumal, 2014).The area in which this research was conducted is approximately 90km from Johannesburg and borders on Mpumalanga, the province to the east of Gauteng. The educational landscape of this inquiry is mostly inhabited by families who live in informal settlements, where water,

electricity and sanitation are not provided. Families here rely on government support, which is provided in the form of child provision, disability and old-age grants. Most parents do not have work and, therefore, rely on the grandparents' old-age grants from the government as their only source of income. Girls who fall pregnant and register their babies at the Department of Home Affairs may also claim financial child support, which is minimal. Child-headed households are common, and many other households only comprise of children and grandparents as the parents have passed on due to AIDS (Pillay & Saloojee, 2012).

These difficult conditions are further exacerbated by people who stream in from the neighbouring countries and take up residence in the area. These communities grow overnight into squatter communities, with no water and no electricity. Often, children from these neighbouring countries show up at schools wishing to register and attend classes. Such situations impact negatively on the quality of teaching and learning, which raises specific challenges regarding rural school leadership. Furthermore, these communities are often "riven with social problems such as substance abuse, rape and assault which principals and teachers have to deal with" (Kruss, 2001, p. 56).

Theoretical Framework

Theoretically, this inquiry draws, firstly, on relational leadership (Cathcart, 2014; Uhl-Bien & Ospina, 2012; Fairhurst & Uhl-Bien, 2012; Grogan & Shakeshaft, 2011; Hosking, 2011), and, secondly, on emotional labour (Hochschild, 1983; Brook, 2009; Wharton, 2009; Ashkanasy & Humphrey, 2011; Iszatt-White, 2013).

There is a wealth of research available on the role of emotions and leadership in organisations including schools (Hargreaves, 1998; Sachs & Blackmore, 1998; Beatty, 2000; Blackmore 2006; Zorn & Boler, 2007; Iszatt-White, 2009, 2013). However, to date, little research has been conducted on relational leadership and emotional labour; specifically in rural school leadership studies. Uhl-Bien (2006, 2007, 2011a, 2011b) has written extensively on this topic and explains that the term "relational leadership" is quite new, although the concept of relation-oriented behaviour is not so new in leadership studies (Uhl-Bien, 2006, p. 654).

Firstly, relational leadership as one of the theoretical lenses, is mostly associated with women (Regan & Brooks, 1995), which offers insight into how women have transformed school leadership. These women were insiders and resisted the traditional administrative behaviour as modelled by their male counterparts (Smit, 2013). In their research, Regan and Brooks (1995) developed relational leadership as a theory based on empirical data sourced from 11 women, who resisted socialisation into the prevailing male-dominated culture (*ibid.*, xi). These accounts of their practice were described as relational as opposed to controlling.

However, it is significant for this inquiry to note that leadership as relational influence can be exercised by both men and women and is not dependent on person or place. Rather, it should be considered as a verb: "leadership is the action of influence; it is relation, and it does not exist by itself" (Schmuck & Schmuck, 1992 cited in Regan & Brooks 1995, p. xi). A new language that is relational is offered – including concepts such as care, vision, collaboration, courage and intuition.

In the South African rural educational landscape, a new way of looking at leadership that is anchored in the development of rural school leaders is proposed. Relational leaders bring a spiritual dimension to their work and strive to achieve a balance between the personal and the professional life (Arar, 2012). Moreover, relational leadership (Grogan & Shakeshaft, 2011, p. 8), implies "being in relation and sharing power with others". This assumes leading in a caring manner, and seeing the world differently – with vision, care and collaboration. In this regard, research by Van der Vyver, Van der Westhuizen and Meyer (2014) proposes that care in leadership requires personal development plans for school leaders. However, relational leadership and associated care can also be viewed as inherent trends that do not have to be formally developed. Leadership is conducted according to a moral code of conduct, and followers are empowered to achieve (Russell, 2003). Also, Uhl-Bien (2004) affirms that the quality of leadership relationships matters because of their effect on outcomes, which are associated with benefits such as job satisfaction, higher organisational commitment, enhanced career progress, lower turnover, and even higher performance. Relational leadership approaches are recognised by the interplay of the relational exchange that generates the influence that produces beneficial leadership outcomes.

Secondly, emotional labour, as the other theoretical lens, refers to leaders who use emotional labour and emotional displays to influence the moods, emotions and performance of their subordinates or followers. Humphrey, Pollack and Hawver (2008) credit Ronald H. Humphrey with coining the phrase "leading with emotional labour". Wharton (2009) puts it slightly differently:

> Emotional labour refers to the process by which workers are expected to manage their feelings in accordance with organisationally defined rules and guidelines (p. 149).

Even more relevant to leadership is the research of Iszatt-White (2009, p. 447), who argues for the "role of leadership in making staff feel valued and emotional behaviour through which leaders' valuing practices are accomplished". In this regard, Ashkanasy and Humphrey (2011) posit that leadership involves an element of emotional labour, because the moods and emotions of staff need to be managed, particularly under challenging working conditions.

That said, scholarship on emotional labour in service occupations is abundant, but not much has been written about rural school leadership and emotional labour (Turnbull, 2013). Ashkanasy and Humphrey (2011) propose that, like service employees, leaders also perform three forms of emotional labour: surface acting, deep acting, and display of genuine emotions. However, whilst most service employees display only positive emotions (service with a smile), school leaders may have to display a wide range of emotions, including both positive and negative emotions. This is because leaders have to express both socially desirable emotions (e.g. being enthusiastic about collective goals) and social control emotions (e.g. being stern toward an employee who always comes late).

Ashkanasy and Humphrey (2011) argue that leaders who use emotional labour are emotionally expressive and are likely to be perceived as transformational in that emotional expressiveness is an important attribute of transformational leaders. Emotional labour can help leaders make their communications more inspiring. Relevant for this inquiry, according to Ashkanasy and Humphrey (2011), is that:

> Leaders often have to be able to portray optimism, hope and confidence even when facing confidence shattering events that may be demoralising for them (p. 373).

In summary, relational leadership and emotional labour are two appropriate theories for understanding rural school leadership, as they offer insights into the research phenomenon, of the experiences of educational leadership of rural school principals. Given the demanding challenges in oftentimes tiring and strenuous educational landscapes, the intensity of emotions deemed theorising using emotional labour, appropriate.

Research Design and Methodology

Educational leadership studies draw on both qualitative and quantitative research (Klenke, 2008), employing a variety of design types and methodologies. This research employed a narrative inquiry, together with ethnographic observations. Narrative inquiry, as a qualitative design type, is slowly edging its way into leadership studies (Slater, 2011) and it was, therefore, deemed relevant to employ this design as an innovative way of understanding the rural school leadership. According to Clandinin and Connelly (2000), narrative inquiry as design type, is a way of understanding experience as well as a research methodology. This methodology allows for in-depth study of the experiences of individuals over time and in context. Put differently, narrative inquiry as a research methodology has reshaped the field of qualitative research, especially with its close attention to experience as a narrative phenomenon and its emphasis on relational engagement. Accordingly, matters under investigation included: processes of relational leadership and emotional labour, intended and unintended consequences of observed interaction patterns, and relationships and socio-cultural contexts within rural educational landscapes. Furthermore, Clandinin (2013, p. 65) explains that such "contexts are grounded in Clandinin and Connelly's (1995) metaphor of a 'professional knowledge landscape. They developed this metaphor as a way to describe the complex historical, temporal, personal, professional, relational, intellectual, and moral qualities of schools." Investigations were conducted via guided conversations and analysis of observational field texts. These field texts were analysed using constructivist grounded theory (Charmaz, 2014) and

narrative inquiry, which is a relational manner of knowledge production (Clandinin, 2013) in an educational setting.

Typically for qualitative research, I used convenience-sampling to select the two school principals. Their schools were in close proximity from each other and they had many years of leadership experience, which they were willing to share with me. I considered them to be particularly information rich. I visited each of the schools approximately twice per month and spent my days there observing classes, staff meetings, assemblies, and activity on playgrounds, at entrance gates, in corridors, and in the principals' offices. During these field visits I was guided by the key research question, exploring the experiences of leadership in rural schools and creating research texts from the field texts. Caine (2002) posits that field texts are co-compositions reflective of the experiences of researchers and participants and need to be understood as telling and showing those aspects of experience that the relationship allows. Important for narrative inquiry was my relationship with the principals and ease of interacting and talking about their daily work. I collated narratives of the principals into a collective narrative (Caddick, Phoenix, & Smith, 2015). This collective narrative (Smith, 2013) is represented in a dialogical fashion in order to convey to the reader the experiences and characteristics of the research participants by my documentation of their working lives. Frank (2005) in this regard asserts that a dialogical approach understands people as inherently relational, and narrative research is part of a dialogue between two or more people. It also allowed for a vivid description of the data, as the two narratives interacted with each other, which fits comfortably in a narrative approach (Saldaña, 2015).

A Constructed Narrative Dialogue: Joan and Peter

The dialogue that follows was constructed, based on the data sourced from guided conversations and observations from the two school principals. It is a constructed and descriptive illustration of empirical data that is represented in a dialogue in which two principals talk to each other and share their experiences about what happens in their schools. I have purposively selected segments of texts from the raw data, and created a collective narrative to construct this dialogue. The integrity of the data was maintained and no data were compromised. Given the voluminous nature of

the field texts I chose selected texts to create a credible representation of the narratives to write a composite narrative in the form of a dialogue of the experiences of leadership in rural educational landscapes. Composing narratives in a composite and dialogical fashion facilitates insight in the lives of principals as the similarities, differences, and tensions are represented. The narrative dialogue is constructed in a chronological fashion of past, present and future experiences and offers a fresh and promising approach of understudying leadership experiences.

I met *Joan*[1] about ten years ago as a master's student at the University of Pretoria. Today, she is the principal of a primary school in a rural school approximately 90 km away from Johannesburg. She has been a teacher for seven years, a Head of Department for four, and served as deputy principal for eight years until her appointment as principal in 2006.

Peter[1] started his teaching career in 1986. Since then, he has worked at three different schools, teaching Sepedi, History, Afrikaans and Biblical Studies to Grades 10 to 12. In 2000, Peter was promoted to the position of head of department and shortly thereafter he took up the position of school principal at a secondary school.

Peter: I am so glad we get to talk a little before the workshop. Our schools are so close to each other, and yet we seldom see each other. How are you and how are things in your school?

Joan: I was really hoping that my school would be in a better place by now. I have been at the school as principal since 2006 and so little has changed for the better. Children are still streaming in from Mozambique and from the local farm schools, which have closed down. These learners cannot speak English or any one of our official languages, such as IsiZulu and Sepedi. Not only is the language problematic, but their parents have no identification documents to officially enrol their children at school and I am obliged to admit them into my school. This makes class placings really difficult.

Peter: I never realised that you had so many foreigners in your school. It must be particularly hard for you to cope.

Joan: I cope in a manner of speaking. I have started a non-profit organisation for additional food distribution as most children get their only meal at school. I know that most parents are unemployed, extremely poor and rely on government funding. Foreigners, however, cannot rely on such

governmental support as they have no South African identification documentation.

Peter: Poverty and hunger is also a problem at my school. I am so glad that the government has decided some years ago to institute feeding schemes at secondary schools as well. I remember the days when secondary school learners would go to primary schools in the vicinity to get food.

Joan: Yes, I remember those days too – when the children from the secondary schools came to my school for food. I could not show them away. But the food allocated to my school is not adequate and the quality leaves a lot to be desired. But at least it is something, when one has nothing. The challenge is that we have the Grade R learners who are not part of the official headcount and therefore not part of the governmental feeding scheme. The Department of Education only allocates funding for Grade R learners for purchasing teaching and learning materials, maintenance and services, but not for the feeding scheme.

Peter: Indeed you are right. Another issue that really concerns me is the manner in which the Department officials treat us as colleagues. I am not sure if you have experienced this. But I feel they treat us in such a patronising manner as they continuously require from me as the principal to submit progress reports and so forth. The final matric results since my inception at the school have improved drastically and yet nothing of this improvement is ever acknowledged. I remember when I accepted the position as school principal; I was so hopeful, energised and committed, but this constant criticism really gets me down.

Joan: Quite frankly, I have given up on the Department officials. Seldom do they visit my school for pedagogical support, nor do they guide me in financial matters. I simply have to do everything myself. I must show you the assembly roof I have had built. Now learners can enjoy assemblies and academic performances by visitors in the shade. You will also notice the paving around the front of the school yard, painted buildings and the revamped staff room. Being a principal these days is a huge challenge because I feel so alone doing the work of the whole school. But what I have done is for the love of these learners and the community. I want to leave this school with a legacy that they will remember me with.

Peter: That sounds wonderful. I too have been struggling to get support from the Department. I have been battling to get toilets commissioned for three years now and to have paving done in the car park. The terrain of the

school is rugged and sandy, and the place where food is served during break is seldom clean. I do not have enough employees to see to these needs.

Joan: I hear you clearly, as it takes a great deal of extra effort to have a clean school. Recently, I am sure you have heard, the community burnt down the local library, the health clinic and the police station. I immediately consulted with my staff and sent all learners and teachers home because there were threats from the community that, if we do not support the community protest, our school will be burnt down too. You see we work with the majority of the people who have never gone to school. Burning a library means nothing to them and they do not understand the significance of the library, the school, the police station and the clinic. So, time and again, we bow down to such things, which are not related to schooling just to protect the school buildings. Needless to add, we lost many days of teaching. This really perturbs me. I sometimes feel that we are the victims of the social ills of this society. Schools should be protected from such violent behaviour. At the end of the protest, I had to call the teachers to encourage them that they need to be involved in the catch-up programmes for the teaching days that were lost. Most teachers were committed to have extra morning and afternoon classes and some devoted their time to teach on Saturdays. I am happy that they responded so positively to the catch-up programmes.

Peter: I heard about these incidents. Such protests really disrupt the teaching and learning. What also concerns me is how the older learners see their future. Many of them show little interest in learning as they seldom have a vision of the future. The AIDS pandemic is so real, together with teenage pregnancies and drugs. I sometimes lose hope whereas, in the past, I was always so positive and optimistic. I remember when I took up the principalship with hope and pride. I believed in the learners and the staff and I still do. I wanted to make my school proud. I worked extra hours with learners, parents and staff. On Saturdays we taught extra classes and on Sundays I would meet with parents. All this was never recognised by the superiors.

Joan: I understand your frustration. I too am everything to everybody: principal, counsellor, teacher guide, finance officer, and so forth. I too get tired of all these responsibilities that are way beyond what is commonly seen as school. How do I deal with pornography and abuse of children in my school? The social welfare services are not reliable for continued

support. Little children live with their grandmothers as many of the parents have passed on due to AIDS. The lives of the majority of the learners are in danger because they are exposed to situations where they are being raped and molested by adults at home. We have lost a girl learner who was raped and strangled at home during the weekend. Some of the learners are raped and there is no proper care at home. Some of the learners are being raped by their stepfathers and their mothers keep quiet because the stepfathers are the bread winners. The school is unable to intervene or to make follow-ups in such cases because it is something that happened at home and the parents do not want the school to interfere and assist. It is simply devastating. The poverty and societal devastation is simply too much for me too.

Peter: Well Joan, I took a radical decision regarding my life. I will resign at the end of the year, take early retirement, and take up a position as a preacher in my community. My hope is now in the spiritual world since, after five years and three months as a dedicated and loyal school principal, I have given up. I have chosen between life and death. The stress makes me ill and I cannot continue in this way.

Joan: I am so sorry to hear you are leaving, and fully understand it though. I also want to leave this profession, but have not been able to find employment elsewhere. There was a time when I thought I would never leave, because I thought work had to be done in this school. But now I think differently, as all the projects I wanted to fulfil, have been completed and, emotionally, I have reached my threshold. Now it is time to move on to explore other ventures.

Findings and Discussion: from Hope to Hopelessness

Given the empirical evidence, relational leadership does more than draw upon expertise and leadership from participants throughout the organisation. It is a process of reciprocal interrelation through which the expertise held by different participants interpenetrates, creating a more holistic perspective that is integrative rather than additive. Relational leadership requires the facilitation of the interpenetration of expertise, which, in turn, requires the skills to build relationships among others, creating a safe space in which they can reciprocally interrelate with one another.

Peter, for example, speaks about hope, courage, high points and pleasant experiences and he links these to why he considers his leadership role to be worthwhile. In the analysis, I recognised so much good in him, something that "gives him life" in his school, and enhanced strength that gives him power and that makes his professional life worthwhile. Also, what gives Peter joy, when and how he is energised, and where he shows commitment and courage features prominently in the data. Peter expresses hope for the children, hope for the future, commitment and hope for education and teaching and leadership, and a passion for teaching, wanting to help children. For Peter the multifaceted exposition of hope, commitment and passion is significant in the context of public scrutiny, bad publicity, constant policy change, low status, poor remuneration, and the HIV/AIDS pandemic in South Africa. Recent research (Smit & Fritz, 2008) has shown that the power of the working environment, the educational landscape, is a much stronger force in education than national educational policies. This inquiry revealed, on the one hand, that a school principal can move beyond the realms of the educational practice to make meaning of his professional life, experiencing hope, showing commitment and passion for his school, but only to a point. On the other hand, if leaders are pushed too far, hopelessness sets in. Sadly, hope, experienced by Peter as emotional labour, could only achieve so much. The emotions at school for Peter became too overwhelming. Feeling minimised, judged and discounted on a daily basis proved too much for him. The daily confrontation of poverty, the rural context, dirt and filth, violence and corruption ate away at his motivation. We learn from Peter that too much stress, negative judgments, and discounting behaviour from the authorities drove him out of the system, and he made a choice between health and death, as he put it. "Too much stress makes me ill", he told me. This proves that school leaders are not only experiencing intellectual labour, but also emotional labour. This refers to the intensification of the daily demands of school leaders who work in such difficult educational landscapes. Stressful emotions are intensified in challenging circumstances and add emotional burdens on school leaders. Such burdens can lead to resignation and paralysis. This implies, as Hochschild (cited in Hargreaves & Fink, 2013) fittingly argues, that:

> Emotional labour requires one to induce or suppress feelings in order to sustain the outward countenance that produces the proper state of mind in others (p. 513).

This further implies that people have to trade part of themselves to motivate others. In the context in which Peter worked, it became too difficult to express care, concern and support for teachers, learners and parents. The work demands and challenges accelerated and Peter resigned because the work had lost its meaning and purpose. He was close to burn-out as he tried to do all that was required of him, and more. The proposition by Ashforth and Humphrey (1993) in this regard holds true:

> If emotional labour is inconsistent with a central, salient, and valued social and/or personal identity (or identities) it will lead to emotive dissonance and/or a loss of one's sense of authentic self (p.101).

This inquiry further reveals that relational leadership and associated care as emotional labour (Iszatt-White, 2013) is an inherit trend, and does not have to be formally developed. For example, Joan conducts her work according to a moral code of conduct, empowers others to achieve, and leads by example in and out of school. She takes responsibilities for far more than what is traditionally expected of school principals. Narratives "from the ground", together with ethnographic observational field texts, redefine the relational leadership style and bring about a new language about leadership. Joan's relational leadership experiences reflect attributes of care, collaboration, vision, intuition and courage. Given the findings of this inquiry, leadership in a rural context requires a redefining not so much in terms of tasks, but more in terms of ways of being. Joan sees herself in relationships with others instead of in charge of others. This kind of leadership is grounded in purpose and relationships that build capacity, which can be harnessed to effect change (Grogan & Shakeshaft, 2013). Odora-Hoppers (2012) offers a helpful explanation in this context:

> Leadership is a matter of how to be, not how to do. How to do, is the task of a manager. The most effective leaders are a living demonstration of how values and character when combined in action carry the day (p. 2).

Concluding Thoughts

Inquiries into the experiences of rural school leaders from a relational perspective are critical to advance new contextual understandings of educational leadership. The challenge is to find the language and the words to articulate experiences, on the one hand, and, on the other, to make these contextual understandings accessible and acceptable for the academic community. These understandings may be articulated theoretically, empirically and practically.

