The Effects of Peer Collaboration on Social Competence of Students with Visual Impairment in Secondary Schools in Enugu State, Nigeria

Liziana N. Onuigbo, Veronica N. Nwafor, Uche N., Eze, Joseph C. Onuoha, Chiedu Eseadi

1Department of Educational Foundations, University of Nigeria, Nsukka, Enugu State, Nigeria.
2Department of Educational Foundations, University of Nigeria, Nsukka, Enugu State, Nigeria.
3Department of Educational Foundations, University of Nigeria, Nsukka, Enugu State, Nigeria.
4Department of Social Science Education, University of Nigeria, Nsukka, Enugu State, Nigeria.
5Department of Educational Foundations, University of Nigeria, Nsukka, Enugu State, Nigeria.

Address For Correspondence:
Chiedu Eseadi, Department of Educational Foundations, University of Nigeria, Nsukka, Enugu State, Nigeria.
E-mail: chiedu.eseadi@unn.edu.ng

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ABSTRACT

Background: The development of appropriate social competence is one important area that is usually affected by visual impairment. However, the inclusion of students with disabilities in the regular schools might improve their social skills as well as increase their interactions among their peers. Children who are socially competent possess both repertoire of socially appropriate behaviours and the social cognitive capabilities that allow them to execute behaviours in a manner that is sensitive and responsive to the demands of particular social situations. Objective: The purpose of this study was to examine the effects of peer collaboration on social competence of secondary school students with visual impairment in Enugu State, Nigeria. Methodology: The current study adopted a quasi-experimental non-equivalent pretest-posttest control group. A total sample of 19 students with visual impairment from special secondary schools in Enugu State was used in the present study. The primary outcome measure was a Social Competence Scale for Students with Visual Impairment (SCSSVI). The data collected was analyzed using descriptive statistics and analysis of covariance. Results: The results show that peer collaboration significantly enhanced the social competence of the students with visual impairment in the experimental group when compared to those in the control group. There was no statistically significant gender influence on the social competence of the students with visual impairment. There was also no significant interaction effect of peer collaboration and gender on the social competence of the students with visual impairment. Conclusion: The researchers concluded amongst others that special education teachers should structure the classroom learning process in a way that the students with visual impairment would be given the ample opportunity to develop self-competency skills through active interaction and communication with peers.

INTRODUCTION

The development of appropriate social competence is one important area that is usually affected by visual impairment. Students with visual impairment have defect, disease or malfunctioning of the optical system that affects their ability to see, learn or interact with both people and objects in the environment (Bishop, 1996). With the impairment in vision, they experience difficulties reading and interpreting the body language, the facial expressions, mood and gestures of the people around them. They may also exhibit some blindisms or stereotypic behaviours which the sighted may consider as unfriendly and socially unacceptable.
Social competence is a broad area of skill development that impacts one’s ability to establish and maintain high quality and mutually satisfying relationships and to avoid negative treatment from others (Welsh and Bierman, 2001). Gresham and Elliot (1990) refer to social competence as the individual’s repertoire of socially appropriate responses and behaviours such as sharing, helping, cooperating, initiating relationships, sensitively interacting with others and handling conflict situations well. Children who are socially competent possess both repertoire of socially appropriate behaviours and the social cognitive capabilities that allow them to execute behaviours in a manner that is sensitive and responsive to the demands of particular social situations.

Human (2010) have shown that most sighted people attain and maintain multiple and complex skills needed to achieve social competence naturally through observation, imitation and experiential learning. The absence of vision or limited visual functioning, however, may make it more difficult for students with visual impairment to acquire accurate information about their social environment and the context in which social activities occur, in order to respond to the social demands of the situation. Also, the congenitally visual impaired are likely to depend more on others to obtain information about the social environment and how to maintain social relationship with family members and peers (Human, 2010). Consequently, Heward (2009) noted that students with visual impairment may grow up to be social isolates. Some authors have indicated that students with disabilities are still at risk of being rejected even when they make effort to fit in. If adequate care is not provided, the children may experience demoralization and loneliness especially when they compare themselves with the other children (e.g. Chamberlain, Kasari and Rotheran-Fuller, 2006). Celeste (2006) observed that students with visual impairment are neither accepted by their sighted peers nor trained in age-appropriate social skills that would foster their interaction with sighted children in the regular classroom. These students contend with the challenges of negative attitude of peers, teachers, parents and society at large which make them show signs of depression, aggression and anxiety, which invariably could result to difficulties in interpersonal relationships (Keff, 1999). Sacks and Silberman (2004) have acknowledged that students with visual impairment who are in an inclusive classroom as well as in special education setting can lack social competence needed for effective adaptation into the ordinary school system.

