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Theoretical review of visual impairment, study on the importance of creativity in education

Jose Enrique Llamazares de Prado*
Ana Rosa Arias Gago**
María Antonia Melcon Álvarez***

* Education Faculty. Collaborator of the education department. University of Leon.

** Dr. Teacher School of Education. Department of didactics. University of Leon.

*** Dr. Professor Department of Psychology. University of Leon. Education Faculty. University of Leon.

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Abstract

In the following work, it is raised the importance in education of key elements such as creativity and divergent thinking. This exhibition has as its main objective the review of studies on visual impairment and creativity. We propose a systematized reflection of the synthetic quantitative estimation of all the available studies, proposing a theoretical framework relating creativity in the education of students with visual deficiency, providing personal assessments. Within the conclusions drawn, the role of creative potential is evidenced, through divergent thinking in the creation of concepts and ideas, for problem solving, with interest not only in education but in any field of life.

Keywords: Visual deficiency, creativity, bibliographic review, inclusive education, divergent thinking.

Introduction

We can say that research is scarce (Arnheim, 1990, Tilley, 1991, Mitjás, 1996, 1997, Connell, 2000, Rodríguez, 2002, Checa, Díaz, and Pallero, 2003, Chinchilla, and Conejo, 2003, Lobato, Martínez and Molinos, 2003, Lorenzo, 2004, Díaz, 2005, Martínez, 2005a, 2005b, Dosio, 2007, sf, Runco, 2014, Toro, 2008, Heredia, 2009, Allen, 2010, Álvarez, 2010, Da Rosa, Goncalves and da Cunha, 2011, Moreno, Huijbregt, and Ramírez, 2012, Espinosa, 2014, Espinosa and Castillo, 2014, Peña, 2014, Aguês Da Cruz, 2016) that address the relationship between blindness and creativity, and even less about the effects caused by the deprivation of vision in the development of creative abilities or divergent thinking.

This scant interest is due to the false consideration that people with visual disabilities are unable to achieve interaction in a predominantly visual creative activity, without interest in the personal abilities of the persons or the development that can improve them or, said otherwise, art does not imply a development in the blind subject, since lacking the sense of sight, the development of the creative capacity, the sublime (Torretti, 2008) or the aesthetic experience is considered unfeasible. Today we know that this is not the case, although this foundation still remains rooted in some people and cultural institutions where little or nothing is given to provide a feasible inclusion, even when there are laws at European level (Art. 5, 24) [1] that promote inclusion (see López-Torrijo, 2009).

In this article we intend a theoretical review, investigating the importance in education of key elements such as creativity and divergent thinking, in order to review the studies of visual disability and creativity. By means of a systematized reflection of the synthetic quantitative estimation of all available studies, proposing a theoretical framework relating creativity

in the education of students with visual functional diversity, contributing personal valuations.

Education in creativity and divergent thinking is essential (Álvarez, 2010); aspects that immediately make us think about the Plastic Expression, being necessary at all levels of teaching to include the subjects that enhance creativity (Romero, 2013). Learning through creativity (Marina & Marina, 2013) becomes, in children with functional diversity, in a “meta-language”, facilitating experiences and educational progress.

Development of creativity and visual disability

For the development of creativity, certain specific elements must be present: previous knowledge, good working memory mechanisms, reasoning and appropriate language, and that these elements be in relation with the original ideas essential for the germ of new concepts (Arnheim, 1990, Tilley, 1991, Connell, 2000, Chinchilla, and Conejo, 2003, Lobato et al., 2003, Lorenzo, 2004, Díaz, 2005, Martínez, 2005a, 2005b, Heredia, 2009, Allen, 2010, Limiñana et al. al., 2010, Moreno et al., 2012, Espinosa, 2014, Espinosa and Castillo, 2014, Aguês Da Cruz, 2016).

In general, the characteristics best valued in creativity are those proposed by Guilford (1991; Romero, 2013); originality, flexibility and fluency. Other authors also agree with it (Chacón, 2005, López, 2008, De la Torre, 1981, 1991, Fernández, 2005). However, for some researchers there is a fourth element in relation to divergent thinking; it is elaboration (Amestoy de Sánchez, 1991, Penagos, 1995, 1997, Romo, 1997, Penagos and Aluni, 2000, Jiménez, Artiles, Rodríguez and García, 2007, Álvarez, 2010). In addition, other variables can be evidenced, such as an adequate context, a high intrinsic motivation, perseverance and ability to maintain the idea itself.

In the psychoeducational intervention of the programs for persons with or without problems, there stand out (factors such as) creativity training whose objective is to develop productive thinking, fluency, flexibility, problem solving, self-concept, communication and self-perception of own personal skills in the subject (Mitjás, 1997, Garaigordobil and Pérez, 2001, Riley, 2001, Malchiodi, 2003, Rubín, 2009, Limiñana et al., 2010, Rabbit and Chinchilla, 2010). There are few studies that address the effects that can occur with the loss of vision on the development of creative thinking skills.

Studies of the creative factor in people with visual disability

The studies presented below, which relate blind people and creativity, could be included in a specific selection: the correlation of mobility and creative thinking, creative inclusion, creative image, creative expression, the development of skills and artistic learning.

The correlation of mobility and creative thinking (De Bono, 2000) was raised by Tisdall, Blackhurst, & Marks (1971), which highlights an increase in mobility in blind children with a function of adaptation to risk patterns, constituting a demonstration of creative thinking (Al-Dababneh, al-Masa'deh, and Oliemat, 2015).

