ORIGINAL ARTICLE

A Multicultural Perspective on Play and Learning in Primary School

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Abstract   In the school's conception of learning, the cultural aspect of children's play has often been lacking. In different countries, it is emphasized that play is important for learning (Dockett and Fleer, Play and pedagogy in early childhood: Bending the rules. Harcourt Brace & Comp, Sydney, 1999; Lillemyr, Nordisk Pedagogik/Nordic Educational Research 22:38–52, 2002; Wood and Attfield, Play, learning and the early childhood curriculum, 2nd ed. Paul Chapman, London, 2005). Recent research has focused on social aspects and friendship as fundamental elements in learning activities. A sense of relatedness to culture is strongly linked to aspects of self-determination, respect, and sense of competence. The socio-cultural theory perspective is of special relevance in this concern, as presented in the theories of Vygotsky and Deci & Ryan (Deci and Ryan, In: Efficacy, agency, and self-esteem. Plenum Press, New York/London, 31–49, 1995; Vygotsky, Thought and language. The M.I.T. Press, Cambridge, 1986), as this perspective is essential in promoting motivation for all students, irrespective of background. In a cross-cultural research study of student groups in Australia, USA ,and Norway; the intention was to identify cultural profiles among student groups on their interests in play, learning preference, self-concept and motivational orientation, applying scales, and

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interviews. Similarities and differences were documented among Aboriginal, Navajo, and Sámi students, compared with non-indigenous (majority) students, in interest in free vs. directed play and learning, aspects of self-concept, and motivation. A tendency of indigenous students to favor a traditional, teacher-directed concept of learning was found, compared to non-Indigenous students. Furthermore, indigenous students had a significantly lower self-concept, compared to non-indigenous students (presented elsewhere, Lillemyr et al., Students' relatedness—a neglected aspect of motivation and learning? AARE International Conference in Brisbane, Queensland, Australia, 2009). In Norway, teachers of indigenous students used play to a lesser degree than teachers of majority students. Teachers in Arizona and Australia seldom used play in the classroom. Our research indicates friendship and sense of competence are important for students' motivation to participate and achieve in school, partly confirming results from other research studies. The authors found a sense of relatedness to be quintessential in this concern. Educational consequences for play and learning in multicultural early years' education are suggested.

Résumé L'aspect culturel du jeu chez l'enfant a souvent été absent de la conception scolaire de l'apprentissage. Dans différents pays, il est souligné que le jeu est important pour apprendre (Dockett & Fleer, 1999; Lillemyr, 2002; Wood & Attfield, 2005). De récentes recherches se sont concentrées sur les aspects sociaux et l'amitié comme éléments fondamentaux des activités d'apprentissage. Le sens de relation à la culture est fortement lié à l'auto-détermination, au respect et au sentiment de compétence. La théorie socioculturelle apporte une perspective particulièrement pertinente à cet égard, telle que présentée dans les théories de Vygotsky et Deci & Ryan (Deci and Ryan, 1995; Vygotsky, 1986),étant donné que cette perspective est essentielle à l'émergence de la motivation chez tous les élèves, indépendamment de leur origine. Une étude interculturelle de groupes d'élèves d'Australie, des États-Unis et de Norvège, avait comme intention d'identifier les profils culturels chez ces groupes d'élèves quant à leur intérêt pour le jeu, leurs préférences d'apprentissage, leur concept de soi et l'orientation de leur motivation, au moyen d'échelles et d'entrevues. Des ressemblances et différences ont été trouvées chez les élèves aborigènes, navajos et lapons, comparativement aux élèves non indigènes (majoritaires) relativement à l'intérêt pour le jeu et l'apprentissage libres contre dirigés et à des aspects du concept de soi et de la motivation. Les résultats montrent chez les élèves indigènes une tendance à favoriser l'enseignement traditionnel et l'apprentissage dirigé par un enseignant, comparativement aux élèves non indigènes. De plus, les élèves indigènes montrent un concept de soi significativement inférieur à celui des élèves non indigènes (résultats présentés dans Lillemyr et al. 2009). En Norvège, les enseignants d'élèves indigènes utilisent le jeu à un degré moindre que les enseignants d'élèves non indigènes. Les enseignants d'Arizona et d'Australie utilisent rarement le jeu en classe. Notre recherche indique que l'amitié et le sentiment de compétence sont importants pour la motivation des élèves à participer et réussir à l'école, ce qui confirme partiellement les résultats

d'autres études. Nous estimons que le sentiment d'appartenance est quintessentiel à cet égard. Nous suggérons qu'il y a des conséquences éducationnelles du jeu et de l'apprentissage dans les premières années d'éducation multiculturelle.

Mots-clés Intéret pour le jeu · Intéret pour l'apprentissage · Self-concept · Sentiment d'appertenance