However, the inclusion of students with disabilities in the regular schools might improve their social skills as well as increase their interactions among their peers. No doubt, the Federal Government of Nigeria in the National Policy on Education, mandated the inclusion of students with special needs including the visual impaired into ordinary schools with the aim of providing equal opportunities to all, their disability notwithstanding (Federal Republic of Nigeria, 2004). Social competence has benefits for all children with or without visual impairment. Research shows that social competence is a significant predictor of success in school as well as a fulfilling life especially in today’s information based society (Maleccki and Elliot, 2002; Rychen, 2003). Social competence equally promotes successful adjustment to school, academic success, and eventual school completion (Williamson and Dorman, 2002). Conversely, lack of social competence has been found to contribute to juvenile delinquency, unemployment, adult criminal behaviour, and mental health problems. Therefore, developing appropriate social competence results in a positive self-concept, higher self esteem, more assertive behaviour and an ability to accept one’s disability as a part of oneself (Wagner, 2004).

Given the unique educational needs of students with visual impairment and the differences in their social development, it becomes imperative that any instructional approach to teaching and learning that caters for the social needs as well as the educational needs of the students should be adopted by the regular classroom teacher. Recent works which describes teaching and learning in an inclusive classroom suggest that peer mediated approach such as peer collaboration may promote social relationships as well as improve teaching and learning (e.g. Harper and Maheady, 2007; Carter, Cushing, and Clark, 2005). Also in line with this study are the findings of Tolmie et al. (2008) that collaborative group work can have a dual cognitive and social impact as students’ collaborative skills improve alongside gains in understanding. Collaborative learning, especially as applied to younger students, is found in the work on socio-constructivist theory of Vygotsky(1978).

Peer collaboration or collaborative learning has been defined by various researchers (e.g. Seabi, Cockcroft and Fridjhon, 2009; Eskey, Onu, Obiyo and Obidoa, 2012) as an instructional process that engages learners of various performance levels to work together in a small group to promote learning. It entails the formation of both formal and informal setting, whereby students work together on a particular task, to analyze, synthesize, evaluate problems, and facilitate discussion and interaction (Stevens, 2008). This interaction however, must be under the supervision of a teacher to ensure orderliness and effectiveness. Peer collaboration in this study is the grouping together of both students with visual impairment and their sighted peers in the regular classroom for the purpose of both academic and social goals.

Peer collaboration engages students as active participants, guards against the danger of students being isolated and encourages questioning, discussion and debate. It also produces intellectual synergy of many minds coming to bear on a problem, develops skills both cognitive and generic that benefit students in their working lives and enhances students’ satisfaction of their learning experiences (Smith and Mcgregory, 1992). Peer collaboration promotes self-esteem and develops skills in negotiation, organization, leadership and evaluation (Stevens, 2008). It provides the platform on which independent learning is nurtured. Students gain confidence,
become aware of their strengths, and are encouraged to develop their own ideas. To reinforce the value of peer collaboration, Heywood (2000) noted that students construct their knowledge in an active way while working collaboratively with classmates. Central to all collaborative work, is the cultivation of the spirit of collective endeavour in which collaborators temporarily become almost a single entity (Miell and Littleton, 2004). Placing students in a group and assigning them a task does not guarantee that the students will engage in effective collaborative learning behavior (Amy, Alan, Frank and Brad, 1999). However, Johnson, Johnson and Holubec (1998) identified four major skills needed for collaborative learning. These skills are; the forming skill which is the basic skill and involves taking turns, using quiet voices; the functioning skill, which is needed to manage the groups’ activities as well as maintain effective working relationships among members; the formulating skills which is needed to stimulate the use of higher quality reasoning strategies, and to maximize mastery and retention and finally, the fermenting skills which is needed to manage cognitive conflict, search for more information, and communicate the rationale behind one’s conclusion. A combination of these skills makes for effective collaborative learning.