Researchers Byers-Lang and McCall (1993) addressed a study on creative inclusion in blind people in the childhood stage, with rehabilitation programs based on peer groups; they concluded that a greater development of creativity in blind children would increase the degree of corporal expression, since in certain cases, it is very difficult to approach the medium without the visual reference (Hodge & Eccles, 2013).

Regarding the research of Jansson (1988), this author analyzed the creative image comparing persons with visual deficit and persons with normal vision, using the "Onomatopoeia and Images" test. The results indicated that the persons with visual deficit have high scores in the configuration of the creative image in comparison with the persons with normal vision (Holmes, Hughes & Jansson, 1998).

The research of Lowenfeld and Brittain (1993) studied the subjective creative expression of blind subjects through sculptural work. For these authors, two differentiated models of creativity were distinguished, according to the dominant mental structure: the haptic model and the visual model. The results distinguished different means of expression for blind and persons

with normal vision, although they showed that the creative process is equivalent in both groups. Regarding the representation of the body image, the results indicated that the blind children had a lower degree of development in the body image, as well as less precise forms compared to the persons with normal vision (Witkin, Birhbaum, Lomonaco, Leher, & Herman, 1968; Millar, 1994; Dulin and Hatwell, 2006; Rubin, 2011; Pinguart and Pfeiffer, 2012; Bregagnolo, 2015).

The development of the capacities and the learning of artistic abilities in blind persons were approached by diverse authors. The musical capacity in relation to blind persons and with normal vision was raised by Pitman (1965), influenced by the theory of Revesz (1950) and using for their study the "Wing Test of Musical Intelligence." The results indicated that a high percentage of blind persons showed a greater musical capacity in comparison with the persons with normal vision, especially in the subtests in which the auditory perception intervened. This greater musical capacity in blind children did not have an equivalence with a high potential; however, it did correspond to a more complete development of that potential (Warren, 1994, Grunwald, 2008).

However, in a research with blind children in comparison with persons with normal vision of Halpin, Halpin & Torrance (1973), the results showed high values in flexibility, originality and fluency, in the actions of divergent thinking, concluding that blind subjects had a greater creativity (Rubin, 2011).

Another more recent study of body image in relation to blind persons, is that of Pinguart and Pfeiffer (2012); their results show that adolescents with visual disability and, especially, in adolescent women, had strong associations of body image with psychological well-being and harassment; in the case of women, they are more susceptible to body dissatisfaction than adolescent men, when they are not able to satisfy social norms about the "perfect" body.

Returning to the topic of sensory recognition, the research carried out on haptic exploration by Kennedy (1980) Vanlierde and Wanet-Defalque (2005) and the later study by Kennedy and Domander (1981); Warren (1994) showed that the recognition of objects is superior in blind subjects with acquired blindness, compared to congenital blind people.

In conclusion, from the analyzed studies it is derived that blind people obtain better results with respect to the mentioned variables in comparison with persons

with normal vision. However, they have a similar level of divergent thinking and creative process, in this case musical ability. On the other hand, blind people obtain worse results in the representation of body image than persons with normal vision. In this way, it is advisable to enhance those aspects that imply a level similar or inferior to the persons with normal vision, improving the didactics of people with visual disabilities.

The value of education through creativity in blind persons

Today there is great interest on the part of education, with special emphasis on inclusive education that concerns us, in using emotional intelligence and creativity as fundamental elements for personal, social development, in order to encourage greater involvement of individuals in society. Regarding: “Inclusive education must be an educational response given to people with functional diversity” (Lozano, Cerezo and Alcaraz, 2015: 21).

Within the educational context, creativity (Romo, 2012) is established as a process of activities considered artistic, but generally, without considering creative-divergent procedures. Therefore, creativity is: “A personal and original way of thinking, feeling and expressing that departs from current or surrounding sociocultural models and results in different, often original and valuable works in the different subjects” (De Prado, 1988, p.20, Fernández, nd).

The use of creativity as an element to improve the quality of education of persons with special educational needs is not a recent issue, the predecessors in this type of research were Houtz and Phillips (1976), Khatena (1976) and Uno, Gargiulo, Sears, Mauter & Rowe (1976); Duarte (2003), analyzing the contributions of the studies on creativity, as well as their incorporation into the teaching plans of the school curricula, specifically in subjects of education for people with disabilities, emphasizing the premise that no outstanding distinctions were shown in the dimensions of creativity. Arnáiz (2003) states:

The existence of a curriculum in which students with specific needs for educational support participate to the maximum extent possible is essential if we want schools to be for everyone. Therefore, a flexible, open and interdisciplinary curriculum is necessary so that all students can learn together, adopting a cooperative learning structure in which everyone is encouraged to cooperate, to help each other, to learn more and better (p.25).

Being able to give a more individualized adaptation when deemed necessary, and not develop parallel programs to the ordinary focused on a specific type of student (Díaz, 2009). In the didactic field, the inclusion of methods, activities, creative and artistic techniques in the teaching plan constitutes the intention to achieve a teaching for success (Garrido, 1988, Fernández).