Resumen Dentro del concepto de aprendizaje en la escuela, el aspecto cultural del juego infantil ha estado a menudo ausente. En diversos países se ha enfatizado que el juego es importante para el aprender (Dockett & Fleer, 1999; Lillemyr, 2002; Wood Attfield, 2005). Investigaciónes recientes en este tema han centrado su foco en la amistad y otros aspectos sociales como elementos fundamentales de la actividad del aprendizaje. Este sentido de coneccion a lo cultural se liga fuertemente a los aspectos de la autodeterminación, del respeto y del sentido de ser competente. La perspectiva de la teoría sociocultural es de especial relevancia en este sentido, según lo presentado en las teorías de Vygotsky y de Deci & Ryan (Deci y Ryan, 1995; Vygotsky, 1986). Esta perspectiva es fundamental en el fomento de la motivación de los alumnos independientemente de los orginenes de estos. En un estudio intercultural (tomando en uso escalas de registro y entrevistas) de grupos de alumnos en Australia, E.E.U.U. y Noruega, donde la intención del studio era: identificar perfiles culturales entre grupos de alumnos, tanto en sus intereses en el juego, preferencias en el modo del aprendizaje, concepto de sí mismos y la orientación de la motivación. Fueron documentadas similitudes y diferencias en los alumnos de origen aborígen, Navajo y Sámi, en comparacion con los alumnos no-indígenas pertenecientes a la mayoría de la poblacion; en el interes entre el juego libre versus juego organizado y la enseñanza, en aspectos del concepto de si mismos, y en la motivacion. Tambien fue encontrada una inclinacion entre los alumnos indígenas a favorecer un concepto tradicional del aprendizaje , con mayor grado de control por parte del maestro, en comparacion a los alumnos no-Indígenas. Además, los alumnos indígenas muestran en este estudio un concepto de sí mismo perceptiblemente más bajo, comparado a los alumnos no-indígenas (presentados en otro articulo por Lillemyr y otros 2009). En Noruega los maestros de alumnos indígenas usan el juego en forma menor que los maestros de los alumnos pertenecientes a la mayoria. Los maestros en Arizona y Australia usan escasamente el juego en la sala de clases. Nuestra investigación indica que la amistad y el sentido de capacidad son importantes para la motivación de los alumnos en su actuacion y participacion en la escuela, resultados en parte confirmados en otros estudios. En esta investigación encontramos que el sentido de la relación cultural y/o social es el aspecto mas significativo. Esto hace suponer consecuencias pedagógicas del juego y la enseñanza en la educación preescolar y los primeros años escolares.

Palabras clave Intereses en el juego · Intereses en el aprendizaje · Concepto de mismos · Sentido de la relacion

Introduction: A Socio-Cultural Perspective on Play and Learning

Theory and research have increasingly argued that social aspects such as friendship and sense of relatedness are fundamental in the development of cultural identity and learning (Ladd 2007). For these reasons, the socio-cultural theory perspective is particularly relevant in this research, as presented variously by Vygotsky (1986) and Deci and Ryan (2000). Play is considered an important arena for children in any culture (Huizinga 1955) and a crucial component in children's varied aspects of development (Singer et al. 2006). Nonetheless, the sources of play from real-life experiences will depend on cultural characteristics. In order for social learning to take place, social motivation is often needed to acquire intrinsic motivation. Play is an essential component in the socio-cultural theory of Vygotsky (1986) who argued that play is a vital element contributing to language development and conceptual meaning. In play situations, children stretch out to the proximal zone of development (ZpD) through the guidance of peers, or when guided by the educator. What a child is capable of doing with help from the teacher or a more experienced peer, has often been termed scaffolding (Berk and Winsler 1995). Through experiences in play, the child acquires social and cognitive capabilities important for learning, and will also develop a sense of relatedness. It is assumed that all individuals have a need for feelings of belonging to a group or culture, defined as a sense of relatedness (Deci and Ryan 1995). The authors think this need is well established through children's play, as it also should be in school learning. The point is that a strong sense of relatedness contributes to a strong intrinsic motivation in play and learning.

However, in relation to Vygotsky's theory, it is emphasized that the tools, interventions, and language of one culture may be significantly different from another, and so education must situate learning within the appropriate social and cultural contexts (Salomon and Perkins 1989). For example, among indigenous people, oral stories and tradition have a stronger meaning than among non-indigenous people (McInerney 2006). Emphasizing children's play, as relevant both for its own sake and for its relation to learning, as in a socio-cultural theory, means that the challenges of integrating indigenous and non-indigenous students in a majority education system have to be extensively problematized. In play, children take control and participate deliberately. In some cultures, observing and listening when participating in activities are part of that culture's tradition (Nystad 2003; Rogoff et al. 2003). In this sense, human development can be seen as a cultural process, with consequences for play and learning (Rogoff 2003).

A Broad Perspective on Learning

The relevance of play to learning and development has also been claimed by others (Bateson 2000; Levy 1978). The recent research literature has argued that children's play can promote learning (Brock et al. 2009; Singer et al. 2006). These perspectives are of relevance for early childhood education and care institutions (ECECs) when attempting to provide quality learning environments. Moreover, motivation and learning are interrelated not the least through the social aspects, especially in play (Lillemyr 2007; Rogers and Evans 2008). Since learning is central

to ECECs as well as primary schools, a *broad* perspective of learning seems reasonable, not the least in addressing the concept of life-long learning (Lillemyr et al. 2001; Wood and Attfield 2005). In Norway, reforms and changes in Acts and frameworks for ECECs and schools in recent years have addressed these trends (Ministry of Education and Research, 2006a, b). From one point of view, the reforms in Norway can be considered to be focusing on motivation, primarily because of the emphasis on children's play (Lillemyr 2002). The same tendencies attempting to include play to ensure children's engagement can be seen in countries such as Great Britain, Australia, and Sweden (Bennett et al. 1997; Dockett and Fleer 1999; Samuelsson and Carlsson 2003).

Based on research, it seems reasonable to assume that there would be a close relationship between children's interests in play and their interests in learning, and that these are closely related to self-concept and motivation (Lillemyr 2001). However, social aspects such as sense of relatedness often are neglected aspects of motivation and learning, even within socio-cultural perspectives (Reeve et al. 2004). For young children, social learning concerns relationships with friends and the extent to which they feel competent and related, as stated by Wentzel (1996, p 1):

> The social worlds of children are pervasive and influential part of their lives at school. Each day in class, children work to maintain and establish interpersonal relationships, they strive to develop social identities and a sense of belongingness, they observe and model social skills and standards of performance displayed by others, and they are rewarded for behaving in ways that are valued by teachers and peers.

