

# Interactions between Students with Severe Visual Impairment, Sighted Peers and Adults in Swedish Public Schools

Tina Björk<sup>1</sup> and Kerstin Fellenius<sup>2</sup>

<sup>1</sup>National Agency for Special Needs Education and Schools,  
Stockholm, Sweden  
tina.bjork@spsm.se

<sup>2</sup>Stockholm University, Department of Special Education,  
Stockholm, Sweden  
kerstinfellenius@yahoo.se

## ABSTRACT

This study surveyed teachers' perceptions of the ways in which visual impairment and body language affect the interaction between students with severe visual impairment, their sighted peers and adults in Swedish public schools. The main focus was on the teacher's perception and role in the interaction, particularly in situations with verbal descriptions. The questionnaires were answered by 52 out of 62 (about 84 percent) Swedish public schools where all braille readers in grades 1-9 had their schooling in 2010.

According to perceptions of the respondents results demonstrate that body language of the student with visual impairment quite often causes misunderstandings amongst sighted classmates (33/52). But to an even higher degree (41/52), the difficulty of perceiving sighted schoolmates' body language causes confusion amongst students with visual impairment.

During lessons, it is more common for sighted classmates to initiate contact with peers who have some vision than with blind peers. Resource persons give verbal descriptions more often than classmates do. Most of the resource persons perceive that they often serve as a link to make interactions take place (42/52) among peers.

As both degrees of visual impairment and body language affect interaction, the role of the resource person as a link, not a barrier, must be highlighted. Knowledge, awareness and attitudes are important in the resource person's supportive role.

## 1. INTRODUCTION

It is difficult to find previous research describing teachers' perception of the importance of body language in the interaction between students with severe visual impairment, their teachers and classmates in the mainstream learning environment. Against this background, this survey was conducted with resource teachers who support braille reading students in Swedish public schools.

*Copyright: © 2015 Tina Björk et al. This is an open-access article distributed under the terms of the [Creative Commons Attribution License 3.0 Unported](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.*

Focus of the study was on the importance of body language in the interaction with peers and adults during the school day.

During the past century, many changes have taken place for students with severe visual impairment or blindness in Sweden. The special school for this group was closed down in 1986, except for students with visual impairments and multiple disabilities (Fellenius, 1999). Of the total group of children and young people, aged 0-19, registered with a visual impairment, about 60 percent have additional impairments (Blohmé & Tornquist, 1997). For students with visual impairments and intellectual disabilities there is a special school with about 30 students (National Agency for Special Needs Education and Schools, 2014). Some students with a mild intellectual disability in addition to the visual impairment go to Swedish public schools.

The regular teacher get some further teacher training courses containing braille, tactual graphics, psychological and social aspects of visual impairment and other issues at Resource Center Vision. The teacher then works with the braille reading student in the public school, usually together with an extra educational resource (Fellenius, 1999). Interaction between braille readers, teachers and sighted peers usually works rather well in mainstream education, thanks to efficient braille technology (Rönnbäck, de Verdier, Winberg & Baraldi, 2009). To provide students with visual impairments access to visual information and non-verbal communication promoting interaction and involvement in education is however a challenge for the teacher (Bardin & Lewis, 2008). Gestures often complement spoken language, and the relationship between gestures and spoken words in full communication is complex (Allwood, 2002). Even if the person with severe visual impairment knows the gestures, he or she cannot see the effect on sighted partners (Frame, 2000). The teacher often verbally describes to the student with visual impairment what is happening in the classroom. Too little attention has been paid to how this affects interaction between students with severe visual impairment, their teachers and classmates in inclusive education.

In a study of blind adults, especially persons who are congenitally blind experience difficulties in learning new body expressions (Magnusson, 2003). They feel that the feedback from sighted others is lacking when they differ from the visual standards. Previous studies also show that

people with severe visual impairment in adulthood choose to use a restrained body language as it might be perceived as more different to use too much or the wrong body language (Björk, 2009; Karlsson, 1999; Sharkey & Asamoto, 2000). Stereotypical behaviors are more common in children born blind than in those who later acquire a visual impairment (Warren, 1994; Magnusson, 2003). These stereotypical behaviors can sometimes be misinterpreted in the interaction with the surroundings. These behaviors decline with age (Warren, 1994).