Theoretically, according to Werhane and Painter-Morland (2011), leadership is an interactive, dynamic, and mutually inter-relational process between leaders and managers, where each participant contributes to the vision and progress toward change. The most effective leaders will be those who are not only visionary, but those who are used to working with a diverse population collaboratively rather than in a traditional leader-follower dynamic. The objective is for this relational way of knowing to be positively received by those in power in rural educational settings.

Empirically, experiences of female and male educational leaders in South Africa, from a narrative perspective, remain largely un-researched and, thus, relational methodologies, such as narrative inquiry, should prove helpful in uncovering how leaders negotiate their roles in rural school communities. Caine, Estefan and Clandinin (2013, p. 580) remind us that "through attending to the relational in-between spaces in narrative inquiry, possibilities arise to discover new ways of knowing and understanding".

Practically, what may be needed for the future is relevant leadership training for school principals. The rural settings will, more often than not, remain as they are, perhaps with slight improvements. However, for the immediate future, these rural schools are so much a part of the South African education system, and given that despite democratic processes since the abolishment of Apartheid, rural schools have seen little if any improvement both in terms of the physical environment and the pedagogical context that should be conducive for teaching and learning.

And finally, the discussion seems appropriate and doable but, in practice, the rural context is simply too complex, to address social ills as they manifest in rural school leadership as well as in rural classrooms and beyond the context of school. One cannot divorce school from community, particularly from rural communities, which makes rural school leadership

even more difficult. The understandings of relational leadership, coupled with care and emotional labour, could shed light on diverse leadership training and practices, which could enhance rural school leadership practices. The time has come to unleash the power of a caring purpose, relational leadership and emotional labour for education in order to create the kinds of schools our children deserve.

Notes

[1] Pseudonym

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La Integración de los Estudiantes Inmigrantes en un Programa de Deporte Escolar con Fines de Transformación Social

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The Integration of Immigrant Students in a School Sports Program with Social Transformations Purposes

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Abstract

The aim of this study is to analyze the integration of immigrant students who participate in the School Sports Program from Segovia, Spain (PIDEMSG). A multiple case study, focused from an ethnographical perspective has been developed, with 11 groups of school sport (118 children in total) in three different categories (7-8, 9-10 and 11-12 years) with a specific focus on 68 immigrant students. Individual and group interviews were conducted, as well as 6 months of observation through the "observer as participant" method. In order to analyze the results, a content analysis has been developed, applying an analytical categories system. The results show that PIDEMSG favors the integration and social inclusion of immigrant students, as well as intercultural communication and the development of educational values, due to their pedagogical approach. The relationship between immigrant students sometimes appears to have a framework of common codes and the recognition of a shared identity, even though they do not all have the same nationality. The experience of the monitors in groups with cultural diversity seems to be a fundamental factor in the achievement of better levels of integration and inclusion of immigrant students.

Keywords: immigrant students, school sports, intercultural education, social integration

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Resumen

El objetivo de este estudio es analizar la integración del alumnado inmigrante que participa del Programa Integral de Deporte Escolar del Municipio de Segovia, España (PIDEMSG). Para ello se ha llevado a cabo un estudio multicasos, enfocado desde una perspectiva etnográfica, con 11 grupos de deporte escolar (118 niños en total) en tres diferentes categorías (7-8, 9-10 y 11-12 años) con un foco específico en 68 estudiantes inmigrantes. Se realizaron entrevistas en profundidad individuales y grupales, además de observación bajo la figura "observador como participante" durante seis meses. El análisis de contenido se ha desarrollado utilizando un sistema de categorías analíticas. Los resultados muestran que el PIDEMSG favorece la integración e inclusión social del alumnado inmigrante, así como la comunicación intercultural y el desarrollo de valores educativos, por su enfoque pedagógico. La relación entre el alumnado inmigrante parece tener en algunas ocasiones un marco de códigos comunes y el reconocimiento de una identidad compartida, a pesar de no poseer todos la misma nacionalidad. La experiencia de los monitores en grupos con diversidad cultural parece ser un factor fundamental en el logro de mejores niveles de integración e inclusión del alumnado inmigrante.

Palabras clave: alumnado inmigrante, deporte escolar, educación intercultural, integración social

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La inmigración es una de las principales manifestaciones de pluralidad cultural presente en el sistema educativo, siendo una muestra de diversidad que atraviesa toda la realidad social (García & Sánchez, 2012; Grau, 2010), y un fenómeno que ha dado pie al desarrollo de representaciones negativas sobre el alumnado extranjero y la propia interculturalidad. Ello ha generado un discurso "culturalista" (Franzé, 2008) que etiqueta al alumnado inmigrante como perjudicial para su entorno en términos sociales y educativos (García, Rubio, & Bouachra, 2008; Poveda, Jociles, & Franzé, 2014). Así mismo Touraine (2000) expresa que a pesar de las potencialidades socializadoras e inclusivas de los procesos escolares, estos se construyen habitualmente desde una lógica asimilacionista que promueve la "negación de diferencias" por parte del alumnado extranjero (Domenech, 2004), lo que supone un desafío permanente respecto a inclusión de la diversidad cultural en los procesos escolares y su transferencia a la cotidianidad (Essomba, 2014; Palaudàrias, 2007).

Las relaciones entre sujetos de distinta procedencia y hábitos culturales se construyen de forma diferenciada en cada sitio, incluyendo diversas formas de discriminación y segregación (Chacón, 1997; Díaz, 2009; Jensen, Arnett, & McKenzie, 2011; Martínez, 1999; Martínez & Fernández, 2006; Molero, Navas, & Morales, 2001; Santamaría, 2002). Para Flecha y Puigvert (2002) existen tres enfoques para clasificar las formas de interacción y discriminación cultural: (a) etnocentrista, equivalente al racismo moderno, asume la superioridad y dominación intrínseca de una cultura sobre otra; (b) relativista, ligado al "racismo postmoderno", no admite superioridad de una cultura sobre otra, pero asume que hay diferencias culturales antagónicas que no permitirían una convivencia adecuada; (c) perspectiva comunicativa, plantea el interculturalismo como dinámica de relaciones, fomenta la "igualdad de diferencias" y no considera superior a ninguna etnia o cultura; así mismo se sustenta en principios democráticos y antirracistas. Es decir, propone transitar hacia una interculturalidad real, desarrollando un plano igualitario de interacciones (Aguado, 2011; Besalú, 2002), y un interculturalismo crítico de carácter emancipador y transformador (Tubino, 2004).

Inmigración, Deporte e Integración

Las prácticas deportivas son supra y transculturales, un espacio de convergencia con códigos universales (Contreras, 2002; Lleixà, 2002) que pueden favorecer los procesos de interacción social (Vianna & Livoslo, 2009), así como la integración de la población inmigrante (Müller & García, 2013), y las relaciones interculturales (Makarova & Herzog, 2014). Ello debido a su alto potencial de socialización cultural (Heinemann, 2002; Paredes & Reina, 2006) y el importante papel social que ocupa el deporte (Sánchez, 2010).

Por sus características intrínsecas, el deporte puede ser útil en el desarrollo de prácticas interculturales e interétnicas (Essomba, 2004). Favorece además la adquisición de nuevo capital social (Maza, 2004), facilitando los procesos de integración y el desarrollo de redes igualitarias (Pfister, 2004). Todo ello es posible porque tras esa aparente simple estructura de la actividad física, existe una enorme complejidad sociocultural que se sustenta en el lenguaje y simbolismo de la motricidad humana (Díaz, 2009).

Para Barker et al. (2013) es precipitado asumir al deporte como favorable para la interculturalidad, ya que puede ser utilizado con fines hegemónicos, condicionando negativamente las interrelaciones y la distribución de capital social (Sapaaij, 2012). Contreras (2002) afirma que la corporalidad de cada cultura obedece a espacios sociales específicos y será difícil desarrollar sus potencialidades fuera de ellos, mientras que Pfister (2004) considera trascendente tomar en cuenta los ideales corporales y valores culturales que cada grupo inmigrante entrega a este tipo de actividades, a fin de no producir rupturas con costumbres profundamente arraigadas. Frente a esto, Van Dijk (2003) manifiesta que el deporte debe colaborar en la construcción de discursos sociales implícitos que permitan superar estereotipos y prejuicios; para ello Ortí (2004) recomienda la utilización de juegos multi o interculturales, lo que implica introducir actividades con diverso origen cultural para promover un acercamiento recíproco (Bantulà, 2002).

A pesar de las aprensiones existentes, estudios muestran la efectividad del deporte como instrumento de integración social y escolar en espacios culturalmente diversos (Allen, Drane, Byon, & Richard, 2010; Ito, Nogawa, Kitamura, & Walker, 2011; Frisby, 2011; Hatzigeorgiadis et al., 2013;

Fuente & Herrero, 2012; Makarova & Herzog, 2014; McGinnity, Quinn, Kingston, & O'Connell, 2012; Sapaaij, 2012). Existe coincidencia respecto a que los métodos empleados o contextos de trabajo son determinantes; el deporte aumenta su potencial intercultural en entornos que promueven valores sociales y respeto mutuo (Hatzigeorgiadis et al., 2013; Li, Sotiriadou, & Auld, 2015), permitiendo la adquisición de capital social extrapolable fuera del deporte (Theebom, Schaillée, & Nols, 2012) y la adaptación a contextos con diversidad cultural (Allen et al., 2010); facilitando así la inclusión de colectivos inmigrantes (Tirone, Livingston, Miler, & Smith, 2010). Los programas deportivos comunitarios han demostrado ser efectivos para estos fines (Forde, Lee, Mills, & Frisby, 2015) siempre que se eviten segregaciones o las "automarginaciones" que puedan producirse (Makarova & Herzog, 2014).

Inmigración, Educación y Deporte

La participación inmigrante en programas deportivos extracurriculares posibilita un acercamiento con la población autóctona (Okamoto, Herda, & Hartzog, 2013), dando pie a mayores posibilidades de socialización con "diferentes" (Cherng, Turney, & Kao, 2014). Sin embargo una revisión realizada por Fernández, Ries, Huete y García (2013) muestra que hasta ahora la investigación sobre "inmigración, deporte y/o actividad física" se ha centrado preferentemente en aspectos relacionados con "rendimiento", "migración del talento" y "sociología", sin que la dimensión pedagógica/educativa del deporte sea un ámbito ampliamente estudiado.

La Educación Física (EF) contiene principios pedagógicos/formativos intrínsecos que no siempre posee el deporte, siendo un instrumento importante para desarrollar espacios educativos interculturales (Molina & Pastor, 2004; Ortí, 2004); por ello, muchos autores consideran a la EF y el deporte como herramientas para potenciar la integración e inclusión inmigrante (Contreras 2002; Díaz, 2009; Heinemann, 2002; Kenneth, 2006; Lleixà & Soler, 2004; Medina 2002; Molina & Pastor, 2004; Lleixà, 2002; Paredes & Reina, 2006; Pfister, 2004). Aunque se debe prestar atención a los posibles "choques culturales" cuando se enfrentan realidades culturales y corporales ajenas (Lleixà, 2002), por lo que Cuevas, Fernández y Pastor (2009) proponen que las iniciativas de éste tipo incorporen recíprocamente elementos de la otra cultura y su sistema de valores.

El *Deporte Escolar* tiene la posibilidad de cumplir un rol determinante en realidades escolares interculturales, mediante el desarrollo de valores socioeducativos relacionados con la diversidad, así como la ejecución de actividades con diverso origen cultural (Torralba, 2002). Para Blázquez (2010) ello es posible si el *Deporte Escolar* se focaliza efectivamente desde una óptica "educativa", es decir todo tipo de actividad física desarrollada durante el período escolar y en un contexto educativo que le permita ser complemento a la clase de EF. Soler, Flores y Prat (2012) creen que esto puede favorecer la participación de los estudiantes inmigrantes, aunque para ello se debe respetar: (a) la participación, (b) la transversalidad, y (c) la continuidad; además de contar con profesionales competentes en términos interculturales y educativos (Besalú, 2002; Soler, Flores, & Prat, 2012).

El Programa Integral de Deporte Escolar Municipal de Segovia (PIDEMSG)

El PIDEMSG se enmarca en un proyecto I+D+i que se desarrolla en colaboración del Excmo. Ayuntamiento de la ciudad y la Universidad de Valladolid. Ha sido creado mediante procesos participativos y su objetivo es desarrollar un proyecto de transformación social mediante un programa de deporte escolar, basándose en la enseñanza de valores y un modelo comprensivo. En dicha instancia participan niños con edades entre los 6 y 16 años (Manrique et al., 2011; Martínez, Pérez, & López, 2012).

Concretamente el PIDEMSG se desarrolla a lo largo de todo el año escolar en 24 centros educativos de la ciudad de Segovia y "barrios incorporados" (pueblos cercanos a la ciudad que actualmente forman parte del mismo municipio). El programa está organizado en 4 categorías para educación infantil y primaria ("Actividad Física Jugada", para 4-6 años; Pre-Benjamines, para 7-8 años; Benjamines para 9-10 años y Alevines para 11-12 años). Cuando se realizó este estudio, en cada centro se ejecutaban dos sesiones de entrenamiento (de una hora) por categoría a la semana, específicamente entre lunes y jueves, en horario extraescolar, justo después del periodo de comedor (de 16.00 a 17.00 horas en los centros que tienen jornada única, que son la mayoría).

Además, cada 2-3 semanas se celebraban "encuentros deportivos" para cada categoría. En los "encuentros" de los viernes se reunen los estudiantes que participan del programa en los diferentes centros educativos, lo que

permite desarrollar actividades con un número elevado de alumnos y realizar procesos de socialización más amplios. En dichos encuentros se realizan varios partidos, de corta duración, del deporte que se esté trabajando en ese momento dentro del programa, pero sin resultados oficiales, ni clasificaciones. Los equipos siempre tienen que ser mixtos y en muchas ocasiones, se mezclan jugadores de diferentes colegios. El PIDEMSG es polideportivo, por lo que a lo largo del curso se practican y aprenden diferentes deportes. Cada año se diseña un calendario específico por categorías, de modo que todos los grupos estén practicando paralelamente los mismos deportes mientras se desarrolla el programa.

Es evidente que éste programa posee características diferenciadoras que hacen interesante su seguimiento y evaluación, como sus fines formativos e inclusivos, que escapan a la lógica competitiva y la especialización temprana, adaptando las actividades a las capacidades y edades de los partícipes (Manrique et al, 2011). Estas singularidades han dado pie a diversos estudios sobre el propio programa (González, Manrique, & López, 2011; Gonzalo, López, & Monjas, 2014; Manrique, Gea, & Álvaro, 2011; Manrique et al., 2011; Martínez et al., 2012), Sin embargo, todavía no se ha realizado ningún estudio específico sobre el alumnado inmigrante que participa en el programa.

Parece necesario realizar estudios sobre programas de deporte escolar y alumnado inmigrante, entre ellos el PIDEMSG puede ser un escenario propicio para el desarrollo intercultural y procesos de inclusión social, debido a sus características pedagógicas. (González et al., 2011; Manrique et al., 2011).

Objeto de Estudio

El presente estudio analiza la integración del alumnado inmigrante en el PIDEMSG. Para ello se han establecido las siguientes preguntas de investigación a modo de objetivos (Stake, 2010):

- ¿Cómo se desarrollan las interacciones sociales entre el alumnado inmigrante y de qué forma estas afectan su proceso de integración?
- ¿Cómo se desarrollan las interacciones sociales entre el alumnado inmigrante y autóctono y de qué forma estas afectan al proceso de integración?

- ¿Cómo se desarrollan las interacciones sociales entre el alumnado inmigrante y los monitores del programa y de qué formas estas afectan al proceso de integración?
- ¿Existen conflictos culturales por parte del alumnado inmigrante dentro del contexto del PIDEMSG?
- ¿Cómo se desarrolla la participación interna de los alumnos inmigrantes dentro del programa?

Metodología

Diseño

Se realiza un estudio de casos de naturaleza etnográfica y paradigma interpretativo, que busca comprender el fenómeno estudiado desde la perspectiva de los implicados, a través de sus percepciones, ideas y motivaciones (Báez & De Tudela, 2012; Taylor & Bogdan, 2000). Se busca analizar y comprender el caso en su contexto y complejidad específica (Bisquerra, 2004; Stake, 2010; Yin, 2009).

Existen dos modalidades de estudio de casos que se ajustan a esta investigación: (a) el estudio intrínseco de casos**,** que busca alcanzar el mayor grado de comprensión del caso en sí mismo**;** y (b) el estudio colectivo de casos**,** que busca el estudio simultáneo de diversos casos, a fin de encontrar problemáticas globales que permitan posteriormente analizarlas de forma profunda (Stake, 2010).

Técnicas e Instrumentos

Se realizó un período de observación sistemática durante seis meses a once grupos de deporte escolar (118 niños en total), de las categorías Pre-benjamín, Benjamín y Alevín, con un foco específico en 68 niños inmigrantes (2 de ellos se sumaron una vez iniciado el curso). La observación fue de carácter directo y bajo el rol de "observador como participante" (Valles, 2014); es decir, un acceso al escenario investigativo sin la búsqueda de interacciones específicas, respondiendo sólo ante las iniciativas de interacción que pudiesen tener los actores hacia el investigador. Cabe resaltar que todo proceso de observación siempre irá

acompañado implícitamente de valores, ideas y representaciones personales que el investigador posea (Montañés, 2009).

En el PIDEMSG había un total de 64 grupos durante ese curso académico, distribuidos por categorías según se puede observar en la tabla 1. Pero se decidió trabajar con estos 11 grupos porque eran los que presentaban un mayor porcentaje de alumnado inmigrante en todo el programa. La procedencia de estos estudiantes era variada; aunque los grupos con mayor presencia provenían de: (a) Africa del Norte, (b) América Central, (c) América del Sur, (d) Asia, y (e) Europa Oriental.

Tabla 1

Número de grupos en función de las categorías y edades[1]

Categorias	**Pre-benjamín (7-8 años)**	**Benjamín (9-10 años)**	**Alevín (11-12 años)**	**Agrupados (unitarias)**	**Totales**
Nº de grupos totales	21	21	20	3	64
Nº de grupos observados	1	5	5	0	11

Se realizaron también nueve entrevistas en profundidad a informantes clave (ocho monitores y un coordinador de los grupos observados), así como ocho entrevistas de carácter colectivo a niños inmigrantes de cada grupo de deporte escolar (una entrevista por grupo), con el propósito de obtener información complementaria desde la propia óptica de los agentes estudiados. Los grupos fueron intencionadamente conformados por la misma cantidad de niñas y niños, sin embargo los integrantes fueron escogidos al azar. Las preguntas en éste último caso estuvieron centradas en temas relacionados con las cinco preguntas temáticas de la investigación. Las entrevistas se realizaron en un clima de confianza, lo que permitió diálogos extensos, distendidos y particulares basados en los objetivos investigativos.

Las observaciones fueron recogidas en una ficha de observación cualitativa (Figura 1) centrada en alumnado y monitores, instrumento que permitió realizar también análisis preliminares. Tanto las entrevistas, como las fichas fueron transcritas textualmente, siendo analizadas de forma paralela al trabajo de campo en primera instancia, a fin de que los datos

obtenidos en cada análisis sirvieran de guía y orientación al resto del proceso investigativo.