The socio-cultural perspective of play and learning is important in all cultures, as children in all cultures seem to play. There is a system of mediating knowledge and skills from one generation to the next, although cultural differences can be found (Salili and Hoosain 2007; Samuelsson and Fleer 2008). However, it is a well-known fact that attitudes toward school learning vary considerably between cultural groups. In Brooker's interesting ethnographic investigation (Brooker 2002), the focus was directed on learning experiences in a small group of children in reception classes (4 year olds). It was found that children gradually adapt to school learning and develop learning cultures, and it was documented that the home and school learning environments are linked. Brooker focused on how social and cognitive gains define children's success as "pupils' or "learners." Providing all children with optimal chances to achieve was found to be a challenge. Ethnicity was a factor of importance in her study although from a general, multicultural point of view rather than an indigenous aspect. Brooker discusses the importance of inviting children to participate in class, as this will be repaid in many ways. Even though Brooker's research focuses on younger children than those in the present research study, it illustrates the complexity of researching learning in school in relation to quality.

A Research Project

"A Socio-Cultural Perspective on Play and Learning" has been an ongoing piece of research since 2001. In the project, we compare characteristic cultural profiles

among indigenous students (Aboriginal Australian, Navajo Indian, Sámi) and Western students (Anglo-Australian, Anglo-American, ethnic Norwegian[1]) regarding their interests in free and directed play, free and directed learning, aspects of self-concept, and motivational orientations (operationalizations, see under "Method" section). In this research the six cultural groups were defined as different socio-cultural groups, because they were characterized by social and cultural differences in terms of history, origin, language, relation to nature, traditions, and cultural identity, as these will be relevant for their sense of cultural community, and accordingly influence perception of ethnicity (McInerney and Van Etten 2002).

Do these various cultural groups have different attitudes toward school learning? To what extent is play an important central element? In this context students' endorsement of choice and sense of cultural relatedness were assumed to be essential, and the aspect of language was supposed to be important for their sense of cultural identity, in relation to learning and development. One important aim of the study was to examine differences between socio-cultural groups in the three countries, primarily between indigenous and non-indigenous groups. The Navajo people in the USA and the Sámi people in Norway account for about 1% of the country's population, and the Aborigines represent around 2% of the inhabitants of Australia. Motivation for school learning has been a challenge in all three countries, particularly among indigenous students. In this research the motivation perspective was a fundamental focus. The indigenous groups have been found to underachieve in school (Commonwealth of Australia 1995; Eckermann 1999; Nystad 2003), and the authors anticipated there would be differences between the indigenous and non-indigenous students in attitudes toward play and learning preferences, resulting from aspects of motivation and self-concept. The authors searched for insights into the reasons for this underachievement (see Lillemyr et al. 2009).

Even though Australia, Norway, and Arizona (USA) represent three different parts of the world, they all have indigenous people as minority groups, providing certain educational challenges (Craven 1999; McCarty 2002; The Sámi 2000). It has also been argued that they all represent a global perspective characterized by a struggle for recognition and self-determination (Duncan and Greymorning 1999, p 173). Even so, the three participating indigenous student groups were tied to the majority education system to varying degrees and in varying ways. The Norwegian samples were chosen as it was anticipated that there might be different preferences for play and learning among these two groups compared to the Australian and American groups (Ministry of Education, Research and Church 1997). The Norwegian Sámi students have their own Sámi curriculum guidelines and are taught in the Sámi language by Sámi teachers (Sámi Curriculum Guidelines 1997). In Australia the Aboriginal students attended mainstream schools, and in the USA, the Navajo students attended their own bilingual Navajo school (McCarty 2002). Furthermore, the indigenous languages are also endangered to a greater or lesser degree. So, the extent to which these indigenous languages were spoken varied

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[1] Ethnic Norwegians are understood to be Norwegians apart from indigenous and multicultural groups of Norwegians; as used in this article in the category "ethnic Norwegian students."

extensively in these three cultural groups. Differences between the indigenous student groups, as well as between indigenous and Western student groups were also anticipated.

Research Question

The research question specifically related to the focus of this article was as follows:

What are the similarities and differences between indigenous vs. non-indigenous student groups' interests in play (directed or free), learning preferences (directed or free), and interests in local cultural activities (directed or free), in Australia, Norway, and USA?

In this article, the perspectives of the student groups' interest in play and learning will be the major issue.

Method

General Approach

In this comparative research project, consisting of two studies, a combined approach was chosen as a triangulation benefit. In study 1, a selection of scales in a questionnaire to collect the third and fourth grade students' self-reported expressions of interests, sense of self-concept, and motivational orientations was found useful, based on Deci and Ryan's (2000) self-determination theory and Vygotsky's (1986) theory, as both emphasize *students' active participation* in school in relation to support of autonomy and guidance/scaffolding, respectively (see Lillemyr et al. 2004). In study 2, qualitative interviews of students were carried out with samples of the same categories of students as in study 1, to further advance search information about students' attitudes toward active participation in school learning, related to interests, self-concept, and motivational orientation. Teacher interviews about students' attitudes were intended to be supplementing findings of this study to student interviews. In the interviews, students were also asked about their use of language at home, compared to use of language at school. A cross-sectional approach was chosen, as the students participating in interviews were not the same ones as those who had answered the questionnaire a few years earlier. Methods of analyses chosen were cross-tabulations, *t*-tests and correlations, and Manova analyses (not all presented here), in addition to analyses of qualitative interviews. The questionnaire was administered in 2002–2004, and interviews were carried out in 2006–2007.