The overall purpose of this survey was to identify teachers' perceptions of the interaction in the communication between students with severe visual impairment, their sighted peers and adults in school. Focus has been on the following research questions:

- How does visual impairment and body language affect the interaction in the classroom?
- What is the role of the teacher in the interaction that occur?

### 1.1 Previous Research

There is quite a lot of research concerning social interaction and communication in preschools between sighted children and children with severe visual impairment. One item that is often addressed is how to enter a group and who initiates interaction and continued communication. In a case study, Celeste (2006) studied play behavior and social interaction with a girl in kindergarten. The girl's preschool teacher was an important person for the child with visual impairment to be part of the social interaction (Celeste, 2006). The teacher must interpret the blind child's questions to her playmates to be supportive in the social interaction (op.cit.). In a study by Webster and Roe (1998) of social interaction between children with severe visual impairment and their sighted peers, 3 to 8 years old, it was found that a smaller group of children helped the child with severe visual impairment to know who his or her friends were, how to approach them and how to understand what they were doing. It was successful when an adult commented on others' activities, expressed his or her own feelings and stimulated interest in other people's ideas and action. Adults can encourage a blind child's involvement in various games if they are sensitive about when to step in or take a step back (op.cit.).

In another study by Kekelis & Sacks (1992) the degree of visual function did not seem to play an important role in the extent of interaction with sighted peers. The study also examined the teacher characteristics that best developed interaction between students with visual impairment and sighted peers. It turned out that the students with visual impairment who liked schooling best had teachers who felt that social development of the students was as important as other learning goals. It proved to be favorable that teachers constantly listened to students' conversations, observed their interactions and provided students with visual impairment adequate support. The best conditions for students with visual impairment were when classroom teachers paired them with a fellow student with good social skills. This had

positive effects on tasks with explicit knowledge goals as well as tasks with social objectives (op.cit.).

## 2. METHOD

To achieve the purpose of the study and answer the survey questions, a structured questionnaire was used supplemented with open-ended questions where the respondents could freely clarify their responses, a combination of a quantitative and a qualitative approach (Gall, Gall & Borg, 2007).

Contact was made with the management of Resource Center Vision at The National Agency for Special Needs Education and Schools in Sweden. The resource center provided the addresses of all the schools, grades 1 to 9 (ages 7-15), where braille reading students had their schooling, a total of 62 schools. Each participating school principal was informed in a letter about the ethical aspects of research studies in Sweden (The Swedish Research Council, 2002) that were taken into account, i.e. requirement for information on the purpose of the study, consent for participation and confidentiality for both student and teacher.

### 2.1 Participants

A questionnaire was sent together with a letter to the school principal. The questionnaire was answered by the person whom the principal judged the most appropriate in terms of having vast experience of working with the student with visual impairment. The background of the respondents varied a lot, from having no teacher training at all to being fully trained special teachers.

In a covering letter respondents were requested to send back, within a week, the filled out questionnaire, to the person in charge of the study.

The questionnaire was answered by 52 out of 62 possible schools (about 84 percent). In eight cases the questionnaire was sent back by the principal because the student had left school or there was no resource person who could fill in the questionnaire. In two cases, there was a lack of information about the non-response.

### 2.2 Material

The survey questions covered issues that could be divided into two types of variables:

- Dichotomous variables, variables with two possible answers
- Ordinal variables, possible to grade

Part of the questionnaire contained a number of statements with four choices of answers on a Likert scale ("agree completely with", "agree partly", "partly disagree" and "strongly disagree"), where respondents were asked to react upon statements by consenting or non-consenting (Gall, Gall & Borg, 2007). The following issues were addressed in the survey: the background of the resource person and of the student with visual impairment, interaction, initiatives to contact, verbal description, and conversational situations.

Quantitative data was set out in frequency matrixes used to describe relationships in cross tables (Befring, 1994). Results of questions with four possible answers in

the Likert scale were for that reason summed up. To get an overview and to see patterns in a lot of data the responses "agree completely with" and "agree partly" were put together as "agree". "Partly disagree" and "strongly disagree" were merged into "disagree". Similarly, the response alternatives "daily/almost daily" and "a few times a week," were calculated and reported as "often," while "sometimes/a few times a month" and "less often" were counted and reported as "rarely".