Literature is replete with various ways in which the use of peer collaboration strategy is enhancing students social competence in schools (e.g. Miell and Littleton, 2004; Heywood, 2000; Smith and McGregor 1992; Seabi, Cockcroft and Fridjhon, 2009; Bruno, Martin and Thierry, 2008; Juthamas, 2012; Taylor, 2008; Chagu-Gardiner, 2012). However, there appears to be dearth of research studies on peer collaboration in Nigerian school environment, especially among the students with visual impairment in the regular classroom. Regarding the students with visual impairment, there is the need therefore, to ascertain if collaborative learning strategy would enhance their social competence considering their peculiarities and learning style. More so, the issue of gender on social competence is also of interest to the researchers. Gender differences in social competence have been reported. For instance, in comparison to boys, girls are on average more assertive (Luthar, 1995), friendly, trustworthy and helpful (Pakaslahti and Keltikangas-Järvinen, 2001), show higher level of empathy and altruism and have less disruptive and impulsive behavior (Willcutt and Pennington, 2000; Lumley, McNeil, Herschell and Bahl, 2002), while boys are more aggressive (Walker, 2004). But Adetoro (2011) has found no significant difference in the social competence of boys and girls. These disparities in earlier studies occurred among normal and sighted children as there is dearth of information regarding students with visual impairment. Following these controversies, the current study may add some knowledge on the issue of gender as it affects social competence of students with visual impairment. Thus, this study in addition to its main interest investigated the interaction of gender and instruction in peer collaboration on social competence of students with visual impairment. Overall, the purpose of this study is to examine the effects of peer collaboration on social competence of secondary school students with visual impairment in Enugu State, Nigeria.

Research Questions
1. What is the difference in the mean social competence score of students with visual impairment exposed to peer collaboration and those not exposed?
2. What is the influence of gender on social competence of students with visual impairment?
3. What is the interaction effect of peer collaboration and gender on social competence of students with visual impairment?

Research Hypotheses
Ho1: There will be no significant difference in the posttest means scores on social competence of students with visual impairment exposed to peer collaboration with those not exposed.
Ho2: Gender will not significantly influence the social competence of students with visual impairment.
Ho3: There will be no significant interaction effect of treatment and gender on social competence of students with visual impairment.

Methodology:
Design of the Study: The study adopted a quasi-experimental non-equivalent pretest-posttest control group design, involving one treatment and one control group. Peer collaboration instructional approach was used in teaching the experimental group while the conventional approach was adopted for the control group.
Area of the Study: The study was carried out in Enugu State, Nigeria. Two schools, College of Immaculate Conception in Agbani Education Zone and Ngwo Girls Secondary School, Ngwo in Udi Education Zone were used for the study. These two schools practice inclusive education.
Population of the Study: The population of the study comprised all the 19 students with visual impairment in Junior Secondary School (JSS 3) drawn from the College of Immaculate Conception in Enugu, and Ngwo Girls Secondary School in Ngwo both in Enugu State, Nigeria. There are 9 female students with visual impairment in Ngwo Girl’s Secondary Schools, Ngwo and 10 male students with visual impairment in College of Immaculate Conception, Enugu.
Sample and Sampling Technique: The sample size of the study consisted of all the 19 students with visual impairment in Junior Secondary School three (JSS 3) in Enugu State. The sample was made up of 9 girls and 10 boys and their average age is 15.7± 2.34 years. The purposive sampling technique was used to draw this sample
Instrument for Data Collection: Social Competence Scale for Students with Visual Impairment (SCSSVI): This is a 47 items self-report questionnaire adapted from Social Skills Rating System by Gresham and Elliot (1990). It is often used to elicit information on students’ social competence. The scale is a standardized, norm-referenced instrument designed to provide professionals with a means to screen and classify students’ social behaviour. The SCSSVI has a four-point rating scale of: strongly disagree (1), disagree (2), agree (3) and strongly agree (4); and five clusters of cooperation, consisting of 8 items, assertion with 11 items, responsibility with 11 items, empathy with 8 items and self control with 7 items.