Methodological Challenges in Cross-Cultural Studies

A major challenge in cross-cultural studies is gaining access to the field. Throughout the history of research in social anthropology, sociology, and other subjects, researchers have encountered serious problems when trying to collect data in cultures different from their own. In the early study by Whyte (1965), he presents

his struggle and tactical solutions in the sociological classic *Street Corner Society* when studying youth culture and gang activities in a big city in the US. In our study, the authors were helped in gaining access to the schools by researchers who had previously carried out research in schools with indigenous students. Studies like ours are dependent on acceptance and support from people with the formal or informal power to allow researchers into the field. Over the years, some of our gate-openers and co-researchers had established close relations with schools with indigenous students. The question in some cross-cultural studies are not from *whom* you are going to get information, but *whether* there are people willing to give information to the researcher (Gran 2007, p 31).

Years of conflicts between a white majority and indigenous groups, as well as a long-lasting mistrust of all representatives of the majority culture in general, and possibly white researchers in particular, have been important restraining factors in cross-cultural research. On a wall in a museum in Sydney, one can read a text that claims that the Aboriginal Australians are one of the most studied indigenous groups in the world, but possibly the group that is the least understood. This means that many Aborigines may be skeptical about meeting white researchers. Over the years, there have been discussions about whether "insiders" or "outsiders" are best at analyzing data from ethnic groups. It has been argued that the important thing is not whether one is an insider or an outsider to the groups, but rather whether one is party to the inside or outside perspective of the particular political discourse (Siraj-Blatchford 1994, p 33). For this reason, our honesty to all parties, was our best weapon against bias in data collections and analyses.

Another challenge was to be able to communicate with indigenous students and interpret their answers, taking cultural differences into account. Exchanging views with a person with a different mother tongue and cultural identity is always a challenge, also in research, and hence our interpretations must be evaluated with caution. In general, the authors can claim that all the students that were interviewed actually understood the questions posed to them, but even so a weakly developed majority language (Norwegian or English) among a few of the indigenous students may have affected the quality of their responses. If this were the case, then it will of course affect the reliability of our research. Then there is the use of translators. Other studies report considerable challenges due to translations between languages. Asymmetry and cultural control over the answers can be a problem in relation to respondents' feelings of freedom and control in the situation (Gran 2007, p 33, 41ff.). Despite these challenges, the authors are in general convinced that reliable and valid data were obtained, not the least because of the genuine interest and openness that was evidenced among students, teachers, and school leaders.

A further challenge is how concepts like play and learning are understood in different cultures, as well as how differences in factors like ethnicity, and social class affect educational benefits and learning styles (cf. Brooker 2002). The understanding of play in school could be considered to relate first of all to Western ideas; although play at home was included as well. Furthermore, the authors learned through interviews that some forms of play seemed to be common to all cultures, across cultural backgrounds. In the research, the authors limited the methodical approaches adopted to relatively general understandings of play in school and at

home, and to learning at school, from the perspective of the third and fourth grade primary school students. In this way, it was tried to allow for children's cultural characteristics in their understanding of play and learning as concepts. With regard to social class, the aim was to compare indigenous and non-indigenous groups from similar social class levels, as far as possible.

Participants

The total sample size in study 1 was 1076 children aged between 8 and 11 years. The children attended grade 3 and 4 in primary schools in Arizona and New Mexico (USA), and in Australia and Norway. Participants in study 1, using a questionnaire including rating scales, comprised 130 Aboriginal students, 144 Sámi students and 57 Navajo students; and 496 Anglo-Australian students, 223 ethnic Norwegian students, and 26 Anglo-North American students. The relatively low number of participants in some groups was partly due to a lack of availability and partly to practical and resource-related reasons in this research project.

In study 2, semi-structured interviews (Kvale and Brinkmann 2008) were carried out with 58 indigenous students (10 Abor, 33 Sámi, and 15 Nav) and 83 non-indigenous students (22 Anglo Aus, 31 Norw, and 30 Anglo Am). In addition, 33 of their teachers were interviewed. In all school environments, especially indigenous societies, the data collection was done using different media, as this was regarded as important for the improvement of the learning environment in regard to students' motivation at school. This was also undertaken as an aspect of handling ethical issues, in a research projects like this.

The Study 1 Approach

In order to collect information about students' interest in free or directed learning and free or directed play, a revised version of an instrument developed for an earlier study (Lillemyr et al. 1998) was used, focusing on interest in play, and interest in learning. This is a Norwegian rating scale, revised and translated into English, Sámi, and Navajo. Students' choice of free or directed learning was related to the school context, whereas students' choice of free or directed play targeted play in school, at home or elsewhere. The dimensions of students' interests in learning and play were examined according to three conditions: freely chosen, teacher-directed, or shared choice between the two. From this, six conditions were inferred. Student answers varied according to a four-point Likert scale (Likert 1932).

Six items, tapped different kinds of interest. However, analyses were done according to *two* conditions: interest in freely chosen activity or interest in directed activity, *thus analyzing four conditions.*[2] With this and other instruments applied in this research study (not all instruments presented here), a satisfactory validity was

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[2] The four conditions were presented as follows:Interest in free play/learning – How interested are you in participating in free play/learning, that is play/learning where you can decide what to play/learn and how to play/learn (4-point scale)Interest in directed play/learning – How interested are you in participating in directed play/learning, that is play/learning where what and how to play/learn is decided mostly by the teacher/an adult.

found (Lillemyr et al. 1998; McInerney et al. 2003). Information regarding students' ethnic background was collected from the teachers. All scales were analyzed for reliability and validity (see Lillemyr et al. 2004). See preliminary presentations (Lillemyr et al. 2005) and references to the instrument developers (Harter 1982, 1983; Lillemyr et al. 1998; McInerney and Sinclair 1991) arguing how psychometric methods in cross-cultural research may elicit valid and reliable data for indigenous communities (McInerney et al. 2001). There was a tendency for the lowest values of reliability to be found in groups with the lowest numbers. However, the authors learned that a relatively low value of reliability found in an indigenous group did not necessarily mean this would be the case in other indigenous groups as well. Based on data analyses and interpretations, the instruments used were considered satisfactory for an explorative, comparative research such as this.