### 3. RESULTS

The results are presented thematically. Quantitative data is presented in tables, often followed by teachers' statements through open questions as a complement to the tabular data. The internal non-response appears through the number of responses (n) given for each question.

#### 3.1 Background of the Respondents

Each school principal was demanded to identify the person working closest to the student with visual impairment during lessons. Out of the 52 respondents, 22 were compulsory school teachers, 9 were preschool teachers, 4 recreational teachers, 1 was a social educationalist, and 1 was a children's nurse. Thirteen had no pedagogical education at all, and within the whole group there were two non-respondents. Everyone will be referred to as respondent and resource person regardless of educational background in the results report. Of the 52 respondents, 51 stated that they had received further education for working with students with visual impairment during a two weeks' course at the National Agency for Special Needs Education and Schools, Resource Center Vision. Three respondents had academic training specifically for students with visual impairment, and five others had previous experience of working with this student group. Approximately half of the respondents (22/51) had long experience of working with students with visual impairment (more than 15 lessons per week for 3 years). Class sizes varied considerably (R = 8 - 31). Mean number of students in the classes was 21 including the student with visual impairment.

#### 3.2 Students with Severe Visual Impairments

Of the 52 students, 22 were girls and 30 were boys. Thirty-seven students had belonged to the same class throughout their schooling.

At the time for the study, 33 of the 51 students (1 non-respondent) had blindness (table 1). Among the group with blindness, one third had had some vision but had lost it. Approximately one third (18/52) had some vision but were recommended to read braille since vision was not enough to read ink print. By ethical reason the questionnaire did not contain any question about multiple disabilities, but the descriptions of the students in the open-ended responses revealed that over a quarter of the students (14/52) had other disabilities, such as autism, ADHD, physical disability, intellectual disability and hearing loss. In spite of additional disabilities the students had been judged to belong in compulsory school

education. In this report all students are called students with visual impairment.

Visual function	Number
Congenital blindness	22
Blindness, with earlier vision	11
Some visual ability	18
Total	51

Table 1. Student's visual function (n=51)

#### 3.3 Body Language and Visual Function

When asked how respondents perceive students' body language, the majority stated that the student's body language differed from that of sighted students (table 2). Of these (40), about a third (13) had some vision. The respondents perceived that students with blindness, to a higher degree than students with some vision, showed different body language.

Visual function /Body language	Different	Not different	Total
Congenital blindness	19	3	22
Blindness, with earlier vision	8	3	11
Some visual ability	13	5	18
Total	40	11	51

Table 2. Correlation between vision and different body language (n=51)

Some respondents stated in the open-ended responses that students with visual impairment showed emotions through facial expressions, but that a smile could be more cautious or rigid compared to the smiles one can see with sighted students. The student with visual impairment could also signal disinterest of interaction with peers by body language. The open-ended responses also showed that for about a quarter of the students, body language could be interpreted as stereotypical behaviors. Those were stiff or vivid movements, jumping up and down, pressing fingers against each other and tensing. More than a third of respondents (19/51) agreed that stereotype movements affected sighted classmates' initiative to make contact, and many believed that this can cause misunderstandings (33/52). A majority (41/52) answered that, on the other hand, misunderstandings arose when students with visual impairments could not perceive sighted peers' body language.

More than half of respondents (29/52) rarely talked with the student about his or her body language.

#### 3.4 Interaction

A calm working atmosphere turned out to be a very important prerequisite for students with visual impairments in the interaction with others (48/52). The best interaction between students with visual impairment

and sighted peers seemed to occur in pair working in the classroom (38/46, 6 non-respondents).

About half of the respondents noted that classmates acted as "helpers" more than just keeping company on equal terms. Only one respondent stated that classmates never acted as helpers (table 3). The student's visual function did not seem to affect classmates' inclination to act as helpers to any significant extent.

Visual function	Often	Seldom	Never	Total
Congenital blindness	12	10	0	22
Blindness, with earlier vision	5	5	1	11
Some visual ability	8	10	0	18
Total	25	25	1	51

**Table 3.** Visual function and classmates acting as helpers (n = 51)

The tendency to act as helpers appeared to decrease with age (table 4). Gender seemed to affect classmates' tendency to act as helpers more than age. Almost two thirds (14/22) of the girls got help from peers compared to just over one third (11/30) of the boys. This became apparent especially amongst the younger students, grades 1-3, where 78 percent (7/9) of the girls' peers often acted as helpers compared to 44 percent of the boys' peers (7/16).