Validation of the Instrument: The scale was subjected to expert-consensus validation. The face validity of the instrument was checked by three experts, one in Special Education, one in Science Education and one in Educational Psychology, of University of Nigeria Nsukka. Their comments were helpful in the modification of items of the instrument. The scale was also trial tested using seven students with visual impairment at Queen of Rosary College Onitsha in Anambra State, Nigeria. The Brailed versions of the instruments were used to enable the students with visual impairment work independently. The results of the trial-testing were used in estimating the internal consistency reliability using the Cronbach’s Alpha statistics. The instrument yielded a value of 0.90 alpha.

Procedure: The study was carried out in two different schools, Ngwo Girls Secondary School, Ngwo and College of Immaculate Conception Enugu respectively. The students in their intact classes were assigned to the treatment and control groups respectively. With the guidance of the researchers, the two teachers of JSS3 students in the schools who have been trained for the study administered the pre-test using Social Competence Scale for Students with Visual Impairment (SCSSVI). This pre-test score were recorded for both the experimental and control group. Two sets of lesson plans were developed by the researchers in collaboration with the JSS 3 English language teachers, who also served as research assistants in the two schools, Ngwo Girls Secondary School, Ngwo and College of Immaculate Conception, Enugu. The collaboration here was necessary as it will help them to understand more the lesson plan during the treatment session. One of the lesson plans was based on the peer collaboration strategy, where the students are required to form small groups of four and work together to execute a learning task with the teacher as a guide. The second lesson plan was developed by the research assistants based on the conventional approach. Each of the lesson plans was structured to last for single period of 40 minutes each.

During the actual treatment, the two teachers were assigned to both control and treatment group respectively. The teacher in the treatment group used peer collaborative strategy to teach students lesson on a comprehension passage taken from the students’ recommended English Language textbook. The teacher decides on how the group of four students will be formed, either by randomly assigning students to groups to maximize their heterogeneity or let students choose with whom they want to work. The teacher explained the objectives of the group task and what peer collaboration is. The teacher modeled the skills they need to succeed in groups. Such skills include: face to face interaction, active and tolerant listening, helping one another in mastering content, giving and receiving constructive criticism managing disagreement and interdependence. The teacher equally emphasized the need for the students in group to know that the sink or swim together and that the success of the group is dependent on the contribution made by each member of the group. The teacher equally encouraged the students to adopt a clear division of labor by assigning roles to each person in the group. Finally, the teacher modeled and reinforced the students during class. To ensure that every member of the group participated, the teacher told the various group that after the group task is completed, each student will submit to the teacher an anonymous assessment of the participation of the other group members: who contributed and those who did not. The teacher facilitated and guided the participant to ensure orderliness and effectiveness of the experimental process. After which a comprehension passage was given to the students to work on collaboratively. The teacher assigned to the control group used the conventional lesson plan to teach the control group after which the comprehension passage question was given to them to work on individually. This study lasted for five weeks after which the Social Competence Scale for Students with Visual Impairment was reshuffled and administered to the participants as posttest.

Method of Data Analysis: Research questions were answered using mean and standard deviation. The hypotheses were tested at 0.05 level of significance using Analysis of Covariance (ANCOVA).

2. Results:

The results are presented in line with the research questions and hypotheses that guided the study.

Research Question 1:

What is the difference in the mean social competence score of students with visual impairment exposed to peer collaboration and those not exposed?
Data in Table 1 shows the mean social competence score and standard deviation of students with visual impairment exposed to peer collaboration learning strategy and those taught using the conventional teaching method. As shown in the table, the students with visual impairment in the experimental group had a pretest mean score of 1.44 and standard deviation of 0.53 in their social competence scale, while their posttest mean social competence score was 3.11 with a standard deviation of 0.78; giving a mean gain score of 1.67. The students with visual impairment exposed to conventional method (control group) had a pretest mean social competence score of 1.50 with a standard deviation of 0.71, while their posttest mean score was 2.00 with a standard deviation of 0.82; giving a mean gain score of -0.5. Thus, the experimental group that was exposed to peer collaboration learning strategy had a higher mean gain score than the control group.

**Hypothesis 1:***

There will be no significant difference in the posttest mean score of social competence of students with visual impairment exposed to peer collaboration with those not exposed.