The Study 2 Approach

Study 2 was designed as a qualitative study, applying semi-structured interviews. Interview guides and questions were developed in English and Norwegian for students and their third and fourth grade teachers, respectively (see attached interview guides and questions used). In Norway, the Norwegian version was used with both Sámi and ethnic Norwegian students; however, with third grade Sámi students, the authors were advised to use a Sámi teacher as translator. Interviews of teachers were taped, and then transcribed and systematized. Interviews of students were written down using pen and paper by the researcher, then transcribed, and systematized. The questions also included background factors (gender, age, grade, and ethnicity). As far as the methods of analyses were concerned, a multi method approach was chosen.

In general, appropriate ethical clearances were obtained before administering the survey and the interviews, according to requirements from school board authorities in all three countries, and in cooperation with the school leaders. In general, this included informed consent from all participants, and the opportunity to withdraw from participation at any time. The ethical arrangements concerning data collection were agreed (granted) beforehand, stating that "the research project in general complies with basic research ethical considerations' by the NESH (The National Committee for Research Ethics in the Social Sciences and the Humanities, Norway), as well as by the specific school authorities in the USA and Australia.

Results

In this presentation, the authors focus on results on two major areas, interest in play and interest in learning. Preliminary analyses from the two studies have been published elsewhere (Lillemyr et al. 2009).

In general, fewer differences were documented among the three indigenous student groups, than between the groups of indigenous and majority students in each country. This supports the proposed legitimacy of including indigenous students from different countries located in different continents in a comparative study like this (Duncan and Greymorning 1999, 163ff.).

Table 1 Interest in learning and play (answers "very much' and "much" in percentages)—indigenous and non-indigenous (majority) groups in Australia, Norway, and the USA

	Anglo	Abor	Nor	Sámi	Angloa	Navajo
Int free learn	81.6	73.8	75.6	66.7	68.0	77.2
Int dir learn	56.6	73.6	55.0	79.4	28.0	66.6
Int free play	95.7	90.0	87.8	83.1	96.0	91.2
Int dir play	40.0	58.2	33.6	52.5	16.0	65.0

	The corresponding chi-squares' sign		
	USA	Norway	Australia
Free learn	ns	.000	ns
Dir learn	.005	.000	.001
Free play	ns (.056)	ns	ns
Dir play	.000	.001	.000

Anglo Anglo-Australian students, *Abor* Aboriginal-Australian students, *Nor* Ethnic Norwegian students, *Sámi* Sámi students, *Angloa* Anglo American students, *Navajo* Navajo Indian students, *Free/dir learn* interest in free vs. directed learning activities, *Free/dir play* interest in free vs. directed play activities, *Free/dir l c a* interest in free vs. directed local cultural activities

Interest in Play

In this study, the authors found differences between socio-cultural groups of students (defined on "A Research Project" section) with regard to *interest* in free activities, as opposed to interest in teacher-directed activities, documenting cultural differences in interests in play and learning, particularly for directed activities (Table 1). In all countries, a significant tendency was found for indigenous student groups to be more strongly interested in directed activities, compared with non-indigenous student groups.

In study 1, the authors found interest in free play to be strong in all groups, independent of cultural background, confirming the argument that free play is important to children in all cultures (Bateson 2000; Huizinga 1955). This suggests that play represents a great potential for motivation in school, as intrinsic motivation is a main characteristic of play (Rogers and Evans 2008). Overall, all the students in the three countries had an active attitude toward play, in particular at home and in recess time. However, play in class occurred most often among ethnic Norwegian students, more so than among Sámi students. In study 2, it was found that play in class seldom occurs among students in USA and Australia, even though several students highlighted the fun aspect of play, and agreed that play would make learning easier. The exception to not using play in class in USA and Australia, appeared to be some use of games in mathematics.

Interestingly, the importance of interest in play to students' interest in learning differed substantially according to group. For indigenous students, the relation

between play and learning appeared primarily to be a relation through *directed* activities. However, for ethnic Norwegian students, a moderately high significant correlation was found between interest in free learning and interest in free play ($r = .31$), a result found for these students only. This does not seem to have affected the Sámi students to the same extent yet (cf. Sámi Curriculum Guidelines 1997). The results from this study confirmed the results of other studies from Sámi schools in Norway, documenting that Sámi students are the most in favor of teacher-directed learning (Lauhamaa 2004; Nystad 2003).

Interviews with indigenous students clearly indicated that play is an important and dominating activity in recess at school: "I love to play 'tips' in the playground"; "I like playing soccer or basketball in playground"; "I love playing with friends in playground." However, a point of concern made by Pellegrini (2005), affirms that play opportunities in school in many countries have recently been greatly restricted. In these studies, in all countries, indigenous as well as non-indigenous students appear to emphasize that play is important. The students say they play a lot both in school and at home. As far as play in class is concerned, the answers from some Sámi students indicate that they are sometimes allowed to play, while others say: "No, we never play in class." Some say they are allowed to play sometimes. Most of the Sámi students think they learn better through play, and say: "Yes, I think so." Aboriginal students say: "Yes, it helps you enjoy learning more." A few say: "No, I do not think so.." In Arizona most Navajo students say they never play in class, while a few say it can happen in mathematics and writing. Some find play will help learning better. A few say: "No, I do not think so.." However, a majority of Navajo students think they would learn better through play.