In the field of blind students, due to the decrease in sensory input, learning occurs as a result of the reciprocal tactile-kinesthetic action and the auditory sense. The amount of information that the blind subject obtains from the environment is collected in a fragmentary way, unlike the persons with normal vision. This results in the importance of using these communication channels in teaching, highlighting the use of all the senses in education to promote multisensory education (Dosio,). In students with visual disabilities, the teacher’s performance in creative matters favors the adaptation to the real possibilities for each student, motivating them to elaborate concepts and develop activities based on knowledge and expressions (Fernández).

For Runco (2014), there are different reasons to enthusiastically raise the creative potential in students with special educational needs: on the one hand, this apparently is considerably diversified, as well as the importance of motivation in creative activities.

For Novaes (1979), it is essential to support the need for creative development by fostering a favorable environment for the expression and generation of ideas and innovations, emphasizing their applicability in the classroom, with emphasis on the beginning at early ages continuing throughout their formation (Frías, 2013), thus enabling improvement in other school subject areas. It is worth mentioning that all people possess a greater or lesser degree of creative potential capable of being developed. The difference at the time of manifesting creativity among the different subjects is due to inheritance and education.

The research of Sternberg and Lubart (1997) regarding creative capacity has shown that certain persons have high competences in a certain field of performance or in several ones, with which it is feasible to be endowed with creative capacity in a certain aspect and not be in other. Consequently, these authors affirm that segregating the less creative persons of the most creative does not make any sense. Being equally applicable to any type of student with or without disability.

Following Carpio (1999), a subject will be creative only in those environments in which he/she has

reached an adequate configuration of competences to solve problems. It is in education where basic competences are developed; however, it is necessary to set out the circumstances that make possible a diverse configuration and not exclusively a single solution.

In the book *Creative Atmospheres. Play, think and create*, Betancourt and Valadéz (2005) specify that a creative environment is one that fosters an adequate state of activation, both affectively and cognitively; and (that) facilitates the productive performance of group tasks.

There are diverse advantages of providing students with a creative environment in the aforementioned case, visual disability, with the elimination of barriers to be able to provide them with freedom without external conditioning, such as: improvement of their self-esteem, their self-concept, their motivation and expressive capacity, feel more secure and develop a better communication and generation of ideas, as well as an evident improvement in the way of expressing them. However, most studies suggest the need to investigate more in order to obtain solid results in research (Halder, and Datta, 2012, Mishra, and Singh, 2012, Datta, 2014, 2015).

From the contributions exposed in the work of Betancourt and Valadéz (2005), it is extracted the need that students can take advantage of personal abilities later, changing the role of teachers as protagonists by a more accessible role, regulating the tasks in a way closer, favoring the involvement of students without exclusion, but not forcing those who do not want, for shyness or shame, in addition to promoting the interest of the work to be attractive to students. These contributions coincide with those proposed in the Model for the Stimulation of Creative Thinking (MEPC for its initials in Spanish). The MEPC values creativity as an element of thought, as well as a competence of any person to a greater or lesser degree (Duarte, 2004).

We can highlight Marín (1995) as the main researcher who postulated the defense of creativity as a fundamental pillar in educational action; hypothesis that has more strength in a time of changes like the one we live in, where competitiveness and development have to be the best possible. Therefore, encouraging divergent thinking in teaching is a main resource for the progress of any educational center, in order to form students with more capacity for resolution, innovation and outputs to the limitations that are raised throughout their development.

It is evident that the curricular improvement of the centers is always possible, and that they have to be open to improvements and changes that provide a better development for their students; therefore, it is creativity; as defends De Prado (2003), an educational factor that enables students and teachers to reformulate ideas and images, rebuilding mental structures, in order to obtain a better reasoning through the elaboration of opinions and diverse ideas, relating personal experiences for configuring the creation of ideas, as well as project them in practice, solving obstacles.

In the branch of pedagogical practice, the terminology of creativity is understood as the progress of the capacities to have new and innovative conclusions that break down obstacles presented in the classroom. Regarding the definition of creativity in the educational field, De Prado (2003) mentions it as the human potential formed by cognitive, intellectual and affective elements through a creative environment is clearly perceived to produce new materials, with a huge social value, and transmit them within the social context. Integrating in this term the elementary properties of creativity such as: the subject, the process, the product and the environment (Garaigordobil and Torres, 1996, Monreal, 2000, Penagos and Aluni, 2000).

On the other hand, the definition applied by Penagos and Aluni (2000) defines it as the generation of elements and/or outstanding behaviors for a scarce knowledge or a fact that requires skill. Understanding from the idea of production when the assessment of creativity is given a prominent value to the skill that would lead to the result or final product of the idea.

On the other hand, Mendoza, (2001) and Rosa, (2008), maintain the theory of González and Mitjás (1999) affirming: “Creativity is a process of discovery or production of something new that meets certain social demands and in which occurs the link of the cognitive and affective aspects of the personality” (p.24). In conclusion, finding or discovering the novelty where there are some social patterns of demand that delimit that something can be considered creative, as well as the importance of the emotions and personality of the artist embodied in the configuration of the creative idea.