School grade	Often		Seldom		Never		Total
	Boys	Girls	Boys	Girls	Boys	Girls	
1-3	7	7	9	1	0	0	24
4-6	2	2	2	3	0	0	9
7-9	2	5	7	4	1	0	19
Total	11	14	18	8	1	0	52

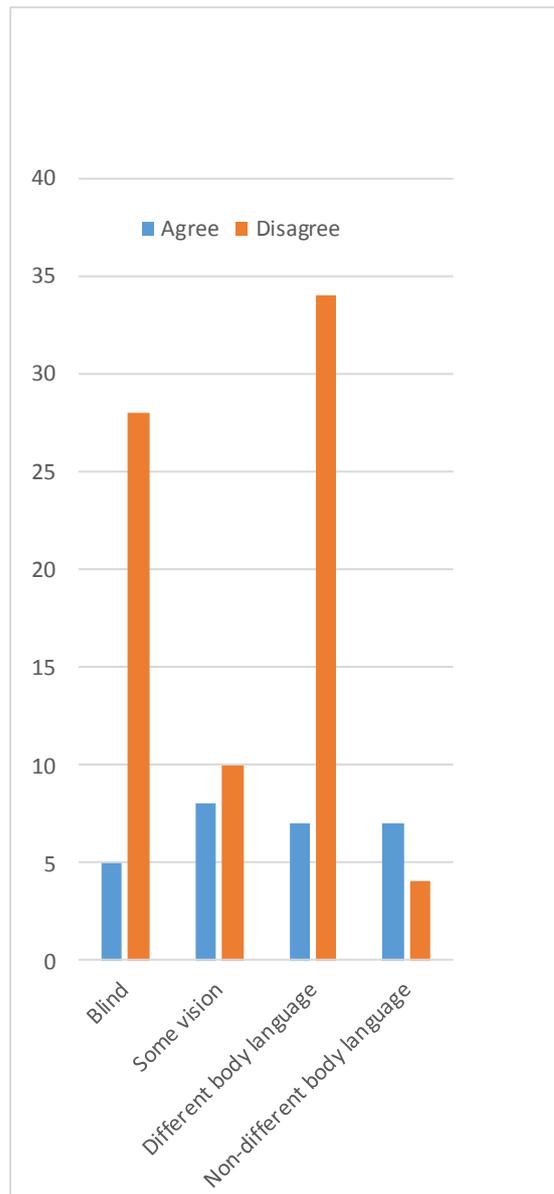
**Table 4.** Students' grade, gender, and classmates who acted as helpers (n=52)

**3.5 Initiative to Contact**

A majority of the respondents reported that students with visual impairment did not initiate contact with classmates as much as sighted classmates during lessons (37/51). Approximately the same number also reported that sighted students did not initiate contact with students with a visual impairment as much as they did with each other (38/52).

How important is the degree of visual impairment and a different body language in initiating contact between the parties? The graph shows respondents' answers to the statement that sighted classmates initiated contact with the student with visual impairment to the same high extent as with his or her sighted peers. Only a small group of students with visual impairment and different body language were contacted by sighted peers to the same extent as sighted contacted other sighted peers.

Thus, visual ability and differences in body language have an impact on sighted peers' initiative to contact, and degree of impact is almost equal between the two factors.



**Figure 1.** Statement: Classmates initiate contact with the student with visual impairment to the same extent as they make contact with each other during lessons. (Visual function n = 51, body language n = 52).

About half of the respondents agreed that the student with visual impairment in a dialogue waited for someone else to initiate contact (24/52). The initiative was usually taken by the resource person (14/44) or by classmates (13/44). Only in a few cases (5/44) the student with a visual impairment was reported to take such an initiative. The majority of the resource persons (42/52) believed that they often served as a link for the interaction between student with visual impairment and sighted peers.

### 3.6 Verbal Description

When asked how respondents themselves perceived verbal description, 82 percent agreed that it was easy or quite easy. The content of verbal description was more often about who was in the room and how they were placed (38/51) than about others' body language (32/52). Table 5 shows that resource persons described verbally more often than classmates did.