The attitude toward play in class was clearly more positive among the ethnic Norwegian students, compared to Anglo Australian and Anglo North American students. Although also ethnic Norwegian students think it is too little play in class, and almost all students find they like play in class, some say: "Play makes learning more fun." Anglo-American students say they sometimes have games in mathematics. Some say they never play in class. In Australia, a few students say they are allowed to play in class, some say they do not play, and some say play happens occasionally. However, as with Navajo students, a majority of Anglo Australian students indicate they "Would learn better through play." Those with a positive attitude to play in class, argue that through play they would enjoy learning more. Some Anglo North American students think play will not help learning, "because we do not know what to do when teacher stops giving instructions." Although some say: "Play makes school more fun," or "Play makes learning better and more enjoyable." It seems clear though, that play in class is quite seldom, except in math, and more seldom than the students would like it to be.

In general, the children told us about culture-specific play activities, as well as indicating general types of play.

Preference of Learning

In Norway, non-indigenous students in this study were found to be significantly more strongly interested in free learning than indigenous students. This was not

Table 2 Interests in learning and play, results of *t*-tests—indigenous and non-indigenous groups in Australia

	N	Mean	t	Sig
Int free learn	495[a]	3.25	1.73	ns
	130[b]	3.09		
Int dir learn	494[a]	2.70	−2.28	.023
	129[b]	2.93		
Int free play	495[a]	3.77	2.00	.046
	130[b]	3.65		
Int dir play	492[a]	2.21	−3.51	.000
	129[b]	2.58		

[a] Anglo Australian students: N = 492, etc.
[b] Aboriginal students: N = 129, etc.

Table 3 Interests in learning and play, results of *t*-tests—indigenous and non-indigenous groups in Norway

	N	Mean	t	Sig
Int free learn	222[a]	3.11	1.17	ns
	141[b]	3.00		
Int dir learn	220[a]	2.68	−5.30	.000
	141[b]	3.18		
Int free play	221[a]	3.51	1.39	ns
	142[b]	3.39		
Int dir play	220[a]	2.20	−3.55	.000
	139[b]	2.58		

[a] Ethnic Norwegian students: N = 222, etc.
[b] Sámi students: N = 139, etc.

Table 4 Interests in learning and play, results of *t*-tests—indigenous and non-indigenous groups in Arizona

	N	Mean	t	Sig
Int free learn	57[a]	3.32	1.05	ns
	25[b]	3.04		
Int dir learn	57[a]	3.11	3.79	.000
	25[b]	2.20		
Int free play	57[a]	3.63	−1.55	ns
	25[b]	3.88		
Int dir play	57[a]	2.93	5.39	.000
	25[b]	1.56		

[a] Anglo American students: N = 25
[b] Navajo students: N = 57

found in the other two countries. The higher interest in directed learning for indigenous groups rather than non-indigenous groups in Norway and Australia was to some degree confirmed among the Navajo students. Indigenous students in Norway endorsed directed learning more than free learning. The results are further documented in *t*-tests run for the Australian, North American, and Norwegian student groups (Tables 2, 3, 4).

It seems that indigenous students prefer teacher-directed learning more than free learning. Free learning means they can take the initiative, be creative and experimental, and therefore have a greater influence on their learning activities.

With a few exceptions, the authors found that indigenous students endorsed a traditional concept of learning at school, directed by the teacher. However, there is evidence that the concept of learning within indigenous cultures has traditionally emphasized free learning, although they are also positive to learning from adults and relatives (Hughes and More 1997; Nystad 2003). Indigenous students' beliefs about school learning appear to reflect their perceptions of the concept of learning in the majority culture. However, based on this study, it is not easy to claim that the one concept of learning is in general better or more advantageous than the other.

General Conditions for Play and Learning

Results from the interview study show students are happy at school, perhaps because they have pleasant experiences and opportunities for playing with friends. This was the case for indigenous students as well as for non-indigenous students. Most of them say; "I like school." or "I like school a lot" or "It is fun sometimes," indicating they thrive at school, apart from a few who dislike being harassed by others, which also underlines the importance of having good relations to others. As an assumption, this reflects students' need for social and cultural relatedness (Deci and Ryan 1995; Wentzel 2005). A few dislike having limitations for play in school: "Like learning, dislike can't play tag outside." With regard to indigenous students' answers to questions about whether students should have something to say in the classroom, most Sámi students say no. A few think they should. Some Aboriginal students think they should be able to voice their opinions, others do not. However, most of them do not think they should have a say in selecting methods. This confirms most indigenous students' endorsement of teacher-directed school learning. Answers to these questions by non-indigenous students were different, as they tended to like being able to have their say.

Discussion

Obtaining samples from such different parts of the world might seem demanding, although there are a number of arguments in recent research for the legitimacy of such samples (Duncan and Greymorning 1999; Reynolds 2005).

One strength of our studies might be its combination of quantitative and qualitative data from indigenous groups of remote and relatively difficult to access areas and languages, as well as data from non-indigenous mainstream groups. A challenge has been the different school conditions for the indigenous groups in terms of teaching language, type of school, and relation to the majority culture. Studies among such groups are typically small-scale, qualitative studies. In some parts of the research, the authors were dependent on door openers and interpreters.