Grupo: GDE01		**Fecha:** día 12 – cuarto mes	**Monitor:**MDE02
Nº de niños: 6	**Nº niñas:** 1	**Nº de alumnos/as: Inmigrantes:** 6 niños	**Nº total:** 7
Observaciones Alumnos: -A04GDE01 es excluido a un costado del campo por la monitora casi comenzando la clase a causa de que este insultó a un compañero español en árabe. La monitora entendió lo que ha dicho. -Dos niños marroquís A01GDE01 y A02GDE01 hablan también en árabe durante el juego para que los demás no entiendan y así sacar ventajas tácticas (C.I. Así mismo lo han reconocido ellos una vez acabado el encuentro). -La única niña presente en el juego y única española en la clase pide constantemente el balón de rugby sin que sus compañeros se lo entreguen en todo lo que va transcurrido de juego. -Ya han transcurrido 30 minutos de clase y A04GDE01 sigue excluido fuera del campo, sin que la monitora le permita entrar al campo. -A04GDE01 entra al campo a dar de patadas (a modo de juego) a sus compañeros mientras ellos estiran y vuelve sentarse fuera del campo. - A04GDE01 se me acerca e intenta persuadirme de que convenza a la monitora de que le deje ingresar al campo a jugar, evidentemente yo no considero esta opción. -A07GDE01 tira un papel de caramelo en medio del campo, la monitora le llama la atención y le obliga a depositarlo en el basurero -A07GDE01 grita repentinamente desde el fondo de la cancha "sois todos unos tramposos", recoge sus pertenencias y amaga con que se irá del colegio. Finalmente todo queda en nada y regresa al campo. -Finalmente A04GDE01 se acerca a sus compañeros cuando estos están reunidos terminando la clase y pide disculpas por todo lo sucedido.			
Observaciones sobre aspectos relacionados al monitor: -MDE02 se ha mostrado inflexible con A04GDE01, lo mantuvo excluido un tercio de la clase a causa de su comportamiento.			
Comentarios y/o reflexiones: -No es primera vez que algún estudiante inmigrante se comunica con otro del mismo colectivo utilizando códigos o un idioma inentendible para el resto de sus compañeros. Este hecho es un factor que otorga un sentido de identidad colectiva y diferenciador para los alumnos inmigrantes en un medio cultural ajeno.			

Figura 1. Ejemplo pauta de observación

Análisis de Datos

Se lleva a cabo un "análisis de contenido" de los datos recogidos. Para Krippendorf (2002) este tipo de análisis corresponde a una técnica destinada a formular inferencias reproducibles y válidas que puedan aplicarse a su contexto. El análisis permitió formular categorías, para esto se utilizó el método de Taylor y Bogdan (2000), que implica tres fases: descubrimiento, codificación y relativización de los datos.

Algunas categorías emergen de preguntas investigativas previas al trabajo de campo (Etic). Otras surgen de la información recogida (Emic).

Tabla 2
Categorías definitivas de análisis

Categorías Etic	**Categorías Emic**
-Interacción entre inmigrantes	-Conflictos culturales
-Interacción entre autóctonos e inmigrantes	-Interacción entre monitores e inmigrantes
-Participación del alumnado inmigrante	

Criterios de Rigor Científico

Deben utilizarse criterios de rigor para que una investigación cualitativa sea considerada científica (Cornejo & Salas, 2011). Para ésta se han utilizado los siguientes (Lincoln, Lynham, & Guba, 2011): (a) credibilidad, a través de la observación sistemática durante 6 meses y la triangulación de los hallazgos investigativos; (b) transferibilidad, mediante la descripción densa del contexto y la población investigada; para proyectar el grado en que los resultados pueden ser extrapolables a otros escenarios; (c) dependencia, triangulación de técnicas e instrumentos de investigación y utilización recíproca de los mismos, asegurando la consistencia de los resultados; y (d) confirmabilidad, los intereses y limitaciones del investigador fueron expuestas desde un principio, sin embargo se procuró neutralidad, triangulando informantes, técnicas e instrumentos.

Implicaciones Ético Metodológicas

Son seis: (a) consentimiento informado de monitores y coordinador del PDE; (b) confidencialidad sobre sujetos observados y entrevistados; (c) informar a los participantes de los fines investigativos; (d) negociación constante entre el investigador, monitores y coordinador de las prácticas investigativas permitidas; (e) resguardo meticuloso de los datos; y (f) entrega del informe a los monitores, coordinadores y responsables del PIDEMSG.

Resultados

A continuación se presentan los resultados del estudio realizado, ordenados por categorías analíticas de tipo cualitativo. Se utilizan algunas citas literales extraídas del trabajo de campo, en las que se usan códigos de protección de identidad (tabla 3).

Tabla 3
Siglas y Códigos de protección de identidad[2]

Código	**Significado**
CDEXX	Coordinador programa deporte escolar
MDEXX	Monitor PDE
AXXGDEXX	Alumno de algún grupo del PDE
OBGDEXX	Nota observación diferentes grupos de deporte escolar
OBEDE	Nota observación encuentro de deporte escolar
C.I.	Comentario de investigador

Interacción entre Inmigrantes

Esta categoría analiza las distintas formas de relación existentes entre los niños inmigrantes (independientemente de su procedencia), las cuales escapan de forma distintiva a las interacciones que estos puedan tener con otros individuos, evidenciando identidad y códigos comunes.

En ocasiones los niños inmigrantes tienden a "automarginarse" del resto de los estudiantes y se unen como un colectivo de identidad compartida,

ello a pesar de poseer distintas nacionalidades. Los aspectos que caracterizan y diferencian las interacciones entre inmigrantes son: (a) formas para solucionar conflictos, (b) formas de comunicación, (c) lenguaje utilizado, y (d) aspectos conductuales.

Se observa la utilización de códigos diferenciados de comunicación en los diferentes sub-conjuntos de inmigrantes (Africa del Norte, América Central, América del Sur, Asia, Europa Oriental). Asimismo, el colectivo inmigrante y sus diferentes grupos internos no muestran una forma homogénea para resolver los conflictos que emergen entre ellos, sin embargo parte de este alumnado en ocasiones parece considerar como lícito y socialmente correcto optar por acciones de violencia física y/o verbal a la hora de resolver los conflictos que surgen:

> "Los niños de origen magrebí hablan constantemente en español [...], pero cada vez que han querido durante la clase decir algo en secreto para realizar algún tipo de acción y sacar ventajas en los juegos se han comunicado en su lengua nativa" (OBGDE01).

> "Un niño marroquí discute fuertemente con otro de origen dominicano, sus compañeros les instan a solucionar el problema mediante una pelea; ambos se amenazan hasta que interviene el monitor" (OBGDE03).

El ingreso de nuevos inmigrantes a los grupos de deporte escolar, deja entrever prácticas solidarias de acogida y empatía por parte de sus pares inmigrantes que ya se encontraban participando del programa. No se observa lo mismo cuando niños autóctonos inician su participación; ello da cuenta de que las interacciones y cohesión de los niños inmigrantes obedecen a particularidades que los distinguen como un grupo social cohesionado, conformado por individuos de identidad compartida y con redes de colaboración específicas.

> "La nueva niña marroquí (A13GDE02), es constantemente asistida por compañeros inmigrantes, [...], son pacientes con ella, le ofrecen reiteradamente ayuda y es defendida por los propios inmigrantes cuando otros compañeros españoles le gritan al equivocarse a causa de su inexperiencia"(OBGDE03).

La forma de resolver los conflictos y/o situaciones problemáticas es un ámbito en que parte del alumnado inmigrante muestra conductas que dificultan su integración, asumiendo dichas prácticas (violencia física y/o verbal) como lícitas y socialmente normales, lo que condiciona negativamente sus interrelaciones personales. Las interacciones entre los alumnos inmigrantes expresan algunos problemas de integración y condicionan la imagen de estos hacia el resto de los actores con los que interactúan. A pesar de ello, tanto en las sesiones de entrenamiento, como en los encuentros con otros centros, se interviene sistemáticamente ante este tipo de situaciones, enseñándoles a resolver los problemas de forma dialogada y sin conductas agresivas, posibilitando que el alumnado aprenda a resolver las situaciones que pudiesen limitar su integración.

Interacción entre Autóctonos e Inmigrantes

En este tipo de interacciones se manifiesta una relación entre sujetos de diferentes cosmovisiones y hábitos culturales, sin embargo hay grupos en los que existe una integración basada en la relación entre iguales, sin atender al origen cultural o la nacionalidad.

> "El grupo está compuesto mayoritariamente por inmigrantes, no se aprecian diferencias relevantes, ni preferencias respecto al origen de los alumnos al momento de las interacciones entre ellos. Los alumnos españoles e inmigrantes juegan en conjunto y participan en forma colectiva, sin apreciarse problemática o discriminación alguna" (OBGDE06).

Existen grupos minoritarios en los cuales la interacción de ambos colectivos da espacio a prácticas de carácter racista y etnocentrista que generan conflictos. Estas últimas situaciones son bidireccionales, es decir, ocurren tanto de autóctonos hacia inmigrantes, como también de forma inversa; sin embargo existen algunas diferencias respecto a los recursos y/o medios empleados en función de si emergen de un colectivo u otro. En el caso de los alumnos autóctonos, se observa que algunos de sus miembros emplean discursos y/o juicios peyorativos respecto a compañeros immigrantes. Ello también ocurre por parte del alumnado extranjero, sin embargo en algunas situaciones conflictivas, la violencia o insinuación de

la misma asoman también como una opción válida para la solución de algunas disputas. Cabe señalar que este tipo de situaciones negativas no fueron observadas en los grupos con monitores de mayor experiencia, lo cual muestra que no se trata de una constante, ni de una conducta generalizada.

> "Un niño grita: 'maldito moro dame el balón', con tono despectivo" (OBGDE03).

> "Discuten el niño español y el extranjero (A04GDE01) este último amenaza con darle de golpes. El niño español se retira mientras balbucea: 'éste está loco'" (OBGDE0).

> "Un niño centroamericano (A07GDE01) y otro español tuvieron una fuerte discusión a causa de una jugada que perjudicó al equipo de ambos. El monitor (MDE02) intervino estableciendo el diálogo como forma única de solución. Los dejó solos un momento, conversaron, se pidieron disculpas mutuamente [...] jugando finalmente hasta acabar la clase sin inconveniente alguno" (OBGDE01).

Los encuentros de deporte escolar se llevan a cabo los viernes por la tarde y reúnen a niños de diferentes centros escolares para realizar una serie de partidos, con normas modificadas y sin un registro de resultados, ni clasificaciones. Esto genera un escenario donde las interacciones sociales entre inmigrantes y extranjeros aumentan significativamente en términos cualitativos, favoreciendo la creación de nuevas redes sociales y la adquisición de capital social. Se trata de una aproximación entre iguales que no se daría sin la existencia del programa.

> "En deporte escolar he conocido nuevos amigos [...], incluso amigos de otros coles que antes no conocía [...], algunos son españoles, otros colombianos y de marruecos" (A08GDE02).

Durante los encuentros de los niños más pequeños (pre-benjamines, 6-8 años) no se observaron prácticas discriminatorias negativas entre ambos colectivos, sino que en todo momento hay una participación homogénea y una constante interacción entre niños inmigrantes y autóctonos. Esta

situación es posiblemente provocada debido a su temprana edad, en la cual la adquisición de técnicas culturales para relacionarse son más fáciles de alcanzar y la cultura de origen de los alumnos extranjeros se encuentra menos arraigada.

> "Dos niñas asiáticas y otras de origen marroquí (categoría pre-benjamín) juegan e interactúan de forma constante con sus compañeros y compañeras españolas, participan activamente de todos los juegos en forma igualitaria" (OBEDE).

Existe relación entre el tiempo que lleva el alumnado (meses, cursos) en el PIDEMSG, y el tipo de relaciones que construyen con sus pares inmigrantes y autóctonos; ello puede verse reflejado en las conductas que demuestran estudiantes de ambos colectivos hacia compañeros de otras culturas. Es decir, mientras menor es el tiempo que el alumno (extranjero o español) lleva asistiendo al programa, mayores situaciones problemáticas suele tener con miembros del otro colectivo, ocurriendo lo contrario entre aquellos que tienen una mayor "experiencia".

Existen dos posibles explicaciones: (a) el desconocimiento de la dinámica participativa y no competitiva del PIDEMSG, y (b) el proceso de comprensión de las normas de convivencia que regulan el funcionamiento del programa.

> "Todos los niños juegan juntos; el niño inmigrante nuevo de nacionalidad marroquí, se desespera cuando sus compañeros pierden el balón, les grita insultos y cuando les marcan un gol en contra grita con expresión de rabia" (OBEDE).

El contexto bajo el cual se desarrolla el PIDEMSG posee particularidades educativas intrínsecas, que fomentan la interacción entre sujetos de diferente procedencia cultural, así como el respeto por la diferencia y la colaboración entre ellos, de modo que posee un fuerte potencial integrador e inclusivo. Además el PIDEMSG fomenta la adquisición de capital social y la creación de nuevas redes sociales entre los alumnos inmigrantes y autóctonos, estableciendo un espacio de "igualdad de diferencias".

Conflictos Culturales

Los niños inmigrantes participes del PIDEMSG se ven sometidos ocasionalmente a situaciones culturalmente antagónicas, en relación a sus hábitos culturales y cosmovisiones de procedencia; desde complicaciones idiomáticas, hasta aspectos relacionados con costumbres sociales y religiosas, lo que condiciona el contexto a posibles conflictos. Las actividades realizadas en el programa obedecen en su totalidad a expresiones deportivas occidentalizadas, aunque practicadas en gran parte del mundo; sin embargo no se otorga espacio a juegos y/o actividades identitarias de las culturas de origen del alumnado inmigrante.

En grupos específicos, ocurren situaciones aisladas en las que se observa la existencia de una distancia cultural entre prácticas deportivas empleadas por el PIDEMSG, respecto a los saberes, tradiciones y creencias que poseen algunos estudiantes inmigrantes sobre el deporte. Ello se traduce en el distanciamiento y/o rechazo de éstos alumnos hacia algunas actividades por razones culturales (habitualmente de género). Por ejemplo, algunas niñas provenientes del norte de África, Europa Oriental y Centro América, a veces no participaban de actividades que ellas consideran exclusivamente masculinas.

> "[...] el monitor me comenta que cuando comienza el fútbol algunas niñas extranjeras dejan de asistir a deporte escolar". (OBGDE04)

> "[...] La niña marroquí (A01GDE02), que es la única inmigrante del grupo, se niega a participar del fútbol en la clase de hoy". (OBGDE02)

> "[...] pero te inventa cosas que no nos gustan, como jockey, rugby [...] son deportes raros para mi". (A03GDE03)

Las barreras idiomáticas no suelen ser un aspecto que obstaculice la participación, ni la interacción social, a pesar de ello puede ser un factor que desencadena situaciones confusas y desentendimiento. Las vías para intentar superar situaciones problemáticas evidencian conflictos relacionados con hábitos culturales arraigados, los cuales producen un

enfrentamiento de posiciones antagónicas al momento de pretender solucionar o culminar esas diferencias contractuales.

> "Él tenía otra forma de solucionar las cosas en su país, cuando no es de la forma que él cree conveniente surgirá el problema" (MDE001).

Interacción entre Monitores e Inmigrantes

Las interacciones entre monitores e inmigrantes, expresan comportamientos dispares en los diferentes centros y grupos. El tiempo de experiencia profesional que posee cada monitor parece ser determinante en las interacciones con los alumnos inmigrantes, más allá del número de extranjeros que compongan el grupo.

Un punto importante a considerar para explicar la naturaleza de las interacciones sociales y algunas desavenencias de alumnos inmigrantes con sus monitores es que, tanto estos últimos, como el coordinador de sus grupos de deporte escolar, afirman que no se les capacitan específicamente para atender la diversidad cultural. Esta escasa o nula preparación resulta preocupante y contraproducente, pues condiciona las competencias interculturales del monitor a la experiencia que vaya adquiriendo durante su permanencia en el programa; también genera disparidad respecto a cómo se construyen las interacciones sociales y culturales en cada grupo del PIDEMSG.

> "Cuando la monitora habla, los alumnos la escuchan respetuosamente, al igual que ella a estos, sin que se aprecien conflictos entre ambos" (OBGDE01).

> "El monitor todas las clases que han transcurrido tiene problemas con algún niño inmigrante, estos muchas veces no lo toman en cuenta" (OBGDE02).

> "Muchas veces utilizo en las estructuras de mis sesiones juegos a los que se juegan en otros países y los pueden enseñar los propios alumnos que tenemos en clases" (MDE01).

La baja presencia de prácticas deportivas asociadas a la cultura de origen de los inmigrantes no ayuda al mantenimiento y desarrollo de la misma. A pesar de ello, los monitores con mayor experiencia realizan por iniciativa propia algunas actividades que fomentan la práctica de juegos con diversa procedencias étnica y cultural, lo que permite mantener los rasgos culturales de origen y conocer expresiones culturales del "otro".

Entre los aspectos comunes que poseen las interacciones desarrolladas entre estos actores, podemos mencionar la baja indiferencia de los monitores frente a hechos relacionados con actitudes discriminatorias y/o racistas, independiente de si estas eran entre inmigrantes o entre inmigrantes y autóctonos. La mayor parte del tiempo existe un ambiente de convivencia positivo, basado en el respeto, en gran parte debido a la concepción pedagógica del programa:

> "El monitor escuchó el insulto del niño marroquí (A09GDE04), le instó a pedir disculpas" (OBGDE04).

> "Le dijo 'oye moro que tonto que eres, vete a tu país', el monitor se percató y lo separó por un momento del juego para conversar al respecto" (OBGDE02).

Existen altercados aislados entre monitores y algunos alumnos inmigrantes, la mayoría asociados a problemas de indisciplina, comunicación entre ambos actores o incompetencias interculturales de los monitores. Ejemplos de este tipo de conductas observadas son: (a) algunos estudiantes inmigrantes se niegan a acatar las reglas del juego, (b) desobedecen a los monitores, y (c) monitores con menor experiencia desconocen la cultura de origen de algunos alumnos. Tal como hemos visto anteriormente, este tipo de situaciones conflictivas suelen darse en mayor medida con los monitores que poseen menor experiencia en el programa.

> "[...] En éste grupo los niños cambian las reglas de la actividad, intentan jugar fútbol convencional [...] el monitor (novato) detiene todo lo que están haciendo" (OBGDE03).

> "[...] Un alumno (A02GDE03) desobedece en reiteradas oportunidades al monitor [...], hace caso omiso a las advertencias" (OBGDE03)

> ”Hoy el monitor (novato) no se ha comunicado con ninguno de los alumnos inmigrantes en toda la clase” (OBGDE03).

> “El monitor (novato) me comenta [...] no es fácil trabajar con grupos como éste, no puedo hacer todo lo que les guste, además no se como hacían las cosas en su país [...] a lo mejor allá creían que estaba bien resolver los problema así” (OBGDE03).

Participación del Alumnado Inmigrante

El alumnado inmigrante demuestra una alta participación en las sesiones de entrenamiento, aunque en grupos puntuales se produce una merma de la participación femenina cuando se desarrollan juegos que ellas consideran masculinos. La participación es inferior en los encuentros con otros centros, perdiendo dichos estudiantes una importante oportunidad de socialización e integración. Esto parece ser causado por razones motivacionales, familiares y/o por decisión de algún monitor. Esto último es un hecho aislado que sólo ha sido observado en un grupo de todos los investigados. Por el contrario, en varios encuentros los grupos de algunos centros estaban compuestos sólo por alumnos inmigrantes.

> “Los niños que no vienen a los encuentros es porque prefieren salir con amigos en el barrio o los padres les obligan a trabajar con ellos” (OBGDE04).

> “El monitor dice que lleva a los encuentros aquellos que tengan buen comportamiento” (OBGDE03).

> “Un grupo exclusivamente está compuesto por extranjeros, predomina la presencia de estudiantes de origen centroamericano y magrebí” (OBEDE).

Puede apreciarse que se supera la lógica de “integración diferenciada”. Es decir, los alumnos inmigrantes no son marginados por poseer un manejo poco avanzado de técnicas culturales de la sociedad de acogida (como el idioma), ni son puestos en grupos aparte para que las aprendan; sino más bien son integrados en el PIDEMSG, favoreciendo un proceso continuo de

inclusión, así como la comunicación directa con agentes y elementos culturales diversos. Sin embargo, muchas veces sus familias y/o grupos sociales cercanos prefieren que participen en otro tipo de actividades o instancias no deportivas.