Even recognizing that creativity is an element with diverse meanings, it is appropriate to understand certain properties of creative processes (De la Torre and Marín, 2003); these can be summarized as follows: the creative act is intrinsically exclusive of man, subjects through their actions reflect ideas, feelings, emotions; equivalently, this action is deliberate, directed, with a

purpose, to obtain solutions regarding the limitations and obstacles, externalize ideas or execute a thought. Humankind are distinguished by inferring premeditation in the most relevant events. Which leads us to conclude that the transfer of information in the execution and the formation of new ideas plays a crucial role in creativity; without transmission, they are left without the main element of communication; creativity as such is more than the factor of inspiration, it has to reconfigure the environment or that which surrounds us through the mind of humankind, and be able to transfer these ideas through the creative act, changing the signs by signs, with a strong originality and novelty load; in such a way it is written by the researchers (Tisdall, Blackhurst & Marks, 1971, Halpin, Halpin & Torrance, 1973, Rubin, 2011, Giudice, 2013, Al-Dababneh, al-Masa'deh, and Oliemat, 2015) as the competence to draw conclusions of innovative and singular thinking, evaluating these determining elements of divergent thinking.

In creativity, emotion plays an important role; and therefore, emotional processes. Currently, it is sought to promote its applicability in the classroom in order to improve school curricula through emotional management, encouraging empathy, an elementary pillar if we want innovative schools. In this sense, it is worth mentioning as an example the "Change Maker" centers: Sadako School, and Amara Berri, deciding what students want to learn by exponentially increasing their motivation and interest in what they learn, and also teaching students to use their own language to share it with others (see Pérez-Pereira & Conti-Ramsden, 2013). Nowadays, the theory of Gardner (2011), multiple intelligences, plays an important role, emotional education and technology for the development of an educational improvement, in the formation of innovative schools.

Creative activity has a changing condition, the creative subject values the environment, influences it, restructures it, adapts it according to its criteria, achieving an innovative change. In the didactic field, the action of teachers plays a vital role (Nuñez, 2001, Rodríguez, 2003, Caballo and Núñez, 2013) in terms of adequacy, as the relation of the contents of the school curricula with respect to the groups of students who have, valuing the interests and virtues, as well as the needs of each student. They must be endowed with creative autonomy, without creative blocks (Muñoz, 2015), in an environment that provides a feeling of security to express any idea or emotion without fear of ridicule, in contrast to students where (in whom) the standard model of execution predominates, since they are not able to create or innovate outside of the norm.

The progress of each subject that develops an artistic activity is linked to personal experiences; consequently, it has to be treated from an individual perspective, and it is not related to age. In addition, the important thing is the creative process and not the material result. Therefore, giving strict guidelines for a specific population model is not feasible; in spite of this, all the studies (Checa et al, 2003, Tapia, 2007, MEC, 2012) show that the development of blind students is equal to that of persons with normal vision; in certain cases, this development can be calmer; nevertheless, it is necessary to demonstrate that it is until the period (age) of thirteen years when the parameters of development are equalized. On the other hand, certain persons with disabilities to a greater extent can develop creative skills, compared to persons without disabilities (Rocío, 2011).

We can finish this section by saying:

"All children have the right to education and everyone should be given the opportunity to reach and maintain their full potential in terms of cognitive, emotional and creative ability; learning, whenever possible, together, regardless of characteristics, interests, ability and learning needs of each student" (Pujolás, 2010).

Conclusions

Education is a basic pillar of any society; therefore, it must be accessible to everybody. Through this, creativity can be enhanced (Giudice, 2013); and with it, divergent thinking, facilitating the formation of new ideas and concepts, as well as new ways to solve problems, with interest not only in school applicability, but for any area of life in general.

The use of creativity not only implies benefits for students, but also for the teachers themselves (see Bae, Song & Kim, 2012) through continuous training, enabling the development of creative intelligence with a greater development of divergent thinking, and greater contact with students with exercises that involve the active participation of students and teachers through cooperative exercises such as *brain storming*, *brain writing*, *six hats to think*, *method 635*, etc... The possibilities in the teaching staff imply a better predisposition to the formation of new ideas, a more open mentality, innovative approaches, proposals to improve the adaptation of school curricula, making possible an improvement in education.

Analyzed the following studies, it is of vital importance the creative applicability in the school context; we can mention the work of Kirst (2010) and Da Rosa

Goncalves and da Cunha (2011), qualitative in nature, it was performed in the case of the work done by Kirst (2010), a workshop experience of Contemporary Art for blind and persons with normal vision. With the creation of didactic material, the two types of students interacted with the materials that aroused a collective dialogue with art. In the analysis of the data, it was observed that blind persons can get to know the contemporary art by means of multisensory learning, as well as in the works that need little or no adaptation; it can be applied in the classrooms in both formal and non-formal education, using approaches that are applicable both to the visually impaired and to persons with normal vision.

Another study of creative didactic aspect in people with visual disability is the treaty by Ruiz (2004), where a program of teaching innovation is established from the school and museum, integrated into a teaching innovation project of the University of Seville, instructing university students about the most effective way to guide and help a blind person in capturing works of art.

Artistic activities with blind and visually impaired children in workshops corroborate that they have a creative development that connects them with the instructors of that workshop, providing a development in the personality of each student body. These actions in workshops provide circumstances similar to those of the game, giving them a better expressiveness to show their ideas and thoughts, either by the narrative or by the written or drawn creation. By facilitating the understanding of different arts, an improvement in different ways of expression is encouraged. It is worth mentioning two artists from the USA: R. Nachum, who combines poetics with Braille in his oil paintings; and L. Brozgol, who teaches ceramics to blind persons.