In a life-long learning perspective, the importance of learning in preschool is fundamental for children's learning and achievement in primary and secondary school (OECD 2006, p 207). Results from this study indicate that social aspects and the need for relatedness are fundamental to students' self-concept and motivation, with important consequences for learning in a broad sense. This seems to be of

special importance for indigenous students, based on their struggle for respect and self-determination throughout history. According to self-determination theory, autonomy, competence, and a sense of relatedness, are basic to motivation and learning. Furthermore, the authors have seen that even 8–10 year olds have a strong need for free play, showing the potential of play in school learning, not the least when taking into account play's dimensions of intrinsic motivation and social interaction. In play, children interact with others and build social competence, providing them with useful experiences and the potential for creativity, experimentation, and learning strategies. However, applying play in class does represent challenges for teachers (Lillemyr 2003). In this study, it was found that play in the classroom is rare. Based on this, it is assumed that including a reasonable amount of play and free choice activities seems adequate to promote involvement in learning in a broad sense in all the countries included in this study. The authors think that this also indicates that the inclusion of social aspects of learning might be reasonable, as play commonly includes peer relations and social elements (Schoenfeld 1999; Wentzel 2005).

In terms of interest in learning, the authors argue for the potential of free learning. The authors think this will need to be promoted not only among indigenous students, but also among non-indigenous student groups included in this study, in particular in Australia and North America. Indigenous students' high interest in directed learning, compared to non-indigenous students may be caused by different factors. The authors assume that this might be because interest in adult-directed play for indigenous children is more closely connected to cultural traditions, compared to non-indigenous children.

In general, non-indigenous groups were more positive about free learning and free play, compared to indigenous groups. The moderately high correlation between interests of free play and interests of free learning that was found among ethnic Norwegian students, the authors believe, could only be caused by the heavy emphasis on a broad concept of learning and free activities and play in the Norwegian curriculum, to promote students' interests in experimentation, creativity, and initiative. This perspective supports a concept of learning and motivation drawing heavily on autonomy, choice, and mastery orientation (Deci and Ryan 1995; Maehr and Midgley 1999).

The indigenous groups appeared to endorse more directed learning in school. These results can at first glance appear contrary to what others have found (Harris 1990). However, the authors find this is not the case; as the authors think this primarily confirms the indigenous people's *perception of what has traditionally been the majority culture's concept of school learning*, even if the concept of school learning has recently changed in many Western countries (Lillemyr 2002). Indigenous people's traditional opinion of learning implies a perception of freedom, as found in research (Hughes and More 1997; Nystad 2003). Furthermore, the indigenous groups in this study appear to endorse a combination of free and directed learning, to a larger extent than the non-indigenous groups, in particular in the Navajo student group. Based on this, the perspective of ZpD and scaffolding (Vygotsky 1986) seems relevant with indigenous students' conception of learning, perhaps more so than with non-indigenous students. Accordingly, it might pave the

way for a broader conception of learning than has often been practiced in schools. This corresponds with the holistic approach to knowledge and more complex learning styles found among indigenous people (Christie 1997), and indicates how the conception of play is a cultural element of great importance for learning and development (Storjord 2008).

In our opinion, the results presented here may indicate that within the indigenous societies, traditional, teacher-centered learning still dominates, because our impression is this is what has been signaled from the majority culture, also documented in research (Nystad 2003). For this reason, it seems indigenous students expect learning in school to be teacher directed, in contrast to the free learning at home.

However, the authors find a broad concept of learning would need to include some aspects of directed learning as well, and the authors feel it would be interesting, even if challenging, to explore alternating between play and learning, and a variety of free and directed learning. Undoubtedly, the analysis of indigenous students' interest in free learning, calls for more thorough examination, to understand the consequences for their future interest in further education.

The documented differences might be interpreted in various ways. The authors think they could have been caused by dissimilarities between cultures, school systems, and the way in which representatives of cultural groups perceive and think about upbringing and education and perceive each other's cultures. The advantage that indigenous cultures have in adapting and developing relatedness to at least *two* cultures must also be realized. This should be flagged to e greater extent as a value in its own right in today's society. The authors find this is actually what Reynolds (2002) is talking about in his search for relevance and identity, affecting upbringing and education related to play and learning. Of course, this perspective has to be taken into account as early as in ECECs.

Based on the results of this study and other research presented above, learning in a broad sense and students' sense of relatedness in multicultural early years' education could be promoted through the following:

- strengthening students' self awareness and self-esteem, according to the two cultures—the indigenous culture and the majority culture—as a platform for interest in school learning,
- providing students with opportunities to alternate between play activities and learning activities, to increase intrinsic motivation,
- arranging play activities in a social setting to increase feelings of relatedness and develop socio-cultural identity,
- providing occasions to be active and to take initiatives, experiment, and be creative and innovative in learning contexts,
- encouraging and developing a sense of social competence, to increase students' sense of academic competence and stimulate interest for school learning.

According to the literature and research across cultures (cf. Samuelsson and Fleer 2008; Singer et al. 2006), play as a prerequisite or as a stimulator to learning can have certain consequences for students' motivation and learning, even where

cultural variety prevails—such as increasing intrinsic motivation, and developing self confidence and sense of relatedness.

Most of these values of relating play to learning are also significantly advocated in indigenous cultures in perspectives of play pedagogy (Lee and Thompson 2007).

Our research gave a few indications that development of social relatedness and sense of social competence are important to students' interest in learning at school. In this context, the inclusion of play in school appears to be underestimated by teachers and school authorities, in particular, in Australia and the USA, confirming arguments found in the literature (Brock et al. 2009; Lillemyr 2009).

It seems satisfying to note that the need for belonging, self-determination, and competence will provide a basis for well-being, acknowledgment, respect, interest, and engagement, as illustrated in the powerful history of how the Navajo Indians built their own school in Rough Rock in 1966 (McCarty 2002), but it has to be further examined in future research.