Los niños inmigrantes que sí participan de los encuentros tienden a interactuar y participar de los juegos activamente, sin que se produzcan diferencias que pudieran limitar considerablemente su participación; al contrario, la mayoría demuestra una constante disposición a participar en las actividades realizadas, relacionándose abiertamente con alumnos de diferentes centros.

> "Las niñas y niños inmigrantes juegan y se relacionan activamente con todos sus compañeros, muchos de otros centros, no se observan problemáticas negativas, consiguen organizarse y participar de las decisiones en conjunto" (OBEDE).

Discusión

Los principales resultados del estudio evidencian que el PIDEMSG favorece los procesos de integración e inclusión social del alumnado inmigrante, además de promover espacios de comunicación intercultural y valores educativos asociados al respeto y valoración de la diversidad. Asimismo, se observa que los estudiantes inmigrantes tienden a desarrollar una identidad compartida como colectivo, empleando códigos comunes de interacción. Por otra parte, la participación de éste alumnado en el PIDEMSG, demuestra tener implicaciones positivas en el aumento de su capital social.

Aunque los resultados muestran que el programa parece ser un espacio que favorece la socialización entre el alumnado autóctono e inmigrante, también es cierto que surgen algunos conflictos y dificultades. Concretamente, existe tendencia a autosegregarse por parte del alumnado inmigrante en situaciones y casos concretos, así como algunas tensiones culturales asociadas a cuestiones de género frente a ciertas prácticas deportivas; siendo éste tipo de problemas más habituales en los grupos con monitores novatos.

El tiempo de experiencia en el programa parecer ser determinante, tanto en la construcción de relaciones positivas de monitores y alumnado

inmigrante, así como en las interacciones entre estos últimos y los estudiantes autóctonos. A mayor tiempo en el PIDEMSG, menor participación en interacciones de carácter negativo.

Los resultados asociados a la interacción entre autóctonos e inmigrantes son semejantes a estudios anteriores, en ellos también se asocia a las instancias deportivas con el desarrollo efectivo de socialización (Hatzigeorgiadis et al., 2013), cohesión social (Li et al., 2015), procesos de integración y desarrollo de relaciones interculturales (Makarova & Herzog, 2014) cuando se promueven valores sociales (Hatzigeorgiadis et al., 2013); siendo este último punto una característica del PIDEMSG (Manrique et al., 2011). Los resultados de ésta categoría coinciden también con lo expresado por Allen et al., (2010), quienes manifiestan que los colectivos inmigrantes pueden utilizar el deporte como vehículo para el mantenimiento de la identidad cultural. Además, el uso de códigos comunes y el desarrollo de nuevo vinculos sociales mostrado por el alumnado inmigrante del PIDEMSG, coindice con lo expresado por Heinemann (2002) y Theebom et al. (2012), quienes afirman que la adquisición de capital social de los inmigrantes aumenta participando en espacios deportivos.

Respecto a la categoría "Interacción entre autóctonos e inmigrantes", Vianna y Livoslo (2009) expresan que fenómenos como la "auto-segregación" esporádica mostrada por algunos inmigrantes del PIDEMSG puede limitar la interacción sociocultural que permiten las prácticas deportivas, lo que para Müller y García (2013) puede afectar negativamente la efectividad que tienen este tipo de instancias para promover procesos de integración. Para Lleixà (2002) lo antes mencionado ocurre porque los inmigrantes poseen una realidad corporal singular, con formas de expresión e interacción particulares. Los resultados muestran también que algunos grupos desarrollan esporádicamente prácticas etnocentristas (Flecha & Puigvert, 2002), acercándose a lo expresado por Barker et al. (2013), quien cuestiona la capacidad intrínseca del deporte para la socialización intercultural, dado que en ocasiones predominan relaciones hegemónicas y culturalistas en perjuicio de las minorías; Ello podría verse acentuado en contextos competitivos, ya que como expresa, Allen et al. (2010), pueden generarse conflictos a causa de los mecanismos excluyentes y elitistas del deporte, lo que a la postre pueden traducirse en prácticas discriminatorias y distribución desigual del capital social entre inmigrantes y autóctonos (Sapaaij, 2012). Sin embargo, el PIDEMSG puede

verse alejado de éste último punto, ya que no posee una lógica competitiva (Manrique et al., 2011).

En función de los resultados asociados a la interación entre estos dos colectivos, es que el PIDEMSG parece tener un enfoque comunicativo (Flecha & Puigvert, 2002), apostando por respetar la igualdad de diferencias y el diálogo como formas de acercamiento entre diferentes procedencias culturales; coincidiendo con lo señalado con diversos autores (Contreras, 2002; Díaz, 2009; Heinemann, 2002; Kenneth, 2006; Lleixà, 2002; Lleixà & Soler, 2004; Medina 2002; Molina & Pastor, 2004; Paredes & Reina, 2006; Pfister, 2004), que visualizan este tipo de actividades como espacios con alto potencial socializador, integrador e igualitario.

Respecto a los resultados asociados a "conflictos culturales", se observa que el PIDEMSG no contempla actividades deportivas identitarias de los países asociados al alumnado inmigrante, existiendo en ello discrepancia con lo planteado por Cuevas et al. (2009), así como por Torralba (2002), quienes consideran fundamental emplear dichos recursos desde una perspectiva intercultural, con el fin de evitar procesos de asimilación de la otra cultural en desmedro de la propia (Allen et al., 2010). En función de lo expresado por estos autores, sería recomendable prevenir prácticas "asimilatorias", para ello recomiendan promover el desarrollo de la cosmovisión cultural de origen en este tipo de instancias, mediante la incorporación de prácticas deportivas identitarias asociadas a la misma; fomentando el intercambio y enriquecimiento cultural mutuo, aspecto que aumentaría en este caso el sentido inclusivo e intercultural del programa. Sin embargo, es preciso señalar que el PIDEMSG opta por emplear mayoritariamente actividades deportivas supractulturales (Paredes & Reina, 2006), es decir conocidas en gran parte del mundo (no exclusivamente asociadas a una cultura), apostando por generar espacios de encuentro común. La trascendencia positiva que tiene el PIDEMSG sobre la adquisición de capital social y construcción de nuevas redes sociales, tanto para inmigrantes como para autóctonos, es evidente, coincidiendo con Cherng et al. (2014), quienes han comprobado que las actividades deportivas extracurriculares son importantes espacios de socialización e integración para el desarrollo de nuevas redes.

Asimismo, los conflictos culturales asociados a cuestiones de genéro, en los que algunas niñas inmigrantes se niegan a participar de ciertas actividades que consideran exclusivas para varones, para Pfister (2004) se

pueden asociar a la evitación de una posible desacreditación social en su entorno próximo, así como a tensiones frente a la imposición de ideales que rompen con aspectos profundamente arraigados sobre el cuerpo y el movimiento femenino en su cultura de orígen; conectandose directamente con lo expresado por Contreras (2002), quien manifiesta que la corporalidad de cada cultura tiene características partículares, las cuales son díficiles de desarrollar fuera de los espacios que no adscriben a la misma. Además, situaciones como la anteriormente descrita podría producir diferencias en la adqusición de capital social entre hombres y mujeres (Pfister, 2004; Theebom et al., 2012). Sin embargo, éste tipo de situaciones ocurrió sólo en algunos grupos específicos (con momitores de menos experiencia) y de forma aislada con algunas niñas, sin que se configure como una conducta o actitud constante.

En función de lo anterior, se puede expresar los resultados asociados a "Interacción entre monitores e inmigrantes" coinciden con lo manifestado por Soler et al. (2012), quienes consideran determinante la experiencia y las competencias interculturales de los profesionales encargados de éste tipo de actividades, puesto que precisamente los grupos con monitores de menor experiencia en el programa, son aquellos dónde se suscitan mayor cantidad de situaciones problemáticas y/o negativas entre éste actor y los estudiantes inmigrantes. Existe discrepancia respecto a la nula formación específica que reciben los monitores del programa en términos interculturales y lo expresado por Besalú (2002), quién manifiesta las dificultades existentes para que un espacio tenga realmente un enfoque intercultural si los profesionales encargados del mismo no están preparados para ello.

Los resultados asociados a la categoría "Participación del alumnado inmigrante" coindicen con lo planteado por Peguero (2011) y Okamoto et al. (2013), sobre como la participación del alumnado inmigrante en este tipo de instancias posee una relacción directa respecto a mayores posibilidades interacción e integración con la sociedad de acogida. Asimismo, la superación de la "integración diferenciada" que muestra el PIDEMSG, coincide con una revisión sistemática de Hatzigeorgiadis et al. (2013), que muestra como las instancias deportivas son un terreno idóneo para procesos de integración social por encima de otros escenarios sociales.

Conclusiones

La primera pregunta de investigación hacía referencia a cómo se desarrollan las interacciones sociales entre el alumnado inmigrante y de qué forma estas afectan su proceso de integración. Los resultados muestran que la interacción entre alumnos inmigrantes se desarrolla dentro de un marco de códigos comunes, tradiciones diversas (en función del lugar de origen) y el reconocimiento de una identidad compartida, a pesar de no tener todos la misma nacionalidad. Sin embargo, se puede observar una cohesión importante respecto a los "sub-colectivos" inmigrantes, los cuales están habitualmente conformados por estudiantes de procedencias similares y que suelen compartir una misma lengua (Sudamérica, Centro-América, África del Norte, etc.).

Respecto a la segunda pregunta, sobre cómo se desarrollan las interacciones sociales entre el alumnado inmigrante y autóctono y de qué forma estas afectan al proceso de integración; se ha podido comprobar que la diversidad cultural presente en el PIDEMSG conlleva como consecuencia múltiples cosmovisiones y costumbres socioculturales que se manifiestan por parte de los alumnos, tanto inmigrantes como autóctonos. Ello es una virtud, ya que posibilita una comunicación intercultural debido a las características del programa. Sin embargo en ocasiones también es una característica que genera conflictos, influidos en cierta media por el tiempo de antigüedad que el alumnado posea en el programa, o falta de ella. En general, en la inmensa mayoría de los casos estudiados, se puede observar que el PIDEMSG posee un alto potencial integrador, permitiendo una mayor aproximación entre pares en un ambiente distendido, en el cual la comunicación, los acuerdos y la participación del alumnado inmigrante forman parte continua del desarrollo de las sesiones. Es un espacio de transformación que brinda la oportunidad a todos de participar en igualdad de condiciones, sin importar procedencia, origen cultural o etnia y sin generar nuevos tipos de desigualdades entre ganadores y perdedores, sino que fomenta la participación, el acercamiento y la interacción constante entre iguales. Por otra parte, los deportes a la base del programa son de carácter supracultural, es decir practicados en gran parte del mundo, lo que permite generar espacios de interacción común e igualitaria. Ello es posible porque se sustentan en los códigos universales del deporte, donde el idioma, la nacionalidad pasan a un segundo plano.

Esto guarda relación con la tercera pregunta, referida a cómo se desarrollan las interacciones sociales entre el alumnado inmigrante y los monitores del programa y de qué formas estas afectan al proceso de integración. Los resultados parecen indicar que un factor determinante en el proceso de integración e interacción del alumnado inmigrante parece ser la experiencia profesional que posea el monitor encargado, ello demuestra tener mayor incidencia que el volumen de inmigrantes o autóctonos presentes en cada grupo, así como en los mejores procesos de integración entre el alumnado en dichos grupos. Sin embargo, los monitores no reciben capacitación para atender a la diversidad cultural; a pesar de ello, los que acumulan mayor experiencia en el programa sí realizan actividades que fomentan la práctica de juegos con diversa procedencia étnica y cultural.

La cuarta y quinta pregunta se centran en si existen conflictos culturales por parte del alumnado inmigrante dentro del contexto del PIDEMSG y en cómo se desarrolla la participación interna de los alumnos inmigrantes dentro del programa. Los resultados encontrados muestran que en los grupos de deporte escolar que presentan un alto porcentaje de alumnado inmigrante y monitores con menor experiencia, suelen producirse más situaciones conflictivas de carácter cultural con parte del alumnado, o bien tienen lugar situaciones en las que se observa una distancia cultural entre prácticas del PIDEMSG y aspectos asociados a la cultura de origen de los estudiantes inmigrantes. En algunos casos, parte del alumnado inmigrante muestra un cierto desinterés en actividades basadas en deportes poco próximos a la cultura de origen del alumnado, o bien, puntualmente, algunas alumnas muestran cierta resistencia a participar en actividades que ellas consideran claramente "masculinas" en su cultura de origen. Una posible línea de trabajo podría ser incluir actividades deportivas identitarias de países asociados al alumnado inmigrante. La realización de éste tipo de acciones depende de la decisión personal del monitor, sin conformar una práctica reglada dentro del programa. Sería recomendable incorporar aspectos relacionados con la atención a la diversidad cultural en la formación de los monitores, además de la adquisición de competencias y herramientas para el fomento de la interculturalidad.

Este trabajo puede ser interesante para el profesorado que trabaja con alumnado inmigrante, especialmente para los profesionales implicados en proyectos de iniciación deportiva, deporte escolar y actividades extraescolares. Como prospectiva futura, parece necesario realizar estudios

que investiguen la utilización de modelos semejantes al PIDEMSG, en otros contextos escolares con diversidad cultural.

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Notas

[1]En todas las categorías se desarrollan observaciones durante los encuentros que reunen a los centros educativos partícipes del programa
[2]El símbolo X es ser remplazado por los dígitos asignados a cada grupo o sujeto de forma individual, a fin de diferenciarlos entre sí mismos

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Assessment of the Knowledge of the Decimal Number System Exhibited by Students with Down Syndrome

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Assessment of the Knowledge of the Decimal Number System Exhibited by Students with Down Syndrome

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Abstract

This paper presents an assessment of the understanding of the decimal numeral system in students with Down Syndrome (DS). We followed a methodology based on a descriptive case study involving six students with DS. We used a framework of four constructs (counting, grouping, partitioning and numerical relationships) and five levels of thinking for each one. The results of this study indicate the variability of the six students in the five levels and in their mastery of the constructs. The grouping construct, which is essential to a proper development of the others, proved complex for the students. In general, we found that these students have a better procedural than conceptual understanding. However, the skills displayed by two of the students in the study group are encouraging with a view to advancing the number knowledge of these individuals.

Keywords: Down Syndrome, decimal numeral system, levels

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Evaluación del Conocimiento del Sistema de Numeración Decimal en Estudiantes con Síndrome de Down

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Resumen

Este artículo presenta una evaluación del conocimiento del sistema de numeración decimal en estudiantes con Síndrome de Down (DS). Seguimos una metodología basada en un estudio de caso descriptivo en el que participaron seis estudiantes con DS. Se utilizó un marco de cuatro constructos (conteo, agrupación, partición y relaciones numéricas) y cinco niveles de pensamiento para cada uno. Los resultados de este estudio indican la variabilidad de los seis estudiantes en los cinco niveles y en su dominio de los constructos. El constructo de agrupamiento, que es esencial para el adecuado desarrollo de los demás, resultó complejo para los estudiantes. En general, encontramos que estos estudiantes tienen una mejor comprensión procedimental que conceptual. Sin embargo, las habilidades mostradas por dos de los estudiantes de este grupo de estudio son alentadoras con vistas al avance en el conocimiento numérico de estas personas.

Palabras clave: Síndrome de Down, sistema de numeración decimal, niveles

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An understanding of the decimal number system can help people with Down Syndrome (DS) to develop more advanced mathematical skills (Lemons, Powell, King, & Davidson, 2015). Basic number skills are essential in their daily lives to finding a job and to achieving self-reliance and a good quality of life (Bird & Buckley, 2001).

There has been considerable research into how people without disabilities construct ideas involving the decimal number system. Some of this research points to the hardships present in the flexible use of multi-digit numbers and in learning place values (Baroody, 1990; Thomas, 2004). Predominant in the research on mathematical education in children with DS is that which analyses aspects on acquiring the concept of a number, such as cardinality and counting (Abdelhameed & Porter, 2006; Buckley, 2007), while there is little research on their understanding of the number system (Gaunt, Moni, & Jobling, 2012). Arithmetic and number skills are areas of particular difficulty for individuals with DS, but education has a positive influence on achievement levels in arithmetic (Nye, Buckley, & Bird, 2005). Some studies have analysed how high they can count and how effective they are when doing operations, but we have yet to find a study that considers the extent to which they understand multi-digit numbers. For example, whether they know and understand the notion of tens or hundreds, whether they group and ungroup tens in a way that lets them solve problems or if they can explain why one number is smaller than another.

In previous research on students with DS, we found that the mistakes made by students with DS when performing additions and subtractions reflected the little understanding they had of the place value of numbers, which impeded their ability to overcome these obstacles (Noda et al., 2011). The work we present herein evaluates the knowledge that six people with DS have of the decimal number system. This evaluation will help us to determine the weaknesses and strengths of this population in an effort to develop educational curricula that are suited to their cognitive characteristics and thus improve their learning of numbers.

Learning and Down Syndrome

People with DS have difficulty learning due to the changes that their trisomy causes to their brain structure and function. Not all people with DS exhibit the same cognitive ability since the brain impairment varies between

individuals. They do, however, share cognitive deficiencies that affect their learning, such as attention span, perception of stimuli, memory (short-and long-term) and language. A knowledge of these different characteristics associated with their behaviour phenotype is necessary to develop effective educational programmes (Lemons et al., 2015).

In general, they have the ability to learn but are inconsistent in how they acquire knowledge, a process that is slower than in children without disabilities (Fidler & Nadel, 2007).

People with DS have attention deficits, as manifested by their inconsistency when performing tasks, their inability to retain answers, a tendency to distraction, or performing movements that have no clear purpose (Lemons et al., 2015). This requires establishing specific interventions to improve these areas. Systematic, constant work targeted at this goal must be part of the educational curriculum for these students (Fidler & Nadel, 2007). Attention span is closely related to short-term, or working, memory, which enables the use of information for brief periods of time. People with DS have problems retaining and storing information for short periods of time and giving an immediate response to a mental or motor operation. As for stimulus perception, some studies have also shown that people with DS are better able to process visual instead of auditory information (Hodapp & Freeman, 2003).

People with DS also exhibit problems when transferring information from short to long-term memory, which stores life experiences, our knowledge of the world, images, the meanings of concepts and words and the relationships between these meanings, strategies for action, and so on. This requires a systematic and organised review of topics learned. Conners, Rosenquist, Arnett, Moore and Hume (2008) found that a home-based memory intervention instructed by parents (focusing on verbal rehearsal) leads to small but significant improvements in remembering numbers among children with DS.

Lastly, a trait of people with DS involves their difficulties with communication and language. The ones that are most evident in the language of people with DS are delay in acquiring vocabulary, a better level of receptive than expressive language, a reduced vocabulary, the use of shorter and less complex sentences, and difficulty organising their speech. These problems are bound to have a severe impact on their communications and learning skills. And yet, despite the speech and language problems they

exhibit, most people with DS are enthusiastically interactive in social settings, they make good use of their non-verbal skills, such as visual contact and facial expressions, and use gestures to make themselves understood when words fail them (Roizen, 2001).

Down Syndrome and Mathematics

Research into what mathematical concepts people with DS learn and how they learn them is scarce, especially in comparison with other disciplines, such as language, an area of learning in which researchers have made greater headway. Most of the research involving DS and mathematics has focused on basic number concepts, probably as these are essential to any subsequent knowledge of mathematics.

In the area of number knowledge, the results indicate that most youngsters and adults with DS do not achieve a basic level of competence. It has also been noted that they tend to lose their number skills faster over time than their language skills (Shepperdson, 1994).

Much of the research done on groups with DS is based on analysing counting principles; that is, abstraction, stable order, irrelevance in the order, one-to-one correspondence and cardinality. There is also research on how students with DS perform addition and subtraction operations that indicates they can be successful with addition problems by using specific counting techniques. Activities involving the counting of objects are therefore key to developing more advanced abilities in these students (Abdelhameed & Porter, 2006).