	Often	Seldom	Never	Total
Respondents' verbal description informing the student with visual impairment who is in the room and how they are placed (n = 51).*	38	13	0	51
Respondents' verbal description of other people's body language (n = 52).*	32	20	0	52
The extent to which the respondents believed that classmates describe verbally (n = 52).	24	25	3	52

**Table 5.** Contents of verbal description

\* No alternative "never" in these questions.

Of the respondents, a majority judged (46/52) that it is very or quite important that students with visual impairment have a close relationship to the person who verbally describes. Some resource persons expressed the difficulty of choosing the right amount of verbal description. It was easy to talk too much or disturb the social interaction between students if verbal description played too great a part. Five respondents who worked with older students (grade 6-9) described the student with visual impairment as being negative to verbal description; student wanted to be just like anybody else in the group and not being treated as different, student did not want to stand out and thought others would find verbal description disturbing, and student thought residual vision could be used and that verbal description was not needed.

### 3.7 Conversational Situations

During organized discussions such as class council or group work, more than half of the respondents in this study reported that students with visual impairment were as active or more active than the average student in the class (34/51). In conversational situations the student with visual impairment mainly waited for classmates' response (33/52). Classmates also noted statements from the student with visual impairment (36/52) which could indicate that the resource persons thought that dialogue mostly worked. Rather than asking the student with visual impairment directly, sighted classmates in many cases often directed their questions to the resource persons (23/52). Results also showed that students with visual impairment rather talked to adults than to sighted peers (32/52).

## 4. DISCUSSION

### 4.1 Limitations

The survey about interaction in communication addressed all the resource persons who worked with a student recommended to read braille in Swedish compulsory schools.

The study had certain limitations, regarding the sample of respondents and of students. Respondents were the persons whom the principals judged the most appropriate in terms of having a vast experience of working with the student with visual impairment. Although the sample was heterogenic, it may be considered as representative of the group of resource persons in Sweden. It would of course be desirable that all of them were teachers. It turned out that a quarter of the 52 students had additional disabilities, but as these students were recommended to read braille and were studying in compulsory schools, they fulfil the criteria for participating in the study. These limitations aggravate drawing general conclusions and calculating correlations regarding interactions in this student group. However, the study shows a picture in descriptive statistics on the basis of the research questions, and it raises new questions about interaction in the educational situation.

### 4.2 Terms of Interaction and Communication

Communicating with others and being part of a socially effective interaction can be a difficult challenge for many students. For students with severe visual impairment, it could be said that they sometimes lack a language in this interaction, the body language. The interaction is influenced by the difficulty of using the adequate code and by interpreting body language. If one considers the difficulty of imitating body language and the uncertainty about making the right choice according to sighted standards, it is perhaps not surprising that students with visual impairments use a different body language.

An interesting result in this study is that degree of visual function has not affected classmates' tendency to act as a "helpers" to any significant extent. To act as a "helper" could result in a care giving culture being established instead of a peer culture, according to previous research (Hartup, 1989; Janson, 1996). Gender appears to influence peers' tendency to act as helpers in the present study. This agrees well with Janson (1996) showing the tendency that girls often go into interactions with visually impaired classmates and indicate compassion as a motive for socializing with the peer with visual impairment. However, boys seem to interact more on equal terms, and they seem to pay more interest in the resources of the peer with visual impairment than in his or her needs. Possibly, body language becomes less important as classmates, with age, learn how to provide adequate verbal description? According to results from this study, peer culture tends to get more important as students get older.

### 4.3 The Resource Person's Role in the Interaction

Previous studies confirm what this study shows; it is relatively common that students with visual impairment would rather talk to adults than with peers (Janson, 1996; Preisler, 1997; Rönnbäck et. al, 2009; Warren, 1994; Webster & Roe, 1998). There may be a risk that this phenomenon is cemented if the adult does not encourage the student's interaction with sighted peers. One way to promote interaction may be that the resource person acts as a link by giving adequate verbal descriptions. Many respondents perceived that it is relatively easy to provide verbal descriptions. Most of them have worked for a long time with the same student and have a close relationship. However, it turns out that only half of the blind students' classmates frequently use verbal descriptions.