It must be said that in the history of art, there are examples of artists: Cassatt, Degas, Monet, Munch, O'Keeffe, Pissarro, who suffered some visual disability at some point in their lives, and this did not stop them from developing and improving as artists; they even improved the artistic creation of their time. This study is reflected in the research of Arqué (2005), which shows the topical preconceptions of sensory limitations, which do not diminish the validity and importance of their aesthetic proposals. However, proposals have been developed for an improvement in cultural inclusion that get closer to these approaches in U.S.A. like the *Moma* or the *Metropolitan*. In Spain, it is worth mentioning the didactic experience at the Museum of Cádiz reflected by García (1989) in *Notebooks of the Southeast (Cuadernos del Sureste, Moreno et al., 2012)*.

We have to understand that art is an educational tool as valid as others, being also an instrument for personal improvement and growth, as well as a means of integration for the different educational fields. The use of art in education favors the development of personal skills, motivation, self-confidence, self-awareness and the generation of ideas, facilitating the resolution of problems, favoring a more developed work where the anxiety factor is not it is an obstacle, as well as the increase of personal self-esteem by the achievements or facts obtained or seeing what oneself can develop. Being these aspects very important in the applicability of the classroom for any school discipline, enhancing creativity helps the management and decision making of the various subjects, as well as the resolution of them.

As a proposal for improvement, within schools and cultural centers there should be encouraged and fostered the development of creative and aesthetic contact through direct contact, as well as the in situ bonding with artists and professionals while they make their compositions, facilitating access groups of people with visual disabilities to develop the creative potential and to be able to experience and learn first-hand about creative contact, being able to develop the ability to express their ideas, thoughts and feelings in the work of art. In addition, the sensitization factor of persons with normal vision would play an important role, being able to facilitate cultural tours with sensorial inhibition (an invisible look of what surrounds us), for learning to recognize the forms through the haptic system, as well as smells or sounds, achieving greater empathy and awareness of people who sometimes do not appreciate that in our society there are people with functional diversity in this visual case.

For future lines of research, we consider that in terms of enhancing creativity a development would be achieved through activities such as: the exercise of memory, synesthesia, neuro-linguistic programming, theatrical action and dance.

Being able to demonstrate the benefits of memory exercise, especially in the early care of students with disabilities, under the cooperation of the school and the home, facilitating the educational progress of this type of students under a unified and common educational discourse, later in higher courses to work with the association of memory and art, through practical exercises, highlighting in the creative activity in the creative process the use of memory and imagination, to move from haptic perception and memory, the experience acquired by persons with visual disability,

as well as their feelings and emotions, through the composition of artistic works. **[Este párrafo es confuso; contiene varias ideas cuyo propósito no es claro.]**

Secondly, to develop the implications of synesthesia or fusion of the senses (Salas, 2015), described as a set of cognitive states in relation to the union of the senses, or in other words, understood as the art of seeing music, smell colors or touch emotions, nothing studied in people with disabilities (which has not been studied in people with disabilities). It is a hyperactivity of different areas of the brain, it is a genetic mutation but it can also equip the subject with appropriate cultural tools; the researcher García (2008) developed a synesthetic subject for the conservatory of the city of Seville, with a theoretical base and other practice with the union of music and various scenic acts, for the artistic field should be stated: “The wealth of modalities of crossed senses presented by synesthesia is a metaphor of the association of ideas and cross-disciplinary techniques that drive both neurological methodology and Art” (García, 2008: 5).

In addition, we currently have the possibility of using digital art and technological elements to develop this type of synesthetic art (Hertz, 2006), by means of machines that relate our senses (Layden, Söffing & Schmidtke, 2015) to a particular interpretation of what surrounds us, being able to be used for the increase of perception, analysis or the way of linking or remembering elements linked to other components such as sensations or emotions that generate us at the moment of perceiving them. Thus, the creation of specific materials can be given in the bet of the multisensory contemporary art or the cooperation of the own students in the creation of this material for its later delight.

On the other hand, within the current of neuro-linguistic programming, a method at the service of emotional intelligence and emotional management, it is worth noting the distinction that each person has a sensitive channel to understand what surrounds them and relate to the people who they surround, being some people more visual, others more auditory and a third group more tactile (Romo, et al., 2006). Depending on the level of development if it predominates in one of the previous ones, it will determine the way in which we learn and acquire information about what surrounds us and the relationship of our preferences and personal tastes, in such a way that they play a prominent role depending on the personality. Therefore, we believe that a comparative study of these characteristics with

persons with visual disability and without disabilities could provide useful information for the state of science and could support emotional management in the classroom through neuro-linguistic programming.

On the other hand, with the use of intergenerational models with cognitive improvement, it can be very useful for the state of science to be able to measure the differences that the artistic implementation supposes from the point of view of the use of psychological batteries. Being able to give a learning that can group several generations, with theatrical activities developed to enhance creativity, improvisation and benefited by the own experience of the elderly.

In the case of students with visual impairment, blindness and (or) low vision, it is especially important to enhance the corporal expression, in representations that manage to join the dance together with the theatrical workshops, there are examples like: Peru, under the direction of the Dr. Llanos Zuloaga (see, Llanos, 2006) in the development of the “*Dance of life or bio-dance*”, especially for blind women, but has not yet linked with theatrical performances and the opportunities it represents for the exhibition of works represented both with members with disabilities and without them, thus achieving an authentic artistic inclusion.

In other countries, like Mexico, in Puebla, under the title “*the other sky, dance from blindness*” is a show inspired by two poems by Mario Benedetti: *Do not give up* and *Oro cielo*, accompanied by music of Chopin, Ryuchi Sakamoto, Rene Aubri and Claude Debussy, under the direction of the psychologist, Lorena Nieva Bernal is committed to intergenerational participation with 41 dancers aged between 8 and 84 years.