There are two alternative explanations of how the cardinal meanings of the first few number words are acquired. One states that these number words are learned through counting, while other studies highlight the role of subitization (Benoit, Lehalle, & Jouen, 2004). The role of subitization has not been adequately studied in populations with DS (Nye, Fluck, & Buckley, 2001). Thus, Sella, Lanfranchi and Zorzi (2013) found that children with DS showed a specific deficit in the discrimination of small numerosities (within the subitizing range) with respect to both mental and chronological age matched typically developing children. And Belacchi et al. (2014) found that students with DS were worse at estimating collections of points than students of the same mental age without disabilities.

People with DS exhibit problems handling abstractions, generalising procedures and applying the lessons learned in one situation to another (Bird & Buckley, 2001). This makes learning mathematics particularly complex. And yet research on the number abilities of people with DS has shown that many of the shortcomings detected are indicative of improper teaching methods (Porter, 1999). Some studies have demonstrated that the mathematical knowledge of this population can be advanced by using suitable methods. These methods mainly involve individually tailored learning sequences, extensive practice with a variety of tasks and support activities that rely on specific materials or computer-based learning (Gaunt et al., 2012; Ortega-Tudela & Gómez-Ariza, 2006). Other researchers have reported advances in the overall knowledge level of students with DS, and in their knowledge of mathematics in particular, when they are taught from an early age or they are integrated into ordinary schools (Turner, Alborz, & Gayle, 2008).

The Decimal Number System

The expression *number sense* appears in curricular documents, associated with the fact that number learning has to be an activity that "makes sense" (NCTM, 2000). Promoting it has become one of the goals of mathematical learning in various countries. Sowder (192) defined number sense as a well-organised conceptual network that allows relating numbers and operations, their properties and solving problems creatively and flexibly. An analysis of number sense has also appeared in research with students who have problems learning mathematics (Berch, 2005; Brigstocke et al., 2008; Gersten & Chard, 1999) from different perspectives, though normally it involves research on how numbers are first learned. There is a consensus in this research in noting how the development of number sense allows, on the one hand, for the early detection of potential problems with learning mathematics and, on the other, for designing approaches to teach mathematics to these students. We are involved in teaching/learning methods that present *number sense* to all students, whether or not they have learning difficulties.

The decimal number system is mastered slowly over the course of one's schooling through a carefully designed educational approach that takes into account the various principles that dictate its operation. One such principle

that must be understood is that of place value. Steffe, Cobb and Von Glasersfeld (1988) noted that an understanding of place value requires learning conceptual structures that lead to viewing 10 as one unit. These structures allow children to regard a set of 10 objects as one unit while maintaining its numerosity; that is, to view it as a *numerical composite unit*. The idea of an *abstract composite unit* is acquired later and is used to coordinate tens and ones.

Researchers have used different frameworks to develop an understanding of the decimal number system, suggesting that students must go through different hierarchical levels (Battista, 2012; Jones et al., 1996).

Jones et al. (1996) offer an approach for teaching and evaluating the decimal number system that involves five levels of thought. Each level addresses the four aforementioned components (*counting, grouping, partitioning* and *establishing number relationships*). Since there is no existing framework adapted for persons with DS, nor are we aware of any research that has delved into the decimal number system in this population, we opted to use a framework validated for people without disabilities, as has been done in early research into other areas of mathematics. In particular, the framework proposes a sequence of levels and is organised into four components that facilitate an evaluation of many mathematical aspects and allow for subsequent adaptation in small steps.

Counting is essential to learning the decimal number system. Students must progress with tasks, starting with counting by ones, and continuing on to counting on by ones, counting by tens and ones and counting on by tens and ones. Later it involves counting on or counting back by hundreds, tens and ones (Battista, 2012; Jones, et al. 1996).

An understanding of the decimal number system also requires mastering *numeric partition* (decomposing a number into the sum of smaller numbers) and *grouping* structures, which are inverse and dependent constructs. Bednarz and Janvier (1988) viewed grouping as the basis for recognising and constructing multi-digit numbers. This construct also includes numerical estimation.

Partitioning requires having stable and flexible grouping structures. Resnick (1983) distinguishes between a *unique partition* and a *multiple partition* of multi-digit numbers (*Unique partition*: 50+6; *multiple partition*: 56=30+26=16+40…).

When learning the decimal number system, it is important to establish *number relationships*, recognise the size of numbers and order them. A mastery of these concepts is indicative of a good understanding of the place value of digits. Understanding grouping structures and being able to partition can be used to order numbers using suitable strategies.

Below is a brief description of the framework in Jones et al. (1996).

Level 1. Pre-place value. *Use of individual units*. Use count all and/or count on strategies. Count informally by tens. Make numbers below 10 in different ways. Estimate amounts using groups as benchmarks. Count by fives and tens. Group to make counting easier and faster. Determine numbers greater/less than another that are no greater than 20. Order numbers less than 20.

Level 2. Initial place value (<10). *Initial understanding of the place value of figures, transition from individual use of ones to the use of tens as a unit*. Count groups of tens as if they were independent items. Form and count groups of tens and ones. Make multi-digit numbers in different ways, especially tens and ones. Estimate the number of objects in a group using the appropriate unit. Group by tens to make it quick and easy to check. Order two-digit numbers after exchanging the order of the ones. Order two-digit numbers close to and between tens.

Level 3. Developing place value (<100). *The use of two-digit numbers is extended to mental addition and subtraction*. Count on or back by tens, adding and subtracting. Count on or back by tens and ones, adding and subtracting. Make multi-digit numbers in different ways. Find the missing part of a number. Determine if the sum of two digits is within a given tens range. Order two-digit numbers. Order two-digit numbers after adding and exchanging the order of the ones.

Level 4. Extended place value (<1000). *Knowledge is expanded to three-digit numbers*. Count by hundreds, tens and ones, adding and subtracting. Make multi-digit numbers in different ways. Find the missing part of a number. Given a specific amount of tens and ones expressed verbally, determine the number without using materials. Determine if the sum of two three-digit numbers is more or less than a given number. Order two-digit numbers close to and between hundreds. Order multi-digit numbers exchanging the order of the hundreds.

Level 5 Essential place value. *Includes mental addition and subtraction problems with numbers up to 1000*. Count by hundreds, tens and ones to

add and subtract mentally. Make multi-digit numbers in different ways. Find the missing part of a number. Determine if the sum or subtraction of two two- or three-digit numbers is more or less than a given number. Given a specific number of hundreds, tens and ones expressed verbally, determine the number without using materials. Order multi-digit numbers, determining which of the two is closer to a third.

The study by Jones et al. (1996) evaluated each student's consistency individually by using components and the differences between children who were at different stages of learning. The findings show that the levels are hierarchical and that the four components are equally important when evaluating one's knowledge of multi-digit numbers. This framework, validated in students without disabilities, is used in this paper to evaluate the knowledge of students with DS. In Gaunt et al. (2012), a teaching program was implemented and used to improve the number skills of children with DS, and especially their understanding of the place value of numbers. This program was based on direct instruction and repeated practice and relied on specific materials and a selection of games. Notable among the findings is the importance of instruction tailored to the individual. They also highlight the need to conduct more research on this topic so that comparisons can be made among groups with DS.

Objectives and Methodology

The objectives of our research are two-fold:

- To evaluate the knowledge that students with DS have of the decimal number system and to rank it based on the five levels of the framework described by Jones et al. (1996).
- To analyse the skills and problems involved in the four components: counting, grouping, partitioning and numeric relationships in students with DS.

The type of data required by this evaluation involves presenting students with tasks that allow us to observe how they solve them and what their rationale is. The research was conducted using a descriptive case study model with students with DS who were interviewed individually. Six individuals with DS were selected, three adolescents and three adults. The three adolescents attend regular public secondary schools where they follow

inclusive education programmes with help outside the classroom at specific times.

The three adults are employed in work centres sponsored by the Tenerife Trisomy 21 Association (ATT21). The six students receive daily tutoring through this Association in different subjects, including mathematics (see Table 1).

Table 1
Characteristics of the six students with DS interviewed

	S1	**S2**	**S3**	**S4**	**S5**	**S6**
Age	16	16	17	25	26	36
Sex	F	M	F	F	F	F
Academic activity	Secondary School	Secondary School	Secondary School	Work Centre	Work Centre	Work Centre

This Association helps 50 individuals with DS, ranging in age from several months to 45 years, and with highly varied cognitive traits and academic knowledge. As a result, the selection of students was conditioned by the limited population and by three basic requirements for this research: that they have a minimum knowledge of two-digit numbers, an adequate ability to express mathematical ideas, and an understanding of oral and/or written language so as to respond to the tasks. The Association's teachers selected a small group of students of various ages, and the researchers opted to create two groups with the same number of students (teens and adults). The students selected, however, exhibited common cognitive traits: they were able to pay attention for 30-45 minutes, after which they tended to grow distracted, their answers relying more on intuition than understanding. The students also had no short-term memorization strategies and were better able to handle tasks requiring visual recall and auditory recognition.

The mathematical curriculum followed by the students involving number learning focused on natural numbers and their operations, especially addition and subtraction. The students were selected based on this number knowledge, the sole mathematical requirement being that they had worked with two-digit numbers. To complement this information we

asked them questions on reading and writing numbers, finding the number immediately before and after a given number, and addition and subtraction with and without regrouping. We started with single-digit exercises and increased the number of digits as more correct answers were offered. In the case of the additions and subtractions, the maximum number of digits was four. Table 2 shows the size of the numbers up to which correct answers were given for each set of problems.

Table 2
Number knowledge of the six students

Task	S1	S2	S3	S4	S5	S6
Writing numbers	3 digits	2 digits	2 digits	6 digits	6 digits	3 digits
Reading numbers	4 digits	3 digits	2 digits	6 digits	6 digits	3 digits
State nº. before and after	4 digits	2 digits	2 digits	2 digits	3 digits	2 digits
Add without regrouping	4 digits	4 digits	2 digits	4 digits	4 digits	4 digits
Subtract without regrouping	4 digits	1 digit	2 digits	4 digits	4 digits	4 digits
Add with regrouping	4 digits	No	No	4 digits	4 digits	4 digits
Subtract with regrouping	4 digits	No	No	No	4 digits	4 digits

The results show that their number skills are independent of age and exhibit differences between one another in terms of the size of the numbers. The strategy for carrying out operations was algorithmic with vertical operations. They were not accustomed to doing mental calculations. They were slow to perform the operations and had to use their fingers to aid them, except for S5, who had memorised basic number facts. This information helps to confirm that the six students could accomplish tasks from the various levels in the framework.

With the first questions, these students demonstrated an ability to read numbers with several digits and to operate with them. Previous research by the authors of this paper on students with DS analysed difficulties and

mistakes involving addition, subtraction and problem solving (Noda et al., 2011; González et al., 2015). In that research we found that the mistakes made by students with DS when adding and subtracting stemmed from a lack of conceptual understanding. That is why we initially thought that success in the first procedural tasks would not imply that they were at the corresponding level of the framework defined by Jones et al. (1996) with regard to the size of the numbers employed. Bear in mind that in this framework, the tasks require a conceptual understanding of the decimal number system. In other words, they may know numbers with up to four digits without necessarily understanding the conceptual meanings of tens or hundreds.

The interviews were conducted at the ATT21 Association and were video recorded. Each student had between three to five sessions, depending on the progress and the level of concentration demonstrated. The interviews were semi-structured, meaning a basic protocol was followed that allowed for additional questions if those asked were insufficient to evaluate the objective. We also repeated some of the questions to check whether a faulty answer was due to a problem with attention span, fatigue or understanding the problem statement. We did this by explaining the task once more but using different numbers.

The structure of the interviews took into consideration each student's different characteristics, mentioned in Section 2, in terms of attention span, perception of stimuli, short- and long-term memory and language. The tasks were given in written form and read out loud. Occasionally, the tasks had to be solved using specific materials (candies, pencils and coins), structured materials (interlocking blocks, Herbinière-Lebert material) and numbered playing cards. The tasks included oral problem statements that were explained using drawings. Session durations were adapted to the level of concentration exhibited by each student. Tasks were broken down into small steps with short and direct problem statements featuring simple words. The explanation of a task could be repeated, and the task itself repeated with other numbers.

The interview protocol designed to evaluate levels of thought included activities from all five levels for the four constructs. The activities were arranged by level, with a minimum of three activities for each construct per level. If a student answered most of a level's tasks correctly, the interview moved on to the tasks corresponding to the next level.

To validate the data we used the researcher triangulation method and an external audit conducted by colleagues. The data were analysed independently by the two researchers. The results were later contrasted by both researchers by watching the videos and the analysis protocol to combine the results. As for the external audit by colleagues, these results have been partially presented and discussed in seminars at the researchers' university and in various conferences (González et al., 2015).

When analyzing the data we took into account the previous theoretical framework that we had used as a reference to guide our research.

Results

We present the results arranged by level, noting the features that characterise the answers for each level, the progress made and the problems faced by the students and the reasons that led us to assign the students to each level. For each construct in the various levels, we show some of the tasks (see Appendix A. Example of task).

Level 1. Pre-Place Value

Students S3, S4 and S6 were able to count objects using numbers in sequential order, one by one, and exhibited a preference for the *count all* rather than the *count on* strategy. For example, when faced with task C1.1 (see Appendix A), student S6 counted all the blocks again, while students S3 and S4 counted on from a given amount.

They did not show a tendency to make groups nor did they use them to count when they were already made and not use partitioning strategies, meaning they did not decompose numbers less than 10, either using materials or symbolically. For task P1.1, the process used by these three students was to take pieces at random (10 and 3; 8 and 6; 7 and 4) and place them atop the 8, without noticing that they were greater. They showed no signs of looking for numbers less than 8.

Students S3, S4 and S6 understood the meaning of "bigger than" and "smaller than" when asked to give a number of objects, and distinguished between numbers larger or smaller than another number when asked graphically or in writing, but not orally (task R1.1). They had problems ordering numbers, however (task R1.2). Furthermore, they did not use tens

as a counting unit. As a result, their interviews did not continue on to level 2 tasks.

Student S2 exhibited a greater understanding of the tasks presented for the various constructs, and he continued on to level 2 tasks. When counting he used the *count all* and *count on* strategies, and resorted to counting by tens for some tasks, though on occasion he did not distinguish between tens and ones. For example, like when solving of task G1.2, he did not use pre-prepared groupings, but rather counted them out correctly by ones. And yet, when asked how much is 10 plus 10, he answered "20". When asked again to count the 23 blocks, he said "ten, twenty, thirty" (indicating the group of 3 as if it were another group of 10). He seemed to have memorised how to count by tens, but he applied it mechanically, letting himself be carried away by his impulsiveness. The student successfully completed the partitioning tasks, using partitioning strategies quickly, both material and symbolic. He relied on the strategy of always looking for numbers smaller than the one to be decomposed; he gave different ways of decomposing one number. He distinguished between numbers larger or smaller than another number when asked graphically or in writing, but not orally (task R1.1).

Students S1 and S5 successfully completed the tasks presented to evaluate level 1, and so were given the tasks for the next level. They counted informally by tens, used a coordinated tens-one approach and they demonstrated certain grouping structures. For example, student S5 when solving of task G1.2, said "ten and three makes thirteen", and afterward counted the other group of 10 by ones. When asked how she could count them faster, she repeated the process but instead counted the last 10 objects by threes: "ten plus three is thirteen, and three more sixteen, and three more nineteen, and three more twenty-two, plus one is twenty-three". Were able to make different partitions for a number smaller than 10, made comparisons using proper strategies and ordered numbers.

Level 2. Initial Place Value

Of the three students who underwent the level 2 evaluation (S1, S2 and S5) students S1 and S5 went on to the level 3 evaluation.

We placed student S2 somewhere between levels 1 and 2, since some of his answers did not surpass the level 1 indicators. Even though he showed some level 2 knowledge, he sometimes confused tens and ones in the

counting and grouping tasks. For part a) of task C2.2, he correctly counted by tens and ones using the *count all* strategy until he had to add the last ten (32 units), at which point he confused the ones with the tens: "Ten, twenty, thirty, forty and fifty". After being corrected, in part b) the student was asked "how much is there now?" after adding 3 units to 32, to which he replied "thirty-three, thirty-four, thirty-five", meaning he was back to regarding ones correctly. Student S2 had problems partitioning the larger numbers corresponding to this level. Although he showed signs of being able to do it, he did not exhibit good strategies and could not use the tens correctly as a unit for partitioning. When he picked the 45 card, S2 formed it with four cards of 10 and one of 5, meaning he decomposed it perfectly (task P2.1). However, when counting to check the result, he confused the tens and ones, saying "ten, twenty, thirty, forty and fifty". The number 24 appeared next, which he formed by adding cards of numbers under 10 and counting with his fingers until reaching 24. Student S2 ordered two-digit numbers when shown to him in writing, though he had problems inverting the ones place and ordering (task R2.1).

Students S1 counted by tens depending on the type of activity. In task C2.1, when shown the number 45 using the Herbinière-Lebert plates and asked to state the number represented, she recognised the 10 plates and said "ten, twenty, thirty, forty", from which point they counted the five remaining units. For task C2.2, when shown two units and adding ten, S1 *counted on* from 2, one by one, up to 12. When another ten was added, she once more *counted on* from 12, one by one, up to 22. She repeated the process when a third ten was added (up to 32). Student S1 was able to partition numbers below 100, although she did not adhere to the unique partition (into tens and ones); rather, she chose numbers with no apparent strategy and added them until the desired number was reached. For example, to partition the number 34 with the number cards (task P2.1), she used the partition 10+3+7+1+1+2+2+1+1+6, making the partition very lengthy. Students S1 ordered numbers below 100 and clearly distinguished between smaller and bigger. In task R2.1, student S1, when shown the numbers 61 and 67, inverted the units mentally and stated, "seventy-six is bigger than sixteen because seven is bigger than one".

Student S5 was flexible in her counting and partitioned numbers under 100 very confidently and used basic number facts in every activity involving this component. She manifested the use of the tens as a composite

unit. For example, with the number cards (task P2.1), she created the number 16 with 10+6; 24 with 10+10+4; and 58 with 10+10+10+10+10+8, and stated "five 10s and one 8". We judged the knowledge level of student S5 to be above the level 2 indicators since she successfully completed all the tasks, except for estimating amounts, which we ascribe to the fact that this is not a usual task for her. In task G2.1, she counted the 53 objects visually and said "there are thirty-five". To check her estimate, she used various groupings (by twos, fives, threes and tens), saying "two and four is six, and three makes nine…". She then continued by ones and by twos. When instructed to make groups to count faster, she started making groups of 10 (5 groups) and then counted by tens up to 53.

Level 3: Developing Place Value

Students S2 and S1 used similar reasoning for some constructs, like ordering and partitioning, but S1 seemed more confident and offered more reasoned replies, so we decided to evaluate her knowledge of level 3 constructs.

In the counting activities resorted to using the more basic *count all* strategy to count, evidence that student S1 had not yet acquired the abstract composite unit structure for the tens. In task C3.1, she recognised the 10 plates and pointing to them, said "ten, twenty, thirty, forty", after which she counted out the five remaining units. When asked to add 20, she needed to represent the new situation with the material and counted again from the start: "ten, twenty, thirty, forty, fifty, sixty and sixty-five". She used the same process with the remaining questions, which shows she has mastered level 2 counting concepts, but not level 3, since she cannot operate mentally with the tens as the abstract composite unit. With the more complex tasks, where they were presented with two kinds of numeric representations, like in task C3.2 for example, not process the two representations mentally, which is the method of operation for this level of thinking; first said that the number represented by the material was "fifty-six", and then wrote down the equation 56 + 12 = 68. Though she was able to do partitioning tasks in level 2, that was not the case in this level. For task P3.1, where they had to partition the number 37, she used a faulty rule that consisted of repeating the number in the tens place as many times as indicated in the ones place (37=30+30+30+30+30+30+30). Lastly, her answers to the ordering tasks

demonstrated an incomplete knowledge of the meaning of tens. This student's answers reveal the influence of the tasks and of the words used in those tasks. In task R3.1, when adding 2 tens to 43 she placed the number 2 to the left of the tens place, writing 243. When asked "What happens if you add two tens to 43?", she wrote 43+2=45, but then, when asked "what if you add 2 tens to 52?", she again wrote down 252, which demonstrates her confusion with the vocabulary associated with the decimal number system.