Could verbal description, if given only by the resource person, consolidate a caring culture and at the same time become a barrier to peer interaction? If teachers act by verbally describing what they observe in the teaching environment, as a message, an indirect verbal description, to the entire class, they could function as models for peers' natural way of verbally describing what happens in the classroom. Recent research shows that the more descriptive language and verbal clarity educators and students make use of, the less a student with visual impairment needs special verbal descriptions (Szönyi & Söderqvist Dunkers, 2012).

The content of verbal descriptions should also be paid attention to. According to this study, body language does not become the object of verbal description as often as people's presence and placement in the classroom. Does this show that one is unconscious of the importance of information about others' body language? Or is awareness of body language considered less important for interaction to occur? If the latter is the case, one is possibly overlooking the fact that verbal description of a classmate's body language could inspire the student with a visual impairment to use that body language himself. To describe verbally body language could give to the student with visual impairment an understanding of how non-verbal language manifests itself in classmates in different situations. Janson (1996) argues that if one acts to increase classmates' understanding of optimal situational conditions, without moralizing, this could support a tendency to develop the interaction that already exists in the peer group.

There may be a risk that the resource persons, with the best of intentions, consider themselves acting as a link for the interaction to take place. It could cause the student, sighted as well as visually impaired, to wait for the resource person's initiative to "link" them to the interaction. The commendable purpose of linking can instead be an obstacle for communication (Ainscow, 2000; Rönnbäck et. al, 2009; Webster & Roe, 1998).

## 5. IMPLICATIONS FOR PRACTICE

What can we do in schools to minimize the social impact of the interaction and increase opportunities for communication between students with visual impairment and sighted peers? In conclusion some suggestions could

be highlighted based on the results of this study and of previous research:

- Working in pairs promotes the braille reading student in terms of opportunities for interaction and participation. According to previous research the visual impairment becomes peripheral in an orderly and calm working atmosphere where the social skills of the sighted classmate promote communication (Janson, 1996; Kekelis & Zell Sacks, 1992; Roe, 2008; Rönnbäck et. al, 2009; Webster & Roe, 1998).
- Teachers should serve as models for verbal description. The optimal purpose is for sighted peers to get used to describing pictures, events and body language in a spontaneous way.
- Students with visual impairment could be given the chance to try out their body expressions through drama exercises. This increases the students' ability to make their own active choice about using body language or not (Björk & Croneld, 2010; Erin, 2006).
- The resource person should act as a model for the whole class to provide opportunities for peers to actively contribute to the creation of a peer culture.
- The resource person should use, what we call "pedagogical timing", that is to intervene at the right moment, to keep distance, be on hand if needed and to give the student the opportunity to act on his own as much as possible (Rönnbäck et. al., 2009; Roe, 2008).

## REFERENCES

- [1] Fellenius, K. (1999). *Reading acquisition in students with visual impairments in mainstream education*. Doctoral thesis, Stockholm: HLS Förlag.
- [2] Blohmé, J. & Tornquist, K. (1997). Visual impairment in Swedish children. *Acta Ophthalmologica Scandinavia*, 75, 194-198.
- [3] National Agency for Special Needs Education and Schools [Specialpedagogiska skolmyndigheten] (2014). Retrieved 13 September 2014, from: <http://www.spsm.se/sv/Vi-erbjuder/Undervisning-i-speciaskola/Om-speciaskolorna/For-elever-med-synnedstanning-och-ytterligare-funktionsnedstanning/Ekeskolan/Om-skolan/>
- [4] Rönnbäck, A., de Verdier, K., Winberg, A., Baraldi, S. (2009). *Att delta på lika villkor?: Den punktskriftsläsande elevens möjligheter till delaktighet i klassrummet [Taking equal part? The braille-reading students' possibilities for participation in the classroom]*. Stockholm: National Agency for Special Needs Education and Schools.
- [5] Bardin, J. A. & Lewis, S. (2008). A survey of the academic engagement of students with visual impairments in general education classes. *Journal of Visual Impairment & Blindness*, 102(8), 472-479.
- [6] Allwood, J. (2002). Bodily communication – dimensions of expression and content. In B. Granström, D. House, & I. Karlsson (Eds.), *Multimodality in language and speech systems* (pp. 7–26). Dordrecht: Kluwer Academic Publishers.