It is worth mentioning, in terms of inclusive international cooperation, in Mexico, Puebla “*My Dream*”, a group of Artists with Disabilities of China (GADC), which combines art in its different modalities, combining the talents of more than 40 artists with disabilities. Power develop movements of cultural exchange between countries, with professionals with disabilities is a step that we have to take into account, to be able to provide society with the inclusive advances it deserves and enrich us of the possibilities offered by this cultural possibility.

References

Arnáiz, P. (2003). *Educación inclusiva. Una escuela para todos*. Málaga: Aljibe.

- Arnheim, R. (1990). Aspectos perceptuales del arte para ciegos. *Journal of Aesthetic Education* 24, 3.
- Aguês Da Cruz, S. D. (2016). *Do paradigma do ver ao do tocar. O devir háptico na criação artística contemporânea*. Tesis doctoral no publicada. Universitat Politècnica de València. doi:10.4995/Thesis/10251/61441.
- Al-Dababneh, K., al-Masa'deh, M. y Oliemat, E. (2015). The effect of a training programme in creativity on developing the creative abilities among children with visual impairment. *Early Child Development and Care*, 185(2), 317-339.
- Allen, P. (2010). *Arte-terapia: guía de autodescubrimiento a través del arte y la creatividad*. Madrid: Gaia.
- Amestoy de Sánchez, M. (1991). *Desarrollo de habilidades de pensamiento: Creatividad*. Guía del instructor. (1ª Ed.). (UAN). México, D. F.: Trillas.
- Arqué, L. (2005). Arte Ceguera. *Integración*, 45, 17-24. Once.
- Álvarez, E. (2010). *Creatividad y Pensamiento Divergente. Desafío de la mente o desafío del ambiente*. Interac. Recuperado de: http://www.academia.edu/7684124/CREATIVIDAD_Y_PENSAMIENTO_DIVERGENTE_Desaf%C3%ADo_de_la_mente_o_desaf%C3%ADo_del_ambiente.
- Bae, S., Song, J. & Kim, H. (2012). Teachers' creativity in career technical education: The mediating effect of knowledge creation practices in the learning organization. *The Korean Social Science Journal*, 39(1), 59-81.
- Betancourt, J. y Valadéz, M. (2005). *Atmósferas creativas. Juega, piensa y crea*. Ciudad de México: Manual Moderno.
- Bregagnolo, E. N. (2015). *Taller "la educación inicial"* (Doctoral dissertation, Universidad Nacional del Nordeste). Recuperado de http://hum.unne.edu.ar/academica/ambientacion/modulos/modulo_inicial.pdf.
- Byers-lang, R. E. & McCall, R. A. (1993). Peer support groups: Rehabilitation in action. *Review: Rehabilitation and Education for Blindness and Visual Impairment*, Vol. 25(1), 32-36.
- Caballo, C. y Núñez, M. (2013). Personas con discapacidad visual. En Verdugo, M.A. & Schalock, R.L. *Discapacidad e inclusión: manual de docencia*. Salamanca: Amaru Ediciones.
- Carpio, C. (1999). La creatividad como conducta. En Bazán, A. (comp) *Aportes conceptuales y metodológicos en Psicología Aplicada*. Ciudad de México: Instituto Tecnológico de Guadalajara.
- Connell, J. (2000), Aesthetic experiences in the school curriculum, Assessing the value of Rosenblatt's transactional theory, *Journal of Aesthetic Education*, 34, (1), 27-35.
- Conejo, I. y Chinchilla, M. (2010). ¿Puede la terapia artística servir a la educación? *EA, Escuela abierta: revista de Investigación Educativa*, (13), 69-96.
- Chacón, Y. (2005). Una revisión crítica del concepto de creatividad. *Revista actualidades investigativas en educación*, 5(1). pp. 1-30. DOI: <http://dx.doi.org/10.15517/aie.v5i1.9120>.
- Checa, J., Díaz, P. y Pallero, R. (2003). *Psicología y Ceguera. Manual para la intervención psicológica en el ajuste a la deficiencia visual*. Madrid: Once.
- Chinchilla, M. y Conejo, I. (2003). Creatividad, expresión y arte: Terapia para una educación del siglo XXI. Un recurso para la integración. *EA, Escuela abierta: revista de Investigación Educativa*, (6), 129-148.
- Da Rosa, M., Goncalves, I. y da Cunha, S. (2011). El Profesor de Arte para Niños Ciegos: Prácticas Pedagógicas en Dos Realidades. Brasil: UDESC. Recuperado de: <http://www.saece.org.ar/docs/congreso4/trab24.pdf>.
- Datta, P. (2014). Self-concept and vision impairment: A review. *British Journal of Visual Impairment*, 32(3), 200-210.
- Datta, P. (2015). Autoconcepto y discapacidad visual: una revisión bibliográfica. Madrid: Once.
- De Bono, E. (2000). *Pensamiento creativo: El poder del Pensamiento Lateral. Manual de creatividad*. Argentina: Editorial Paidós Plural.