S5 possessed good knowledge of two-digit numbers and completed the tasks for this level correctly, though in some cases she preferred to write down the operations, instead of doing them mentally. We thus proceeded to test her at level 4. Student S5 was able to operate mentally using the tens as an abstract composite unit. For example in task C3.1, counted the first 10 plate by saying "two times five is ten" (multiplicative strategy), and then continued with the remaining plates, saying "ten, twenty, thirty, forty and forty-five". When asked the number that would result from adding 20, she calculated it mentally, stating that "four and two is six, so we have 65". She used the same process with the remaining questions; that is, she operated mentally, demonstrating the use of the tens as an abstract composite unit. On the other hand, recognised and effectively used multi-digit partitions and used basic numeric facts, though she could not do so mentally in every situation. For task P3.2, S5 used the tens as the counting unit, and visually and mentally answered that there were 10 units hidden. In task P3.3, she did not see 40 as a part of 65; instead, she correctly employed the subtraction algorithm. That is to say, she recognised and used the partition but did not compute it mentally in every case.

Level 4: Extended Place Value

Student S5 gave correct answers for many level 4 tasks, though in every construct she exhibited problems, which leads us to believe that she is in the process of building the skills attributed to level 4. S5 had troubles understanding the meaning of hundreds, tens and ones and the relationships between them so she could not determine how many tens there were in a three-digit number, identifying it only by the position it occupies in the written number. In other words, she does not always ascribe 10 tens or 100 ones as the numerosity of one hundred. For example, when shown a hundred using the Herbinière-Lebert material and asked "how many units

of 10 are there in this hundred?" she counted and replied "ten". When asked how many ones there were, she counted by tens and said "a hundred". However, when asked "how many tens are there in the hundreds plate", she said "zero tens". In other words, she indicated the digit occupying the tens place in the written number. Not use the hundreds or tens as the counting unit to give a mental reply, but instead resorted to writing the algorithm, she used this same method for the grouping and partitioning activities. In task G4.1 part a), when was asked to write 4 tens and 3 ones, she correctly wrote 43. For part b), she thought of 400 and replied "zero because four are hundreds". For question c) she stated 31, while for part d) she had to write out the equation, which she did correctly.

Was able to give different decompositions for numbers below 1000, she was not, however, able to see when hundreds, tens and ones can be combined mentally, having instead to write out the equation, as she did for task P4.2, where she directly wrote out the operation 462-342. Finally, the student S5 knew the number sequence for ordering, and she successfully completed those tasks requiring her to order various three-digit numbers. But her problems with the positional value of numbers kept her from correctly determining the distance between two quantities. In part a) of task R4.1, she only focused on the hundreds, ignoring the tens and ones, and answered "closer to three hundred, since in four hundred the hundreds place is bigger". For part b) she focused only on the hundreds and tens, ignored the ones and said "closer to 320 since in 330 the tens place is bigger".

Summary of the evaluation

Table 3, showing the profiles of the six students and their levels, is based on the results and on the analysis presented. The graph reflects the level of thought each one was capable of engaging in.

Table 3

Profiles of the levels of thought of the six students

	S1	**S2**	**S3**	**S4**	**S5**	**S6**
Age	N3	N2	N1	N1	N4	N1

Conclusions

In our research we used a framework consisting of five levels of thought, each one with four constructs, to evaluate the understanding that persons with DS have of the decimal number system. This framework, already validated for students without disabilities, has proven useful for evaluating the number knowledge of this population with DS. Jones et al. (1996) interviewed twelve students (six in 1st grade and six in 2nd grade) after concluding a teaching sequence that used the constructs and the different levels. At the end of the first year, one of the six students was at thinking level 5 (which is higher than that required for the curriculum of this academic year), one at level 4, one at level 3, two at level 2 and one at level 1, thus demonstrating the high variability in the levels. As for the six 2nd-grade students, the results were more homogeneous, with three at level 5, two at level 3, transitioning to 4, and one at level 2. Although the empirical data from the research by Jones et al. (1996) are not comparable to this study due to the age difference of the students and the type of study carried out, both research efforts involved a framework that is consistent in its constructs and hierarchy.

In our research, there was a variability in their understanding of multi-digit numbers that evidenced their individual differences. One possible explanation might be that their cognitive skills and behavioural characteristics lead to different ways to solve the tasks. Their numerical education could also play a role. Such is the case of student S5, who is at level 4 and who exhibited fewer deficits in attention span, perception, memory and language. This student exhibited greater concentration and motivation in the tasks, which resulted in fewer procedural mistakes. She also gave verbal explanations with certain agility and had a good grasp of basic number facts. This agrees with Lemons et al. (2014), who point to the clear need for increased of mathematics intervention research for people with DS that takes into account the behavioural phenotype.

As we had anticipated, these results show a gap between the ability to carry out numerical procedures (reading and writing numbers or writing addition and subtraction equations) and those tasks in which they have to take the initiative and determine what number knowledge is needed. For example, three of the six students used improper strategies to complete the level 1 partitioning tasks with numbers under 10 despite knowing the

numbers up to 100. It is characteristic of this population to engage in repetitive procedures, which is why open-ended activities with different solutions pose such a challenge to them, as reflected by the greater uncertainty in their answers.

The framework served to demonstrate the need to expand the number task curriculum taught to these students. We noted that counting is the predominant resource used to solve every task, to the detriment of other skills like estimating, grouping, partitioning and subitization. There has been little research on the role of subitization in populations with DS (Belacchi et al., 2014), though we did observe some students, like S5 and S2, use subitization for small sets, but the strategy was not used spontaneously by every student in our study. In fact we found that in one activity, they were able to recognise ten with the Herbinière-Lebert material without counting before resorting to counting all the units in the same activity.

The answers of the six students show that the skill of estimating is not developed in their learning, since they said numbers at random with no strategy to look for the most suitable quantity. Moreover, four of the six students did not show any inclination to group during the tasks for the various constructs, and often resorted to counting objects one by one. We do, however, agree with Jones et al. (1996) in thinking that the grouping construct is key to developing the other constructs.

The methodologies used for these students need to be changed so that more emphasis is given to those conceptual aspects that will help them further their understanding of the mathematics that follow. This would also improve their cognitive development (Lemons et al., 2015).

Another important observation with regard to this population is its problem with mentally manipulating multi-digit numbers. In the case of the students who have achieved levels 3 and 4 of thinking, whose progression to the higher levels was conditioned by this fact, we noticed that they were dependent on writing out equations to deal with those tasks in which they were expected to mentally manipulate two numbers. This aspect of the framework would require adaptation if it were to be used as a basis for developing a teaching-learning sequence.

The results of students S1 and S5 show how students with DS can advance their knowledge of the various constructs. Their reasoning is encouraging as they seek to further their understanding and achieve a

mastery of numbers that is not based solely on algorithms and memorisation. Our findings show that we must not put a cap on the knowledge of the decimal number system that can be attained by students with DS.

Lastly, the framework utilised in our research is not only useful for evaluating the knowledge that students with DS have of multi-digit numbers; it also provides a basis for creating teaching programs, an objective that we are currently putting into practice. As stated in Belacchi et al. (2014), individuals with DS can achieve good academic results if their strengths are recognised and developed. At the completion of the evaluation, the framework allows us to expand the number activities from the start of the learning process, emphasising the four constructs without prioritising the counting construct. The framework needs to be adapted to the estimation tasks and to those that require using numbers mentally. These aspects require a long-term learning process that teaches them to look for certain strategies not associated with routine procedures, something rarely seen in this population.

We started by working with level-1 students using tasks from the four constructs broken down into small steps using carefully worded language. We designed the tasks taking into account the strengths and weaknesses in their development profiles. We used activities with visual aids, and employed different materials (like arithmetic blocks and everyday objects), card and dice games with rules and computer games, which we then complemented with other activities involving paper cards and pencils. This was done because as the research shows, students with DS benefit from using a variety of materials familiar to them from everyday life to generalise acquired knowledge (Bird & Buckley, 2001). We worked with small groups of two or three students to encourage communication and the use of mathematical vocabulary between them and with their teachers, thus making use of their great social and imitative skills.

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Appendix A

Examples of Task

Task level 1.

Counting. C1.1.

Show a written number and say "give me this many blocks". Add 2 more and ask "How many are there now?"

Grouping. G1.2.

a) Arrange a group of 17 blocks in front of the student, grouped by fives and two single units, and ask how many there are.
b) Arrange a group of 23 blocks in front of the student, grouped by tens and three single units, and ask how many there are.

Partitioning. P1.1.

Give the student the piece for number 8 from the Herbinière-Lebert material and ask for different ways to get it.

Relationship and ordering. R1.1.

Write a number much bigger or much smaller than a given number.

Relationship and ordering. R1.2.

Order two or three numbers less than 20.

Task level 2.

C2.1. Counting.

Show a number represented using Herbinière-Lebert (45). "What amount is shown?"

Figure 1. Task C2.1

C2.2. Counting.

a) Show 2 units using Herbinière-Lebert (Figure 2). "What amount is shown?"

Add ten. "What amount is shown now?"

Repeat the process adding tens up to 32.

b) Add 3 units to the previous number (Figure3). "What amount is shown now?"

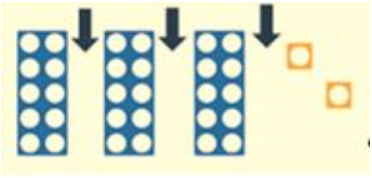

Figure 2. Task C2.2(1)

Figure 3. Task C2.2(2)

G2.1. Grouping.

a) Give student 53 blocks, "How many do you think there are?"
b) Ask student to check it. "How many are there?"

"What would you do to make it easier and faster to count them?"

P2.1. Partitioning.

Cards with the numbers from 1 to 10 are shown on the table.

Cards with two-digit numbers are placed face down in a pile: 24, 16, 45, etc. A card from the pile that is face down is chosen and its two digits revealed. The student must take cards from 1 to 10 whose sum equals the two-digit number just revealed.

R2.1. Relationship and ordering.

Show the student the written numbers 61 and 67 and ask, "Which is bigger?" Invert the order of the tens and ones. "Which is bigger now?"

Task level 3.

C3.1. Counting.

Show an Herbinière-Lebert representation of the number 45. "What amount is represented?"

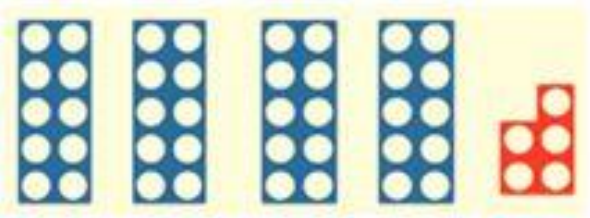

Figure 4. Task C3.1

"If you add 20, how much will you have?"
"If you now give me 10, how much will be left?"
"And if you give me 25 now, how much will be left?"

C3.2. Counting.

Show an amount in which one part is represented using Herbinière-Lebert material and another symbolically. "If 12 holes are covered up, how many are shown in total?

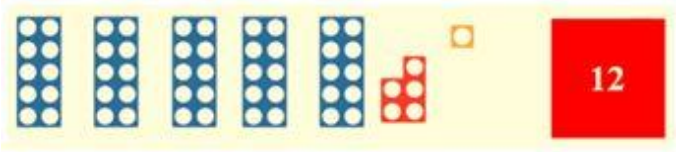

Figure 5. Task C3.2

P3.1. Partitioning.

"Decompose the number 37".

P3.2. Partitioning.

"There are 34 units shown with the Herbinière-Lebert material. A part is hidden under some paper. How many units are hidden?"

Figure 6. Task P3.2

P3.3. Example of partitioning tasks for Level 3.

"We're planning a birthday party. We have 40 balloons but we need 65. How many more balloons do we need?"

R3.1. Relationships and ordering.

Is the number 43 closer to 40, 50, 60 or 70?
If we add 2 tens to it, is it now closer to 40, 50, 60 or 70?

Task level 4.

G4.1. Grouping.

a) "What number is formed with 4 tens and 3 ones?"
b) "How many ones are there in 40 tens?"
c) "How many ones are there in 31 tens?"
d) "What number is formed with 31 tens and 12 ones?"

P4.2. Partitioning.

"There are 462 units in all. How many are hidden?"

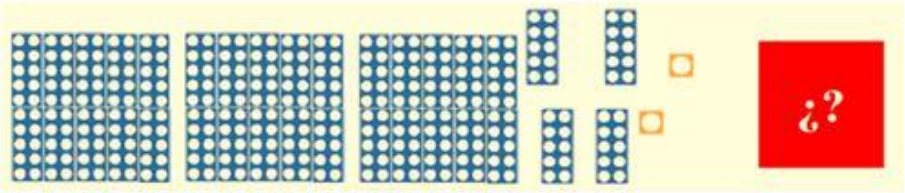

Figure 7. Task P4.2

R4.1. Relationship and ordering.

a) "Is the number 327 closer to 300 or 400?"
b) "Is it closer to 320 or 330?"

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The Influence of Occupational Socialization on Novice Teachers' Practical Knowledge, Confidence and Teaching in Physical Education

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The Influence of Occupational Socialization on Novice Teachers' Practical Knowledge, Confidence and Teaching in Physical Education

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Abstract

The purpose of this qualitative multiple-case study was to examine the influence of occupational socialization on three novice physical education teachers' practical knowledge, confidence in teaching content and enacted pedagogical practices. This study involved three novice teachers who taught in Finnish primary schools. Data sources included nonparticipant lesson observations and semi-structured in-depth teacher interviews. The analysis occurred in two phases. Initially, we created a case narrative for each teacher with respect to the research questions through an inductive process that integrated the occupational socialization theory. For the second phase, a cross-case analysis was completed to provide a comprehensive and in-depth understanding of the data set. Each teacher's occupational socialization experiences influenced their teaching confidence, planning practices and enacted pedagogical actions. In addition, the teacher education program experience extended their practical knowledge and was evident in their PE teaching. Therefore, in designing the pedagogical structure in teacher education, it is essential to consider pre-service teachers' experiences about teaching, schooling, sport and physical education and thereby strengthen their knowledge and skills of how to teach physical education and provide students with quality learning experiences.

Keywords: Physical Education, practical knowledge, occupational socialization, teacher education

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La Influencia de la Socialización Ocupacional en el Conocimiento Práctico, la Confianza y la Enseñanza en Maestros Noveles de Educación Física

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Resumen

El propósito de este estudio cualitativo de casos múltiples fue examinar la influencia de la socialización ocupacional en los conocimientos prácticos, la confianza en el contenido de la enseñanza y las prácticas pedagógicas promulgadas de tres profesores noveles de Educación Física que enseñaban en escuelas primarias finlandesas. Las fuentes de datos incluyeron observaciones no participantes y entrevistas semi-estructuradas en profundidad a maestros. El análisis se realizó en dos fases. Inicialmente, se creó un caso narrativo para cada profesor con respecto a las preguntas de investigación a través de un proceso inductivo que integró la teoría de la socialización ocupacional. Para la segunda fase, se completó un análisis de casos cruzados para proporcionar una comprensión completa y profunda del conjunto de datos. Las experiencias de socialización ocupacional de cada maestro influyeron en su confianza en la enseñanza, en las prácticas de planificación y en las acciones pedagógicas. Además, la experiencia del programa de formación docente amplió sus conocimientos prácticos y fue evidente en su enseñanza de EF. Por tanto, al diseñar la estructura pedagógica en la formación del profesorado, es esencial considerar las experiencias de los maestros en la enseñanza, la educación, el deporte y la EF y fortalecer así sus conocimientos y habilidades de cómo enseñar EF y proporcionar a los estudiantes experiencias de aprendizaje de calidad.

Palabras clave: Educación Física, conocimiento práctico, socialización ocupacional, formación de profesores

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Teachers' mental processes and their classroom actions affect each other reciprocally (Meijer, Verloop, & Beijaard, 2002). Therefore, in an attempt to understand teaching, researchers cannot restrict themselves to studying teachers' instructional practices, but should also focus on teachers' mental processes (Beijaard & Verloop, 1996). In addition, actual teaching will provide teachers with an opportunity to refine and clarify their mental processes (Johnston, 1992). Borg (2003) concluded that the educational community should be interested in understanding teachers' professional actions, not what or how they think in isolation of what they do. There is a call for a focus in teacher education (TE) on what teachers know and how that knowledge is constructed (Tsangaridou, 2006).

The term teacher knowledge has over time expanded and broadened significantly, with a growing focus on the personal aspects of knowledge (Ben-Peretz, 2011). While the practical context is also central (Black & Halliwell, 2000), researchers have focused on teachers' practical knowledge (Elbaz, 1981). Verloop, Van Driel and Meijer (2001) used practical knowledge as an overarching inclusive concept that includes a variety of mental processes from conscious and well-balanced opinions to unconscious and unreflected insights that underlie teachers' actions in practice. They pointed out that, "in the mind of the teacher, components of knowledge, beliefs, conceptions, and intuitions are inextricably intertwined" (p. 446). The main emphasis is on the complex totality of teacher's mental processes, where knowledge and beliefs are seen as inseparable, although beliefs are seen as a more personal component and refer to individual values, attitudes and ideologies, while knowledge as a content-related component with a focus on teacher's more factual propositions (Meijer et al., 2002; Witterholt, Goedhart, & Suhre, 2016).

Practical knowledge is that part of professional knowledge that guides daily and weekly interactions in classrooms (O'Sullivan & Deglau, 2006). Evidence in the PE literature suggests that central to teachers' work and their practical knowledge is a clear and deep understanding of the content being taught (Reuker, 2016; Schempp, Manross, Tan, & Fincher, 1998; Siedentop & Eldar, 1989; Siedentop, 2002; Ward, 2013). One special characteristic of the content knowledge (CK) in PE is that it includes not only theoretical knowledge but also personal performance skills in a specific sport or content area. Interestingly, CK mastery is typically acquired outside the TE program through a long history of participation in

sport and/or coaching (Siedentop & Eldar, 1989). There is concern in TE that when pre-service teachers enter a teacher preparation program with in-depth CK in only one or two sports (Kim, Lee, Ward, & Li, 2015) they will finish their program short of developing an adequate understanding of the content taught in school PE (Kim, 2016; Siedentop, 2002). Therefore, PE teachers often teach content outside their areas of expertise and sports where they lack personal performance skills (Reuker, 2016) or CK (Siedentop, 2002; Sinelnikov, Kim, Ward, Curtner-Smith, & Li, 2015). However, sport-specific knowledge and experience seems to be necessary but insufficient for good teaching; Reuker (2016) reported that athletes lacked the pedagogical knowledge necessary to teach their own sports. As noted before, CK is not enough; teachers need to implement content pedagogically. As Siedentop and Eldar (1989, p. 257) concluded, an "expert teacher combines high levels of teaching skill (the technical virtuosity component) with high levels of subject matter competence, both applied through experience to a particular context." Relevant CK is assumed to provide much of the basis for the development of pedagogical CK (Ayvazo & Ward, 2011; Graber, 1995; Siedentop, 2002; Rovegno, 1995). Ward, Kim, Ko and Li (2015) defined pedagogical CK in PE as teachers' understanding of what content to include and how it is to be instructed to specific students in particular contexts. The term helps to distinguish a teacher's own ability in a content area (e.g., throwing a ball or dribbling) from the knowledge of the skill that is needed in order to teach it to students (Rovegno, Chen, & Todorovich, 2003). The differences between CK and pedagogical CK should also be identified in TE, because during content courses with a focus mainly on pre-service teachers' performance skills in particular content areas or sports, more integrated activities are needed in developing pedagogical CK expertise as well (Kim et al., 2015; Sinelnikov et al., 2015; Tsangaridou, 2014). Recently, several studies have shown how improved teacher CK was recognized in more mature and enacted pedagogical CK, which in turn showed increased student learning (Kim, 2016; Sinelnikov et al., 2015; Ward et al., 2015).