- [7] Frame, M. J. (2000). The relationship between visual impairment and gestures. *Journal of Visual Impairment & Blindness*, 94(3), 155-171.
- [8] Magnusson, A.-K. (2003). *Blinda personer icke-verbala kommunikation, studier om kroppsspråk, icke-verbal samtalsreglering och icke-verbalt uttryck [Blind persons' non-verbal communication, studies of body language, non-verbal conversation-adjustment and non-verbal expression]*. Doctorial thesis, Stockholm University, Department of Education.
- [9] Björk, T. (2009). *Talar du med mig?: En studie om blindas tankar och erfarenheter kring icke-verbal kommunikation [“Are you talking to me?”: A study of blind persons' thoughts and experiences of non-verbal communication]*. Bachelor's essay, Stockholm University, Department of Special Education.
- [10] Karlsson, G. (1999). *Leva som blind: Fenomenologisk-psykologiska undersökningar [Living as a person with blindness: Fenomenological-psychological studies]*. Stockholm: Carlssons.
- [11] Sharkey, W. F., Asamoto, P., Tokunaga, C., Haraguchi, G. & McFaddon-Robor, T. (2000) Hand gestures of visually impaired and sighted interactants, *Journal of Visual Impairment & Blindness*, 94(9), 549- 563.
- [12] Warren, D.H. (1994). *Blindness and children: An individual differences approach*. Cambridge: University Press.
- [13] Celeste, M. (2006). Play behaviors and social interactions of a child who is blind: in theory and practice. *Journal of Visual Impairment & Blindness*, 100 (2), 75-90.
- [14] Webster, A. & Roe, J. (1998). *Children with visual impairments: Social interaction, language and learning*. London, New York: Routledge.
- [15] Kekelis, L & Sacks, S.Z. (1992). The effects of visual impairment on children's social interactions in regular education programs. In L. Kekelis & S.Z. Sacks (Eds.), *The development of social skills by blind and visually impaired students*. (pp. 59-82). New York: American Foundation for the Blind.
- [16] Gall, M. D., Gall, J. P. & Borg, W. R. (2007). *Educational Research: An Introduction*. New York: Pearson.
- [17] Swedish Research Council [Vetenskapsrådet] (2002). *Forskningsetiska principer inom humanistisk-samhällsvetenskaplig forskning [Ethical principles for research in humanistic-sociology research]*. Stockholm: Vetenskapsrådet. Retrieved 7 December 2012, from: [http://www.cm.se/webbshop\\_vr/pdf/etikreglerhs.pdf](http://www.cm.se/webbshop_vr/pdf/etikreglerhs.pdf)
- [18] Befring, E. (1994). *Forskningsmetodik och statistik [Research methodology and statistics]*. Lund: Studentlitteratur.
- [19] Hartup, W. (1989). Social Relationships and Their Developmental Significance. *American Psychologist*, 4, 120-126.
- [20] Janson, U. (1996). *Skolgården som mötesplats: Samspel mellan elever med och utan synskador [The school yard as meeting place: Interaction between students with and without visual impairments]*. Stockholm University: Department of Education.
- [21] Preisler, G. (1997). Social and emotional development of blind children: A longitudinal study. In V. Lewis & G. M. Collins (Eds), *Blindness and Psychological Development in Young Children*. (pp.69-85). Leicester: BPS Books.
- [22] Szönyi, K. & Söderqvist Dunkers, T. (Red.). (2012). *Där man söker får man svar: Delaktighet i teori och praktik för elever med funktionsnedsättning [Where you seek you will get the answer: Participation in theory and practice for students with disabilities]* (FoU skriftserie nr 2). Härnösand: National Agency for Special Needs Education and Schools.
- [23] Ainscow, M. (2000). Reaching out to all learners: Some opportunities and challenges. I H. Daniels (Red.), *Special education reformed: Inclusion* (pp. 101-122). London: Falmer.
- [24] Roe, J. (2008). Social inclusion: meeting the socio-emotional needs of children with vision needs. *The British Journal of Visual Impairment*, 26, 147-158.
- [25] Björk, T & Croneld, A. (2010). *Kroppsspråk för alla [Body language for everyone]*. Stockholm, National Agency for Special Needs Education and Schools.
- [26] Erin, J. N. (2006). Teaching social skills to elementary and middle school students with visual impairments. In S.Z. Sacks & K. E. Wolffe (Eds), *Students with visual impairments teaching social skills to students with visual impairments: From theory to practice* (pp. 364-404). New York: AFB Press.