- De Prado, D. (1988). *Técnicas creativas y lenguaje total*. Madrid: Narcea.
- De Prado, D. (2003). *La creatividad, motor de la renovación esencial de la educación*. Educrea Universidad de Santiago de Compostela: Lubrican.
- De la Torre, S. (1981). *Creatividad: Qué es, cómo medirla, cómo potenciarla*. Barcelona: Sertesa.
- De la Torre, S. (1991). *Evaluación de la creatividad*. Madrid: Escuela Española.
- De la Torre, S. y Marín, R. (2003). *Manual de la Creatividad*. Barcelona: Ediciones Vicens Vives.
- Díaz, A. M. (2005). *Metodología para la educación artística en niños ciegos y baja visión*. Santiago, Chile: Escuela de Niños Ciegos Santa Lucía Recuperado de http://www.santalucia.cl/archivos/ponencia_arte_ceguera.doc.
- Díaz, M. (2009). El Alumnado con Deficiencia Visual. Necesidades y respuesta educativa. *Innovación y Experiencias Educativas*. (14).1-8.
- Dosio, P. (2007). Apuntes sobre el arte de los no videntes. Folleto Vicerrectoría Académica, Biblioteca Mario Carvajal, Área Cultural, Universidad del Valle: Colombia. Recuperado de <http://www.minedu.gob.pe/webdipecud/download/Apuntes%20sobre%20el%20arte%20de%20los%20no%20videntes.doc>.
- Dosio, P. (0000.). *La educación y los no videntes*. Recuperado de <http://www.pasoapaso.com.ve/index.php/unadecadaretratando/item/480La%20educaci%C3%B3n%20y%20los%20no%20videntes>.
- Dulin, D. y Hatwell, Y. (2006). The effects of visual experience and training in raised-line materials on the mental spatial imagery of blind persons. *Journal of Visual Impairment & Blindness (JVIB)*, 100, (07) 414-424.
- Duarte, E. (2003). Creatividad como un recurso psicológico para niños con necesidades educativas especiales. *Sapiens: Revista Universitaria de Investigación*, 4(2), 13-32.
- Duarte, E. (2004). *Educación, aprendizaje y cognición. Teoría en la práctica*. En S. Castañeda (Coord.) Modelo para la Estimulación del Pensamiento Creativo. Ciudad de México: Manual Moderno. pp.501-514. Recuperado de http://www.psicologia.uady.mx/documentos/publicaciones_libros/MODELO_PARA_LAESTIMULACION.pdf.
- Espinosa, R. (2014). El proceso creativo de personas invidentes como una forma de expresión comunicativa. *Creatividad y sociedad: revista de la Asociación para la Creatividad*, (22), 6-34.
- Espinosa, R. y Castillo, H. (2014). Análisis y evaluación de la generación de iconos mentales en personas invidentes a partir de la percepción virtual táctil utilizando realidad virtual y sistemas hápticos. *Icono14*, 12(2), 295-317.
- Fernández, E. R. (0000). *La Creatividad en la educación de alumnos con necesidades educativas especiales*. Recuperado de <http://www.iacat.com/revista/recreate/recreate01/elena.htm>.
- Fernández, E. (2005). *La creatividad en el desarrollo de los niños ciegos*. Universidad de Santiago de Compostela: Creación integral.
- Frías, P. (2013). Encrea: docentes con entrenador personal en creatividad Estudio de caso único con línea base múltiple. *Creatividad y sociedad: revista de la Asociación para la Creatividad*, (21), 4-27.
- Gardner, H. (2011). *Las inteligencias múltiples: La Teoría en la práctica*. Barcelona: Paidós.
- Garaigordobil, M. y Torres, E. (1996). Evaluación de la creatividad con sus correlatos con inteligencia y rendimiento académico. *Revista de Psicología*, 18 (1), 87-98.
- Garaigordobil, M., y Pérez, J.I. (2002). Efectos de la participación en el programa de arte Ikertze sobre la creatividad verbal y gráfica. *Anales de psicología*, 18(1), 95-110. Recuperado de: <http://revistas.um.es/analesps/article/viewFile/28631/27721>.
- García, J. M. (1989). Una experiencia didáctica con invidentes en el Museo de Cádiz. *Cuadernos del Sureste*, (1), 46-47.
- García, P. (2008). La construcción sinestésica como obra de Arte. *Recreate Revista Internacional de Creatividad aplicada del grupo IACAT Compostela*. 8, 1-13.
- Garrido, J. (1988). *Cómo programar en educación especial*. Madrid: Escuela Española.
- González, F. y Mitjans, A. (1999). *La Personalidad, su Educación y Desarrollo*. La Habana. Cuba: Editorial Pueblo y Educación.