Siedentop and Tannehill (2000) noted that PE teachers with a strong practical knowledge can convert their knowledge about the content into actual instructional practices in a complex situation. Thus, experienced and expert teachers have more completely developed schemata of teaching, a deeper understanding about typical classroom situations and students as

well as larger teaching repertoires that will help them in making instructional decisions (Reuker, 2016; Siedentop & Eldar, 1989). On the other hand, pre-service teachers had difficulties adapting instructions for their students and implementing appropriate teaching strategies (Graber, 1995; Rovegno, 1995). However, research evidence indicates that teachers have varying levels of practical knowledge, teaching behaviours and competence depending on their knowledge and experience of the specific content area being taught. In a seminal study, Schempp et al., (1998) reported that experienced teachers showed differences between their expert and non-expert content areas in recognizing problems in student learning, in the level of detail in planning and organizing subject matter, in the ability to accommodate all students and in their comfort with and enthusiasm for teaching. Siedentop and Eldar (1989) concluded that teachers felt more like experts in those activities in which they had strong backgrounds, and therefore expertise in teaching is highly specific to context and subject matter. Ayvazo and Ward (2011) also studied two teachers' expert and non-expert content areas and noted limitations in both CK and pedagogical CK in both teachers' weaker teaching unit despite their teaching experience.

Occupational Socialization Theory as Theoretical Framework

Teachers' practical knowledge has been acquired and developed during their life experiences as students in school, from other physical activity experiences, through their TE professional preparation programs and/or during their actual teaching in schools (Graber, 1995; Tsangaridou & O'Sullivan, 2003). Therefore, occupational socialization will serve as the theoretical framework in this study. Research in teacher socialization is generally focused on understanding the processes whereby an individual teacher becomes a contributing member of the society of teachers (Zeichner & Gore, 1990). Thus, teacher socialization research exposes the social, psychological and political dynamics of what it is like to be a PE teacher as well as agencies and mediators of socialization (Templin & Richards, 2014). Originating from teacher socialization theory more broadly (Lortie, 1975), occupational socialization theory (OST) represents one theoretical perspective that has been used to understand why teachers think about and teach PE as they do (Lawson, 1983a, 1983b; Schempp & Graber, 1992). Teacher socialization is conceptualized within a time-oriented continuum

represented by phases of acculturation, professional socialization and organizational socialization (Richards, Templin, & Graber, 2014). These phases reflect the influence of individual biographies before TE, teacher training in higher education and work socialization in the context of schools and are fully described and analysed in comprehensive research reviews (Pike & Fletcher, 2014; Richards et al., 2014; Schempp & Graber, 1992; Templin & Richards, 2014). The unique contextual features of schools and teaching ought to be recognized, even though the theoretical framework was originally based on the context of the United States (Pike & Fletcher; 2014; Richards, 2015). Therefore, research is needed outside the traditional arena to confirm or challenge existing findings.

Acculturation, or pre-TE socialization, begins at birth and reflects childhood and adolescent participation in and experiences of PE and sport with the influence of family, friends, teachers and coaches. Through an "apprenticeship of observation" (Lortie, 1975), individuals develop their beliefs, values and understandings of what it means to be a PE teacher (Schempp & Graber, 1992; Templin & Richards, 2014), and it is an important phase in the development of PE teachers. In general, those who enter the profession have had positive experiences of PE in school and are interested in and enjoy sport and physical activity (Capel, Hayes, Katene, & Velija, 2011).

Professional socialization begins when pre-service teachers enrol in a TE program, where, during the TE process, they are expected to gain PE knowledge, develop a professional identity and start to think and act as PE teachers in a school context (Pike & Fletcher, 2014; Templin & Schempp, 1989). Historically, many scholars have argued that physical education teacher education (PETE) is relatively ineffective in altering the beliefs of pre-service teachers (Pike & Fletcher, 2014; Templin & Richards, 2014), while other studies have shown a strong influence (Ingersoll, Jenkins, & Lux, 2014; MacPhail, Tannehill, & Goc Karp, 2013).

The next phase, organizational socialization, is the workplace socialization that occurs on the job and is ongoing throughout teachers' careers (Richards et al., 2014). Organizational socialization may work against change (Pike & Fletcher, 2014), while schools are often guided by unwritten and deeply embedded assumptions held by veterans and powerful teachers (Lawson, 1989; Schempp, Sparkes, & Templin, 1993). In particular, newly qualified teachers can meet induction problems in the

form of reality shock, marginalization, role conflict or isolation (Stroot & Whipple, 2003)

Based on OST, some recent studies have shown how deeply rooted personal life experiences are in both pre-service and in-service teachers during practical teaching in schools. While Flory and McCaughtry (2014) showed the strong influence of family values and cultural templates for PE teachers in urban schools, O'Leary, Longmore and Medcalf (2015) reported how all three stages of occupational socialization influence teacher development. As a fact, these were case studies with one to three teachers involved. Through another research approach, Adamakis and Zounhia (2016) studied pre-service teachers' beliefs regarding PE outcome goals with a cross-sectional questionnaire investigation. They concluded that the PETE program did not seem to affect their students' beliefs, nor was there an influence of their athletic level and time spent playing sports, which is both consistent and inconsistent with previous research.

It seems that the research methodology and the structure of PETE is central, when Hemphill Richards, Gaudreault and Templin (2015), through a case-based learning approach, demonstrated enhanced cognitive growth and enriched engagement and reflection in pre-service teachers. Ni Chroinin and Coulter (2012) also reported a change in pre-service teachers' understanding of PE and highlighted the alignment between the principles guiding the TE program and pre-service teachers' experiences. Nevertheless, all university-based work may not be valuable as such; rather, it is the connection to teaching in schools that was important for developing knowledge (Capel et al., 2011).

One area of less OST research is related to classroom pre- and in-service teachers for whom PETE consists of a few courses with minimal impact. Tsangaridou (2012) concluded that many primary school teachers have limited CK, do not have appropriate skills or knowledge for good PE teaching and do not feel confident teaching PE. Similarly, Elliot, Atencio, Campbell and Jess (2013) noted among non-specialist primary school teachers in Scotland that their early school experiences of PE formed their beliefs of the subject, influenced their teaching confidence and affected their PE teaching practices. Teachers also commented that TE did not adequately prepare them, which was partially related to limited time in PE-specific training. Deficits in classroom teachers' CK and teaching confidence have created a momentum in primary schools towards utilizing

sport coaches and physical education specialists in PE (Jones & Green, 2015). However, Jess, McEvilly and Carse (2016) noted that primary PE teachers had a diverse range of personal and professional backgrounds, thus resulting in significant differences in primary PE practices across schools.

Research from different countries during the TE phase has shown that pre-service teachers' personal school PE experiences and physically active backgrounds as students are linked to their perceived competence and attitudes towards teaching PE (Morgan & Bourke, 2008; Morgan & Hansen, 2008; Penttinen, 2003; Valtonen, Autio, Reunamo, & Ruismäki, 2012). In addition, acculturation from teaching and coaching experiences was also positively correlated with pre-service teachers' intentions to teach PE and perceived teaching strengths (Penttinen 2003; Valtonen, Reunamo, Hirvensalo, & Ruismäki, 2015). In addition, Kari (2016) reported recently with a follow-up study, that pre-service teachers' previous physical activity experiences were reflected in their development as PE teachers during the TE program. Teachers with a physically active history had a solid foundation of understanding and experience on which to construct new knowledge. Upon graduating from a five-year TE program, students felt they had PE CK and experience of teaching PE, which made them view themselves as experts in the teaching field. Looking back on the TE program, they appreciated the time they had for practicing their movement skills, which provided feelings of competence, learning and improved self-esteem, thus providing a foundation for a career teaching PE. Moreover, there are some promising findings indicating that meaningfully designed courses in classroom TE can positively change pre-service teachers' perceptions of their own preparedness, their identities as PE teachers and their self-efficacy for teaching PE (Fletcher, Mandigo, & Kosnik, 2013; Freak & Miller, 2015).

The purpose of this qualitative multiple-case study was to examine the influence of occupational socialization on three novice PE teachers' practical knowledge, confidence in teaching content and enacted pedagogical practices. In the study, we first examined teachers' occupational socialization, analysed their practical knowledge and confidence in teaching content and described their planning decisions and teaching actions. This enabled us to determine how their occupational socialization is represented in their practical knowledge, teaching confidence and enacted practices.

Methodology

Teacher knowledge can be conceptualized and investigated in several ways (Tsangaridou, 2006). Therefore, this study adopted a multiple-case study approach, which offers an in-depth understanding of teacher learning in its natural setting (Merriam, 1998; Yin, 2013) and highlights the individuality of teacher knowledge (Johnston, 1992). This qualitative approach will provide a holistic and comprehensive understanding of teacher socialization in it is context (Miles & Huberman, 1994). One important starting point for this study was that it is not possible to detect general features for teachers' practical knowledge, nor is the aim to formulate prescriptions for PE teachers (Verloop et al., 2001). However, what was observed in this study of teachers' practical knowledge represents a mixture of teacher outcomes and impressions acquired during phases of occupational socialization. Because it is impossible to distinguish perfectly between the three phases (Flory & McCaughtry, 2014, Elliot et al., 2014; O'Leary et al., 2015), it is unavoidable that the results can provide only a partial picture of teacher socialization.

Context

In Finland, teachers are required to have a master's degree, and teaching and research is emphasized in TE programs (Westbury, Hansén, Kansanen, & Björkvist, 2005). The main objective is to prepare teachers with a research orientation who are capable of independent problem-solving and have the capacity to utilize the most recent educational and subject-specific research (Finnish National Board of Education, 2014). Education is the major subject in the five-year classroom teachers' master's degree program. These three teachers were graduates from a Finnish University and had courses in language and communication studies, methods classes in various school subjects, and pedagogical studies. Their compulsory PE course (4 European Credit Transfer System [ECTS]) focused on the content and pedagogy of PE for primary school students. In addition, these three teachers elected to specialize in PE as their minor study (60 ECTS) and therefore also qualified as PE teachers in primary and middle school. The purpose to this specialization course is to provide preservice teachers in-

depth knowledge of the content and pedagogy in primary PE. More specifically, the course included topics as PE curriculum work, the instructional processes, curriculum models, student empowerment, fundamental movement skills, motor learning, physical activity and fitness, school in the society, dance, gymnastics, games and major sport for primary students. Furthermore, the TE program has a strong research-oriented component in pedagogical studies, and all students have to write both BA and MA theses. The TE program includes supervised teaching practice that starts in the first year and continues with student teaching during the final year. This teacher practice is mainly organized in the University Training School.

The national goals for PE are defined in the National Core Curriculum for Basic Education. According to these goals, primary PE has the general lifelong educational objective to have a positive impact on students' physical, psychological, social and affective growth and well-being and to guide each student towards a lifelong interest in physical activity (Finnish National Board of Education, 2004). More precisely, the subject aims are to enhance students' movement competency and motor skills, promote a physically active lifestyle and physical fitness, support responsible personal and social behaviour, promote appropriate values and promote enjoyment of self-expression (Yli-Piipari, 2014). Typically, primary PE is organized around multi-activity programs in a series of units with an emphasis on popular ball games (Heikinaro-Johansson & Telama, 2005; Palomäki & Heikinaro-Johansson, 2011). The Finnish PE curriculum is close to the Scandinavian model and similar to PE in other Western countries, although it includes activities characteristic to the Scandinavian context such as swimming, skiing, skating, orienteering and outdoor education (Annerstedt, 2008). Two PE lessons of 45 minutes are compulsory for all students at the primary level. The Finnish national curriculum leaves teaching decisions concerning activity selections and delivery to individual teachers and schools (Yli-Piipari, 2014). Primary PE lessons are taught either by the students' classroom teacher or by a classroom teacher specialized in PE. Although PE generally is a popular school subject (Palomäki & Heikinaro-Johansson, 2011), Lauritsalo, Sääkslahti and Rasku-Puttonen (2012) showed that messages posted on the Internet discussion forums frequently referred to negative experiences.

Participants

Three purposely selected (Patton, 2002) teachers were chosen because they were first-year teachers from the same TE program, had a dual qualification as both PE and classroom teachers, instructed PE and other subjects, had diverse physical activity backgrounds and together represented both genders. Each teacher was asked to identify a content area from the National Core Curriculum for Basic Education in which they had high teaching confidence and one area in which they had low confidence. They were told that confidentiality and anonymity procedures would be implemented in the study, and informed consent was obtained from all teachers.

Tom (pseudonym) was 27 years old at the time of this study and had graduated with a dual degree from a University as a classroom and PE teacher. He started to work as a classroom teacher with additional teaching responsibilities in PE in January 2015. Tom worked at a primary school, which has about 200 students. Tom was a classroom teacher in grade six and taught two PE lessons a week to boys in grade six and two lessons a week to boys in grade three. Tom chose Finnish baseball as his low-confidence sport and floorball as his high-confidence sport.

Nicole was 28 years old and had worked for one year as a teacher, as she had started in August 2014. She graduated from a University with a dual qualification as a classroom and PE teacher. Nicole worked at a primary school with about 200 students. Nicole was classroom teacher in grade two and she taught PE (eight lessons a week) to boys and girls in grades two and five and to girls in grades four and six. Nicole selected Finnish baseball as her low-confidence sport and gymnastics as her high-confidence sport.

Amanda was 25 years old and was still enrolled as a classroom and PE pre-service teacher at a University. She was in the final stages of her studies and was writing her master's thesis alongside her work. She had worked since August 2015 as a classroom teacher at a primary school with 354 students. Amanda was a classroom teacher in grade four and she taught PE (six lessons a week) to boys and girls in grades four, five and six. Amanda selected rhythmic gymnastics as her low-confidence sport and team handball as her high-confidence sport.

Data collection

Interviews and observations were used by the second author to gather data that indicated how the teachers' practical knowledge was represented in their teaching and how occupational socialization influenced their thinking and pedagogical practices. The purpose of nonparticipant observations during lesson was to provide the researcher a chance to "live" the lessons and compare teacher interviews with what actually took place. Direct observation allowed the researcher to gain a detailed understanding of how the teachers constructed their pedagogical practices (Patton, 2002). The observations followed standard guidelines for non-participant observation and the researchers sat in a corner of the teaching area, observing and taking field notes (Check & Schutt, 2012). The observations were non-participant because the observer did not interact with the teacher or the students during the lessons. Each teacher was observed teaching two lessons: one from the high-confidence unit and one from the low-confidence unit. Although unsystematic in nature, the observations were loosely based on Schempp's, Tan's and McCullick's (2002) study on expert teaching. During observation, the second researcher took detailed field notes about the goal of each lesson, the instructional strategies the teachers used, how the students responded to the activities, how the students and the teachers interacted and the characteristics of the PE learning environment. The observations provided glimpses into each teacher's practical knowledge as seen through the lens of the researcher. Observations of teachers' actions and students' behaviours served as starting points for informal interviews. Thus, the field notes from the lessons not only complimented the interview data, but they also provided an opportunity to analyse teachers' pedagogical actions in relation to their thoughts.

Interviews have been used in interpreting both teachers' practical knowledge (Beijaard & Verloop, 1996) and teacher socialization (Pike & Fletcher, 2014). One semi-structured interview took place after the completion of both observed lessons and provided an opportunity to gain in-depth responses. For example, broad categories of questions were related to information about the teachers' acculturation, professional socialization, organizational socialization, perceived teaching confidence and teacher planning and instruction. In addition, interview questions were based on field notes from lesson observations. All interviews were audiotaped and

transcribed verbatim. In addition, an informal interview was carried out at the end of each lesson. Detailed notes were recorded as soon as possible after each informal interview, which provided the researcher an opportunity to ask questions in order to clarify, explain, elaborate and discuss what happened during the lesson.

Data Analysis

Data were analysed inductively through individual-case and cross-case analysis (Patton, 2002; Yin, 2013). Interview and observation data were read carefully by both researchers to identify mutual themes and patterns in order to find common categories (Patton, 2002). The development of coding categories involved a repetitious process that entailed considering the relevant literature and exploring the interview data. The conceptual input from the literature was primarily informed by concepts related to OST and teachers' practical knowledge. Codes were defined to reflect the issues and with reference to notions in the conceptual framework. Consensus among researchers was achieved upon discussion of differences in coding and categorizing the themes. Due to the fact that the study involved three teachers, our data analysis started with an individual case analysis and was then completed with a cross-case analysis. For each case, a summary report was generated based on a within-case analysis of the coded data. In addition, a matrix was generated to provide a visual and evolutionary representation of each case (Miles & Huberman, 1994). Finally, a cross-case analysis was conducted that aimed to reveal similarities and differences and relationships between categories of data were identified.

Several steps were taken during the research process to maintain trustworthiness. First, the study procedure was made transparent to participating teachers at the beginning of the study (Lincoln & Guba, 1985). The triangulation of data sources involved the identification of similar data situated in both observations and interviews (Miles & Huberman, 1994). Although the teachers were aware of the purpose of the study, they were not informed of the focus of the observation. Therefore, they had no specific preparation, and their teaching was deemed authentic and naturalistic. Member checks were conducted formally during two stages. First, teachers received the field dairy of the observed lesson and the interview transcripts. Second, at the end they received a draft copy of their own case. None of the

three teachers suggested any major changes during either stage of the member check. The first author translated all quotes to English in a way that resembles the original as much as possible. Peer debriefing occurred multiple times to make sense of and challenge emerging categories.

Results and Discussion

Lawson (1986) defined occupational socialization as any kind of socialization that influences individuals to select PE teaching as a profession and which then affects their practical knowledge about teaching and their actions as physical educators. The purpose of this qualitative multiple-case study was to examine the influence of occupational socialization on three novice PE teachers' practical knowledge, confidence in teaching content and enacted pedagogical practices. Four themes were generated from the analysis of interview and observation data. These were given the titles of, "acculturation influence", "professional socialization", "content knowledge and competence", and "organizational socialization".

Acculturation Influence

All three teachers had mainly positive experiences in their PE lessons during their 12 years in school. As Tom said, "I always liked PE in school," and Nicole said, "In middle school I had a very good PE teacher who was versatile and skilled, so we practiced skill a lot but also played games." Although Amanda always liked PE, she explained that "I had no positive experiences in gymnastics while boys and girls were together in a large group with one [student] performing and everyone watching, low activity." Thus, they all enjoyed PE in school and remembered that PE was mostly about playing games with "terribly little skill practice" (Amanda). They recalled that a variety of sports was covered, but they especially remembered ball games, which both teachers (Morgan & Bourke, 2008; Ni Chroninn & Coulter, 2012) and students (Palomäki & Heikinaro-Johansson, 2011) typically report as the most frequent activity in PE. Morgan and Hansen (2008) concluded that teachers with positive experiences from PE tend to use the same content in their teaching as they themselves experienced during their own school days, while teachers with negative experiences avoid repeating own poor experiences in teaching. However,

up to this moment, none of these teachers implemented teaching strategies that they as students did not like during PE lessons. During the TE program they had understood what was inappropriate in PE, and "you realized rather fast when you started in the [TE] program, that NO, you can't keep on doing this" (Tom). They avoided repeating their own poor or inappropriate experiences such as having students pick teams and having one student perform in front of other students. Observations showed that teachers in ball lessons implemented instructional tasks with a focus on skill practice as well as tactical understanding and game play. In gymnastics, Nicole also created "stations with activities for different skill levels" (field note).