Appendix

The Socio-Cultural Perspective on Play and Learning Project, 2006
  Interview Forms, Australia

Interview Guide: Students

I am now going to ask you some questions about how you think of school and about how you feel you are doing at school. For all students to like school as much as possible, we are going to ask you and other students from your school and other schools what you think is good about school. We will ask you other questions also. For example, what do you like to do at school? What do you like to do at home? We will also ask you to tell us what you think about your teachers.

Everything you tell me will be kept private and no one else will know the answers you give to me questions—not the principal, not your teachers, no-one outside of this room. I will write down what you say or we can tape the interview if you don't mind being taped. If you want me to turn off the tape recorder at any point just let me know. If you want to stop the interview for any reason, just let me know. If you don't want to continue answering my questions after we start, just let me know.

Your participation in this interview is voluntary, and you can change your mind about being interviewed at any time. You don't have to do the interview if you don't want to. If you don't understand any of the questions, or you find them difficult to answer, just let me know. Take your time. This is not a test. There is no right or wrong answers. You are simply giving me your opinion about things. I am interested to know what you think about things like school, learning, and playing.

Are you ready to answer? Here is the first one.

The Socio-Cultural Perspective on Play and Learning Project, 2006

Questions for Students in Australia

() Boy
   () Girl
   Age:_____
   Grade:_____
   Cultural/Ethnic background:_____ (E.g. Aboriginal/Torres Strait Islander or English-Australian)

1. (a) What do you like/dislike about school? Tell me about it.
    (b) Do you think school is fun?
    (c) What would you like to do more of in your lessons to make school more fun?
2. What subjects in school do you like best?
3. What do you like to do during recess and lunchtime?
4. At home, what do you prefer do to in your spare time?
5. (a) After school and on weekends do you spend much time with your parents or other adult family members?
    (b) What kinds of things do you do with your parents or other adult family members/community/neighborhood members?
6. Do you spend much time with friends of your own age in your spare time?
7. Do you get along well with the other students at school?
8. (a) Do you do well at school? (Very well? Average? Not so well?)
    (b) How do you think girls do at school?
    (c) How do you think boys do at school?
    (d) Why do you think this way?
9. Are you interested in what is going on at school?
10. Do you plan to go to college or university after finishing school?
11. Do you prefer to do things by yourself, or do you prefer to be instructed/directed/guided by teachers or other relevant adults when doing school work or when you are learning?
12. Is getting good grades/doing well at school important for you?
13. Do you play a lot? At home? At school? Where do you play?
14. (a) Does your teacher make learning fun?
    (b) Do you play during lessons?
    (c) Do you think being able to play makes learning better for you/helps you enjoy learning/school more?
    (d) Describe a good teacher for me.
15. Do you like teachers to always instruct/direct you or would you prefer teachers to let you work on your own more and make more decisions for yourself?
16. Do you think students should influence what is going on in the classroom?
17. Would you like students to have influence on *how* to work in school?
18. Do you speak a different language at home compared to what you speak at school?
19. Do you think it is important to do well in school? Why do you think so?

20. Do you feel that your background and traditions are respected at school (by class mates, teachers, and leaders)?

Interview Guide: Teachers

I am now going to ask you some questions about how you think your Year 3 or 4 students feel about themselves at school; their sense of self, their interests in play, their motivation, their experience with school learning. To obtain information about how much students like school, we will ask/have asked them certain questions. However, we would like to discover what you know, or believe, your students think about school, what they like to do at school, and what they like to do when they are not at school. We would also like you to reflect on what you think students like about teachers, and what you think the challenges are facing 8–10 year olds at school and at home.

Everything you tell me will be confidential. Your participation will remain anonymous. We will write down your responses, or tape them, if you have no objections. Your participation is of course voluntary.

Should you find any of the questions difficult to answer or you choose not to answer any question, please let me know. It is hoped, however, that you will try to answer all questions so as to ensure we are able to maximize the volume, scope and quality of the data we are collecting.

Are you ready? Here is the first one.

Thank you very much for your cooperation

Questions for teachers in Australia

() Male

() Female

Age group 25–30 years, 30–35 years, 35–40 years, etc.:……….

Number of years of teaching experience:

Cultural/Ethnic

Background:…………………………………………………….

1. In general, do you think that your students are motivated and engaged in the teaching and learning process? Could you explain this?
2. What school subjects do they appear to like best? Are there differences between boys and girls?
3. How do they spend their time outside school? For example, watching TV, playing, sports, etc.?
4. Are the students close to their parents and the rest of the family? Do they engage in activities with parents, other adults in the family and in the neighborhood?
5. Do you believe that your students get on well with each other at school?
6. Do you think girls or boys, in general, perform better educationally? Why?
7. What is your estimate of the percentage of your students you believe may go on to further study?

8. (a) To what extent do your students work independently, that is, with minimal supervision/instruction, during lessons?

    (b) Do your students demonstrate a preference to be assisted/directed/ instructed by you or other relevant personnel during lessons or during extra-curricula activities?

    (c) Do you think there are differences between boys and girls in this concern?

9. Do you feel that obtaining good grades/results is important to your students?

10. Do they engage in free play a lot? At home? In school? Where do they play?

11. Do you use play related to school subjects to make learning more interesting? How?

12. To what extent do your students influence what teaching/learning activities take place during lessons? Do they have choices offered to them? If so, please exemplify.

13. Do you find that your students are interested in having influence on *how* they can work in the classroom? Please explain.

14. (a) What language/s do your students speak at home?

    (b) Do any of your students speak a language other than Standard English at school? If so, please provide details.

15. Are the students' background and traditions respected (by fellow students and teachers) at school? Which cultural backgrounds are represented?

16. What do you believe is the biggest challenge confronting Aboriginal children at your school?

Thank you for your cooperation!

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