The data in Table 2 shows that peer collaboration strategy as a factor in the study had a significant effect on the social competence of students with visual impairment. This is because the calculated F-value of 7.970 in respect of the treatment as main effect is significant at .014 levels and therefore significant at 0.05 levels of significance. This means that adopting peer collaboration as a teaching strategy for students with visual impairment significantly enhanced their social competence. Therefore, the null hypothesis of no significant difference in the posttest mean score of social competence of students with visual impairment exposed to peer collaboration and those not exposed is rejected. Thus there is significant difference in the posttest mean score of social competence of students with visual impairment who were exposed to peer collaboration compared to those that were not.

**Research Question 2:**

What is the influence of gender on social competence of students with visual impairment?

Table 3: Pretest-Posttest Mean scores and Standard Deviation of students with Visual Impairment showing their Social Competence by Gender

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pre-Test</th>
<th>Post-Test</th>
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<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>Peer Collaboration</td>
<td>5</td>
<td>1.40</td>
</tr>
<tr>
<td>Males</td>
<td>4</td>
<td>1.50</td>
</tr>
<tr>
<td>Females</td>
<td>5</td>
<td>1.80</td>
</tr>
</tbody>
</table>

Data in Table 3 show the mean social competence scores and standard deviation of male and female students with visual impairment exposed to peer collaboration strategy. From the table, it is clear that the male students with visual impairment in the experimental group had a pretest mean score of 1.40 and standard
deviation of 0.55 in their social competence scores; while their post-test mean social competence scores was 3.40 with a standard deviation of 0.54. The female students with visual impairment exposed to peer collaboration strategy had a pretest mean score of 1.50 with a standard deviation of .58; while their posttest mean score was 2.75 with a standard deviation of 0.96. The male students with visual impairment in the experimental group that were exposed to peer collaboration learning strategy had a higher mean gain than their female counterpart.

**Hypothesis 2:**
Gender will not have a significant influence on the social competence of students with visual impairment.

Data in table 2 revealed that gender as a factor in the study has no significant influence on the social competence of students with visual impairment in the experimental group. This is shown by the fact that the F-value is 1.780 which is significant at 0.203 level of significant and not significant at 0.05 levels. This means that the null hypothesis that gender does not have a significant influence on the social competence of students with visual impairment is accepted.

**Research Question 3:**
What is the interaction effect of peer collaboration and gender on social competence of students with visual impairment?

<table>
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<th>Table 4: Interaction Effect of Peer Collaboration and Gender on Social Competence of Students with Visual Impairment</th>
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<tr>
<td><strong>Treatment groups</strong></td>
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<tr>
<td>Peer Collaboration</td>
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<td>Conventional Method</td>
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</table>

Table 4 shows that the male students with visual impairment in the experimental group (peer collaboration) had a posttest mean score of 3.40 with standard deviation of 0.55 in social competence score as against males in the control group (conventional method) that had posttest mean score of 2.20, with standard deviation of 0.84. The mean difference between the male’s posttest mean scores in experimental and control group is 1.2 in favour of the experimental group.

On the other hand, female students with visual impairment in the experimental group (peer collaboration) had a higher post test mean score of 2.75 with standard deviation of 0.96 as against 1.80 post test mean score and standard deviation of 0.84 scored by females in the control group (conventional method). The posttests mean difference in the experimental and control group is 0.95 in favour of the experimental group. Thus both male and female students with visual impairment scored higher in the experimental group, which is an indication that there is no interaction effect between gender and social competence.

**Hypothesis 3:**
There will be no significant interaction effect of treatment and gender on social competence of students with visual impairment.

Data in table 2 revealed that there was no significant interaction effect of peer collaboration and gender on social competence of students with visual impairment. This is shown by the F-value of 7.970 which is significant at 0.014 levels of significant and not significant at 0.05 levels. The null hypothesis of no significant interaction effect of peer collaboration and gender on social competence of students with visual impairment is accepted.