Tom's, Nicole's and Amanda's athletic backgrounds influenced how confident they were in teaching different sports, which also supports previous research where teachers' personal experiences had a direct relationship with their perceived confidence in teaching PE (Morgan & Bourke, 2008; Penttinen, 2003; Valtonen et al., 2012). All three teachers showed higher confidence in teaching sports and content areas where they had experience either through childhood and youth sport involvement or during TE, although they were most confident in sports in which they themselves had actively participated. Tom had played ice hockey at the highest level until he was 18 years old and he had high confidence in ice hockey and other invasion games. Nicole's high-confidence content area was gymnastics: "[I] had competed all my life and had been a coach already for ten years." Low-confidence content areas were mainly related to an individual lack of practical skills. As Amanda stated, "you are a less skilled athlete in that, so it also feels difficult to teach things [content] that you do not perform well in." Likewise, Morgans and Bourke's (2008) study showed that teachers were confident in teaching content in PE because of their personal experience in the specific area. Morgan and Hansen (2008) found that teachers felt least confident in teaching dance and gymnastics, which was also true for Tom and Amanda. However, Nicole was confident in teaching gymnastics and she had been a gymnast as well as a gymnastics coach. Siedentop and Eldar (1989) also reported that teachers feel like an expert in the activities where they have had extensive experience, and they stated that expertise is often linked to a particular topic or content. This is consistent with our results because all teachers perceived that they were experts in the sports in which they had the most experience and in which they had also competed.

These teachers have chosen teaching and teaching PE as their profession because of their interest in sport and a desire to transfer that interest to their students. Ralph and MacPhail (2015) also reported this as the main reason why individuals decide to enter the PE teaching profession. Tom indicated that he wanted to work with something he liked and was good at. "Sport has been a big pleasure for me," said Nicole, and therefore she wanted to have an impact on children's lives by teaching them the physical, psychological, social and health benefits of being active. Amanda also wanted to communicate her enjoyment of movement to children and thereby promote a physically active lifestyle, but she also noted her own interest and skills as a reason for becoming a PE teacher. Thus, early socialization influenced these teachers' choice to start a PETE program, which supports the OST (Lawson, 1986; Pike & Fletcher, 2014; Templin & Richards, 2014).

Professional Socialization

Although research has shown that teachers' previous experience has a stronger influence than formal TE itself (Adamakis & Zounhia, 2016; Capel et al., 2011; Elliot et al., 2013; Flory & McCaughtry, 2014; Morgan & Hansen, 2008), this was not the case for Tom, Nicole and Amanda. Our results support researchers reporting that TE can contribute to a deeper understanding of PE as a school subject and its relevance and significance for all children (Hemphill et al., 2015; Ingersoll et al., 2014; MacPhail et al., 2013). Although all teachers had a strong CK from their acculturation experiences at the beginning of TE, they developed their sport-specific CK and skills during the professional socialization phase, which in turn influenced their teaching and perceived confidence in various content areas. Amanda had learned "how to teach with task sheets and we did not just play games, but we practiced everything from skills to game play and all steps in between and how to structure teaching." Tom explained that he "learned technical skills and rules in different sports." Nicole pointed out: "I have learned a lot about basketball and I feel confident because of all the coursework, plus I'm a better player, plus I now know more about game strategy. When I started PETE being an athlete with a background in individual sports, it was difficult to know how to move on the court in team games." The teachers have also developed a deeper pedagogical understanding, which was reflected by Tom, who had learned "how to

organize and to try to give short and distinct instructions." In Finnish baseball, Tom "instructed the correct skill in throwing and explained that it is similar to overarm throwing in team handball, which they previously practiced' (field note). Similarly, Amanda "walks around [in the gym] and provides feedback: Look where you want to throw" (field note). Nicole showed a student-centred approach: when she "asks students how to throw a ball, they answer and Nicole confirms" (field note). Thus, their practical knowledge enacted in teaching developed both from a CK perspective and from a pedagogical CK perspective during TE (Reuker, 2016; Verloop et al., 2001).

These teachers explained how during TE they had learned that in PE teaching a variety of different content should be covered, and teaching ball games should include skill practice, game strategy and alternative game variations. Moreover, they have learned "that all students must be included and [that teachers should] try to achieve high student activity" (Tom); "to adapt teaching so that weak students can also be successful and those who are stronger can have challenges" (Nicole); and "how to teach in different ways" (Amanda). Ni Chroíníns and Coulter (2012) have also shown that pre-service teachers changed their views and beliefs about teaching PE during their TE program, and they included that the teachers had learned and developed despite their own school experiences of PE. During the professional socialization, these teachers had incorporated a different view where games and matches were not the only focus, and they considered the development of specific skills, strategies and techniques as more important, even though they perceived that PE teaching during their own PE mainly consisted of game play. Despite the general view that early school experiences have a stronger influence on socialization than TE (Elliot et al., 2013; Morgan & Hansen, 2008), it is quite clear that TE has had a strong influence on Tom, Nicole and Amanda.

All three teachers had developed sport-specific skills through combined practical content and methods courses (Schempp et al., 1993). CK and sport skills play a central role in their practical knowledge, while all three teachers believed that it is important to be able to demonstrate the tasks they teach. Nicole explained that it is an advantage to be able to demonstrate, and Tom said, "if you are skilled yourself [as a teacher] and you demonstrate a skill and then they [students] are like "wow," I also want to learn." However, they also recognized the possibility that a student could

demonstrate a skill. Nicole "asked for a student volunteer to demonstrate, while during student demonstration she corrects the performance and similarly supports the student" (field note). Amanda also noted that "sometimes I have a student to demonstrate so that I do not always demonstrate, and sometimes I use a student because I know they are better than me." These examples of practical knowledge showed how novice teachers' instructional actions are also contextually embedded in the particular situation and based on a mixture of beliefs, knowledge and experience (O'Sullivan & Deglau, 2006; Siedentop & Tannehill, 2000; Verloop et al., 2001).

Tom learned during professional socialization that teaching ball games in PE should not only consist of students playing regular games; rather, the students should also learn something. Although his own experiences from PE mainly consisted of game play (Elliot et al., 2013; Morgan & Hansen, 2008), he now elected to teach both technical skills and game strategies. Additionally, Tom implemented curriculum models that he had learned during PETE (Deenihan & MacPhail, 2013). He taught games and game strategies by applying Teaching Games for Understanding (TGfU) and believed that students learned game strategies through a cycle of playing, pausing, discussing and playing again. He typically "starts to play games and then they [students] notice that we don't know the rules, where to stand, and how to hit or kick, so that is a good motivator." Furthermore, Tom implemented the Sport Education model in order to develop students' social skills and to teach students responsibility and leadership skills. During the Sport Education lesson in floorball, "Tom reminds students to give positive feedback to each other when he notices that they start whining" (field note). He indicated that professional socialization had influenced him to challenge students by empowering them and giving them responsibility. Nicole was also teaching a Sport Education unit to her sixth grade class, and "it looks really promising at the moment and that [Sport Education] is something I have learned directly from my TE [program]." Amanda was not familiar with task sheets during her acculturation, but now she has recognized the benefit of using a variety of teaching strategies and methods. In invasion games, she used several small teams instead of two goals and one ball to increase student activity and learning.

Content Knowledge and Competence

Several researchers have pointed out the importance of teachers' CK and sports competency (Siedentop, 2002; Ward, 2013; Witterholt et al., 2016) as part of their practical knowledge, which also was evident for Tom, Nicole and Amanda. Here, both the acculturation and professional socialization phases were blended together to inform teachers' views on teaching PE in general and their perceived confidence in particular. In this process, relevant CK can provide a strong foundation for further development and the construction of new practical knowledge to be enacted in their instructional practices (Ayvazo & Ward, 2011; Kari, 2016; Siedentop, 2002). The issue of CK and their own performance skills need to be discussed from a PE perspective, and particularly at the primary PE level. Nicole was an expert in gymnastics through her athletic background and her long-term coaching experience, and Tom had extensive experience in ice hockey through his high level of involvement. How extensive CK is needed by PE teachers is not clear, since several studies have shown how student learning improved when teachers gained CK (Kim, 2016; Ward et al., 2015). Sinelnikov et al. (2015) reported similar learning results, but these novice teachers' own practical content performance was still sufficient for them to deliver appropriate instructions. Nicole and Tom had strong CK in a specific area, but as Nicole noted, "what I do as a coach and as a teacher is different." Tom also stated that "you don't take those tasks that you yourself have practiced at a national level, but select those tasks that any student can do and then adapt them a little." So it appears that expert CK is not needed in teaching primary PE, although it might have another function in supporting teacher status and confidence (Schempp et al., 1998). As Siedentop and Eldar (1989) have also concluded, many teachers teach quite effectively with moderate levels of competence in most of their content areas. These facts point towards a need for pedagogical knowledge (Reuker, 2016). Thus, during PETE Tom and Nicole had completed courses where content and methods were blended to a didactical mixture of knowledge. In addition, they had a master's degree in education with coursework in pedagogy and didactics as well as several sequences of student teaching (Westbury et al., 2005), which provided essential input into their practical knowledge for teaching PE.

Teachers' planning behaviours were also influenced by their acculturation and professional socialization. This was evident when teachers explained that planning was less time consuming for teaching content where they had high confidence. Since their perceived confidence in various sports was related to their personal experience with physical activity and in the TE program, it also influenced teacher planning. Tom said, "if I'm unconfident in a sport, I put much more time into reading and understanding it [the content] so that students think I'm an expert in that also." Low-confidence content requires more preparation, which in turn takes more time. As Nicole stated: "it was more time consuming to plan a floorball lesson than a lesson in gymnastics," which was her high-confidence sport. Teachers searched the Internet or went back to their study materials from PETE to find appropriate instructional tasks and to relearn rules. In a high-confidence sport, planning was less time consuming, as the teachers knew which tasks worked and were grade level appropriate. Amanda said that "I had to read about task progressions in forward rolls, but in floorball I did not have to read about how to shoot because I can do it [shoot]." The importance of CK received further support from Schempp et al. (1998), who found that subject expert teachers plan richer activities when they accommodate for classroom context.

All three teachers explained that it was easier to provide specific feedback in a sport in which they felt confident because they had deeper knowledge and more experience of the content. Tom explained that he tried to provide variable feedback and that that feedback had an impact on student learning. He continued, speaking about ice hockey: "as a previous player, you know exactly how to say that: use the outside edge and think about this and have a stick that you can lean against," while in teaching dance he would say "just go with as basic as possible." Nicole perceived that it was more difficult to give feedback in team sports because she did not have much experience in team sports. However, in Finnish baseball she "moves around and corrects, provides feedback and hints, she provides a lot of corrective feedback, feedback is related to hitting the ball" (field note). Giving feedback about tactical aspects during game play was a particular challenge because of her lack of experience with the game, though she could give specific feedback when students were practicing technical skills because she had mastered the skills. Similarly, Siedentop and Eldar (1989) also reported that a teacher felt that it was impossible to teach strategies in

invasion games based only on the knowledge from TE and with little personal experience in ball games. Amanda also found it difficult to provide feedback in gymnastics because of her lack of knowledge and personal competence. As she said: "for me, who has not seen it [the skill] so often, it is much more difficult to give feedback." As with planning, teachers' abilities to provide student feedback was influenced primarily by their physical activity backgrounds, although practical knowledge developed during TE provided an additional base on which to stand.

Organizational Socialization

While teachers wanted to implement and apply the curricular models they learned during TE, the influence of professional socialization needs to be recognized as a strong element in the occupational socialization process. No "wash out" effect was evident during the organizational socialization. These results are not in line with previous research on this persistent problem for newly qualified teachers (Schempp et al., 1993) and the low influence of TE (Adamakis & Zounhia, 2016; Morgan & Hansen, 2008). While Capel et al. (2011) argued that teachers tend to reject what they have learned during TE and return to the methods with which they were familiar during their own schooling, these three teachers implemented what they had learned such as TGfU, Sport Education, use of feedback, high student activity, individually adapted instruction and games played with small teams.

The lack of the typical "wash-out" effect might be explained by these teachers' dual qualification as classroom teachers and PE experts with high CK levels compared to all other classroom teachers in their schools (Elliot et al., 2013; Tsangaridou, 2012). In fact, they were therefore able to implement their practical knowledge from the acculturation and professional socialization phases without having to adapt to an existing and powerful old culture or to unproductive traditions (Lawson, 1986). When they were PE experts with rich CK and strong pedagogical knowledge that informed their practical knowledge, they could stand for their decisions related to their enacted instructional practices (Schempp et al., 1998). However, they had some concerns as first-year teachers (Stroot & Whipple, 2003), and everything was not easy as novice teachers, but these issues were not related to the pedagogy of teaching PE. As previous research has indicated, time was a limiting factor both in planning and teaching, but they

had also concerns about how to deal with non-teaching issues such as parents and extra-curricular sport competitions (Stroot & Whipple, 2003). However, these issues might be difficult to include in TE, and could rather be such understanding that teachers learn on the job. However, we feel confident that in a few years these teachers will also learn how to deal with these issues and become even more skilled and confident as teachers.

Conclusion

In summary, the results showed that occupational socialization during childhood and TE has influenced teachers' practical knowledge, perceived competence and planning and instruction in teaching PE. Teachers' physical activity and athletic backgrounds were particularly evident in how confident teachers perceived themselves to be in different content areas and also in teachers' planning behaviour and their ability to provide more detailed student feedback. Having active participation in a particular sport made teachers feel more confident in teaching that sport to their students. The professional socialization during a five-year TE program influenced their perceived confidence in various sports and changed what they know, what they are able to do and what they value about teaching PE. The practical content and methods courses have resulted in increased CK and competence, which they related to teaching confidence and the development of practical knowledge. In addition, teachers have developed a deeper understanding of the subject and a stronger ability to apply what they have learned in their day-to-day teaching. Previous research has shown that teachers' perceptions and experiences from their own school days have a stronger influence on their occupational socialization than TE and their own sporting background (Capel et al., 2011; Morgan & Hansen, 2008; Zeichner & Gore, 1990), which is not consistent with our results.

What was reported in this study of teachers' practical knowledge represents a mixture of TE outcomes and impressions acquired during acculturation. Because it is difficult to distinguish between the two sources completely (Flory & McCaughtry, 2014; Elliot et al., 2014; O'Leary et al., 2015), it is probable that the results can provide only a partial picture of formal TE. What is important is that we have provided some encouraging evidence to show that it is possible for novice teachers to overcome the constraints of "wash out". Nevertheless, the findings from this study

support practical skills and CK as a central part of PETE. Teachers need to know what to teach, and with strong CK teachers will gain confidence and enthusiasm as part of their identity as teachers (Kari, 2016). The CK coursework needs to integrate subject matter and methods though a variety of strategies including observations, analyses, reflections, lesson planning and peer teaching (Kim et al., 2015; Reuker, 2016; Tsangaridou, 2014). Our findings also highlight and add to the literature that each teacher has an individual acculturation history, which needs to be acknowledged in how TE is structured. At the moment, most TE programs are structured according to a "one-size-fits-all" approach, which means that all pre-service teachers have the same coursework. Therefore, teacher educators are encouraged to find ways to individualize the course structure to meet the needs of individual pre-service teachers. This study extends the literature related to OST into a different context. However, given the exploratory nature of this study and the relatively short duration, further work is necessary to support our findings from this multiple-case study approach. Whereas this study showed that TE can have an impact, we had no intensions to study this in particular. Therefore, more research is needed to investigate what parts help teachers to learn and develop during the socialization process and how they do so.

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Review I

Cortés, P., & Márquez, M. J. (Coords.). (2016). *Creatividad, Comunicación y Educación. Más allá de las fronteras del saber establecido.* Universidad de Málaga: Servicio de Publicaciones y Divulgación Científica. ISBN:9788497479646

Creatividad, Comunicación y Educación. Más allá de las fronteras del saber establecido, es una obra coordinada por Pablo Cortés y María Jesús Márquez en la que participan un elenco de personas de diferentes nacionalidades, profesiones y sensibilidades. Las diferentes aportaciones nos hacen transitar por temáticas, experiencias y realidades que nos (ob)ligan a (re)pensar los modos en cómo se puede y se debe trasgredir los límites "aparentemente" insalvables de una educación fuertemente cristalizada y opacada en la repetición, memorización, unificación y homogeneización.

Parecía casi imposible que esta obra pudiese ver la luz, sobre todo porque el proceso de construcción, elaboración y coordinación se topa, precisamente, con modos, tiempos y espacios que no acogen en su cotidianeidad otras formas de gestación y alumbramiento del hecho educativo. El reto de escribir sobre creatividad y sus formas de expresión y comunicación constriñe, en sí misma, la manera en como se da a conocer la experiencia o aportación creativa que ha acontecido en cada capítulo de este libro. Escribir sobre creatividad se torna un tanto complicado, limitado y casi siempre injustamente evidenciado. Crear, innovar, transformar, colaborar, dialogar… son verbos y acciones que acompañan inexorablemente a cualquier proceso creativo y comunicativo que contiene, al unísono, inspiración, silencios, goces, invención, búsquedas… y también debilidades, injusticias, sufrimientos, dolores, desequilibros… Es por ello, que a veces el texto no contiene todo lo que se quiere y se debe expresar del proceso creativo. Aún con esta dificultad, esta obra, precisamente, apuesta

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por mostrar y compartir, con algunas pinceladas teóricas y con relatos de experiencias, la fuerza desgarradora que aporta ser creadores y creativas en la propia vida, la apuesta ilimitada de aquellas personas que buscan más allá de lo establecido y las trasgresiones a las fronteras institucionales que levantan muros diarios en las relaciones humanas. Hablar o leer de creatividad en educación, la mayor parte de las veces, nos traslada a recetarios o pócimas mágicas sobre qué hacer o como llevar a cabo ciertas actividades. Pocas ocasiones nos vincula con lo que sucede o acontece en la persona, en sus relaciones y en su entorno, para hacer de ello una oportunidad para crecer y reivindicar su libertad, aún en medio de las dificultades y límites que la sociedad impone. Esta obra es una oportunidad para (re)encontrarnos con otras voces y experiencias que nos invitan a pensar reflexionar, construir y diseñar estrategias, en las cuáles, sean los propios sujetos los principales actores de su vidas y muestren aquello en lo que creen. Creatividad contiene en sí misma la acción de crear y dar vida en una misma y junto a los demás. De ahí que todos y cada uno de los capítulos -que invito a leer- son un espacio donde lo colectivo-personal, lo íntimo-público, lo afectivo-emocional, lo diverso-igual, el yo-ustedes… nos hacen contemplar el proceso creativo como acto resiliente, como acto transgresor. Actos que, como diría Eduardo Galeano en el libro de los abrazos, sólo nos llevan a dejar que quienes se acerquen a una de estas experiencias, a una de estas lucecitas, se enciendan y con ello alumbren enormes fueguitos creativos de otros y otras.

Dejarse llevar por la lectura de este monográfico os hará transitar, en un primer momento, por espacios conceptuales y reflexivos sobre la creatividad y el modo de prepararse para una nueva era; o sobre, ¿quieres cambiar la sociedad? sólo tenemos que crear un buen relato; al tiempo que te hará reflexionar sobre la estrecha relación que existe entre identidad resiliente e identidad creativa, o cómo la creatividad implica siempre una mirada crítica y un proyecto que nos habla de emancipación. En un segundo momento podrás realizar la andadura por diversas experiencias que hablan de: nuevos caminos pedagógicos de la interculturalidad y su tránsito hacia el activismo; cómo conjugar el pensamiento creativo y currículo escolar; abordar procesos educativos o momentos de aprendizaje con herramientas como: aprendizaje basado en problemas, coaching tutorial y metodología activa como herramientas creativas; o bien, como transitar otras caminos de enseñanza y aprendizaje desde la narrativa y creatividad

en la universidad. La parte final de esta andadura os hará vivir el tránsito de tres escenarios: La creatividad y metacognición como elementos promotores de resiliencia; Creatividad en personas con Síndrome asperger; y Creatividad compartida, narrativa de formación y transformación social.

Todo acto creativo y comunicativo en educación nos ha de llevar más allá de las fronteras del saber establecido, si no, estaremos muriendo en el intento de creer que educar es sólo cosa de dos.

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