**Discussion:**
The purpose of this study was to examine the effects of peer collaboration on social competence of secondary school students with visual impairment in Enugu State, Nigeria. First, we found that male and female students with visual impairment exposed to peer collaboration performed better than their counterparts in the control group, who experienced the conventional approach. This is an indication that peer collaboration as an instructional strategy is highly efficacious in enhancing social competence of students. This result is in agreement with Smith and McGregory (1992) who confirmed that in communication and dialogue with each other during peer collaboration, children share their experiences, ideas, see things from different perspectives, evaluate and re-evaluate their knowledge and learn how to deal with various situations. This level of intersubjectivity builds cooperation, understanding and trust among peers. This study also supports the study conducted by Taylor (2008) who examined the role of social competence in supporting and constraining interaction in collaborative learning format. According to her creating an inclusive community, where students
feel accepted and valued, through collaborative learning reduces instances of inappropriate behaviour thereby enhancing academic and social success of students with disabilities. This result equally supports the study of Cha-Gardiner (2012) who conducted a study to investigate the efficacy of cooperative learning in improving the social skills of students with visual impairment. For Cha-Gardiner cooperative learning strategies resulted in positive improvement in the students’ abilities to exhibit desired social skills. Also in line with this study are the findings of Tolmie et al. (2008) that collaborative group work can have a dual cognitive and social impact as students’ collaborative skills improve alongside gains in understanding. However, the ability of collaborative learning in enhancing the social competence of students with visual impairment can be attributed to its distinctive use of various collaborative skills such as forming skills, functioning skills, formulating skills and fermenting skills Johnson, Johnson and Holubec, (1998). The combination of these skills during collaborative learning helps students with visual impairment to develop social skills that were hitherto absent as a result of their impairment. This is also in line with Vygotsky social constructivist theory that posits that the social exchange in peer interactions produce essential social knowledge that the children must understand in order to continue to reproduce and build upon their experiences in their social environment.

Second, we found that gender has no significant influence on social competence of students with visual impairment. Male and female students in the experimental group recorded higher but similar posttest social competence score than male and female students in the control group. This is in agreement with Adetoro (2011) whose study showed that there is no significant gender difference in social competence of undergraduate students. However, this study is contrast to previous studies (e.g. Luthar, 1995; Willcutt and Pennington, 2000; Pakaslahti and Keltikangas-Järvinen, 2001; Lumley et al., 2002) in which females were found to be more socially competent than males. Based on these disparities it could be argued that this study showed no significant difference in social competence of male and females due to their peculiarities and the use of peer collaboration strategy. Third, we found a non-significant interaction effect of peer collaboration and gender on social competence of students with visual impairment. This means that the enhancement of the students’ social competence was as a result of the intervention using peer collaboration and not other factors. This finding is in agreement with Cha-Gardiner (2012) which reported no significant interaction effect of gender on social competence of students with visual impairment. Thus, both male and female school children who acquire socially competent skills possess both repertoire of socially appropriate behaviours and the social cognitive capabilities that allow them to execute behaviours in a manner that is sensitive and responsive to the demands of particular social situations.

**Conclusion:**

The use of peer collaboration as an instructional strategy seems more effective in enhancing the social competence of students with visual impairment than conventional teaching method. The students with visual impairment exposed to the use of peer collaboration acquired the needed skills for effective collaborative learning. Besides, gender has no significant effect on social competence of students with visual impairment. As a result, both male and female student with visual impairment have the potential to learn especially when the social environment is enhanced through collaborative learning. Therefore, given the unique and educational needs of male and female students with visual impairment and the differences in their social development, there is the need for teachers to structure the learning process in such a manner that the learners with visual impairment are given the opportunity to negotiate meaning through active interaction and communication with peers. The special education teacher’s role in helping these students with visual impairment through peer collaboration is imperative given that children, both male and female, who are socially competent possess both repertoire of socially appropriate behaviours and the social cognitive capabilities that allow them to execute behaviours in a manner that is sensitive and responsive to the demands of particular social situations.

**REFERENCES**


Carter, E.W., L.S. Cushing, N.M. Clark and H.K. Craig, 2005. Effects of peer support interventions on students’ access to the general curriculum and social interactions. Research and Practice for Persons with Severe...
Cha-Gardiner, G., 2012. Implementing cooperative learning for young adolescents with visual impairment to improve social skills. AER international conference. Retrieved from slideplayer.com/slide/5793522/
Keef, S., 1999. Outlook on relations: Personal network and psychosocial characteristics of visual impaired adolescents. Amsterdam, Netherlands: Thelatessis