- Grunwald, M. (Ed.). (2008). *Human haptic perception: Basics and applications*. Birkhäuser: Springer Science & Business Media.
- Guilford, J. (1991). *Creatividad y Educación*. Barcelona: Paidós.
- Giúdice, M. (2013). Educación, discapacidad y el desarrollo de la creatividad. *Journal for Educators, Teachers and Trainers*, 5(1), pp. 90-102.
- Halder, S, & Datta, P. (2012). An exploration into self concept: A comparative analysis between the adolescents who are sighted and blind in India. *British Journal of Visual Impairment*, 30 (1), 31-41.
- Halpin, G., Halpin, G., & Torrance, E. P. (1973). Effects of blindness on creative thinking abilities of children. *Developmental Psychology*, 9(2), 268.
- Heredia, M. (2009). *Artes Plásticas: La comunicación de la experiencia artística en las personas con ceguera*. (Tesis inédita de doctorado). Instituto Universitario Nacional del Arte I.U.N.A. pp. 1-64. Recuperado de http://www.arteuana.com/talleres/tesis/Tesis-Maria_Cristina_HEREDIA_BASAIL.pdf
- Hertz, P. (2006). Synesthetic Art- An Imaginary Number?. *Leonardo*, 32 (5), pp. 399-404 doi: 10.1162/002409499553460.
- Hodge, S. & Eccles, F. (2013). Loneliness, social isolation and sight loss: a literature review conducted for Thomas Pocklington Trust. pp. 1-44. Lancaster University. Recuperado de http://eprints.lancs.ac.uk/68597/1/loneliness_social_isolation_and_sight_loss_final_report_dec_13.pdf.
- Holmes, E., Hughes, B. & Jansson, G. (1998). "Haptic perception of texture gradients" *Perception* 27(8) 993-1008.
- Houtz, J.C. & Phillips, R.H. (1976). Open-Ended Problem-Solving and Creativity of Disadvantaged Children. *The Journal of Creative Behavior*, (3). 223.
- Jansson, G. (1988). What are the problems with pictures for the blind, and what can be done to solve them?, In: MagnCe, C. W. M. Vlaskamp, F. J. M. Soede M. and Butcher G. (Eds) *Man-Machine Interfaces, Graphics and Pructical Applications*. London:Royal National Institute for the Blind.
- Jiménez, J., Artiles, C., Rodríguez, C. y García, E. (2007). *Adaptación y Baremación del Test de Pensamiento creativo de Torrance: Expresión Figurada*. Educación Primaria y Secundaria. Canarias: Consejería de Educación, Cultura y Deportes del gobierno de Canarias.
- Khatena, J. (1976). Creative Imagination Imagery: Where is it going?. *The Journal of Creative Behavior*, 10(3).189-192.
- Kennedy, J. M. (1980). Blind people recognizing and making haptic pictures, en Hagen M. A. (de.), *The perception of picture*, 2, New York: Academic Press.
- Kennedy, J. M., & Domander, R. (1986). Blind people depicting states and events in metaphoric line drawings. *Metaphor and Symbol*, 1(2), 109-126.
- Kirst, A. C. (2010). *As aprendizagens do público com deficiência visual: uma experiência de diálogo com a arte contemporânea*. Dissertação de Mestrado: Florianópolis: Udesc.
- Layden, T., Söffing, C. & Schmidtke, K. (2015). Comparing the Shape of Sounds: An artistic investigation. *V International Conference on Synesthesia, Science and Art*, Alcalá la Real, 16-19th May. Spain. Recuperado de https://www.researchgate.net/profile/Christine_Soeffing/publication/299657988_Comparing_the_Shape_of_Sounds_An_artistic_investigation/links/5703f1d308ae44d70ce05b86.pdf.
- Lobato, S., Martínez, M. y Molinos, I. (2003). El desarrollo de habilidades en las personas con necesidades educativas especiales a través de la expresión plástica. *EA Escuela Abierta: Revista de Investigación Educativa*. N° 6, 47-70.
- Lorenzo, J. (2004). *La educación artística del deficiente visual. Análisis específico del lenguaje plástico*. (Tesis inédita de doctorado). Universidad de La Laguna.

- López, O. (2008). Enseñar creatividad. El espacio educativo. *Cuad. Fac. Humanid. Cienc. Soc.* 12, 49.
- López-Torrijo, M. (2009). La Inclusión educativa de alumnos con discapacidades graves y permanentes en la Unión Europea Educational inclusion of students with severe and permanent disabilities in the European Union. *RELIEVE. Revista electrónica de investigación y evaluación educativa*, 15(1), 1-20.
- Lowenfeld, V., & Brittain, W. L. (1980). *Desarrollo de la capacidad creadora*. (2º Ed.). Buenos Aires: Kapelusz.
- Lozano, J., Cerezo, M. y Alcaraz, S. (2015). *Plan de Atención a la Diversidad*. Madrid: Alianza.
- Llanos, M. (2006). Celebrando la luz de la ceguera. Experiencia pionera en biodanza con adultos ciegos. Lima, Perú. Recuperado de <http://www.monografias.com/trabajos-pdf5/biodanza-y-discapacidad-celebrando-luz-ceguera/biodanza-y-discapacidad-celebrando-luz-ceguera.shtml>.
- Limíñana, R., Bordoy, M., Juste, G. & Corbalán, F. (2010). Creativity, intellectual abilities and response styles: Implications for academic performance in the secondary school. *Anales de Psicología/Annals of Psychology*, 26(2), 212-219.
- Malchiodi, A. (2003). *Hand book of art Therapy*. New York: the Guilford press.
- Marín, R. (1995). *La Creatividad: diagnóstico, evaluación e investigación*. Madrid: UNED.
- Marina, J. y Marina, E. (2013). *El aprendizaje de la creatividad*. Barcelona. Ariel.
- Martínez Abellán, R. (2005a). Deficiencia visual, creatividad, expresión y terapias artísticas (I). *Polibea*, (74), pp. 15-26.
- Martínez Abellán, R. (2005b). Deficiencia visual, creatividad, expresión y terapias artísticas (II). *Polibea*, (75), pp.29-43.
- MEC (2012). Ministerio de Educación. Educación Inclusiva: Personas con Discapacidad Visual. Módulo 3: Desarrollo Evolutivo.
- Mendoza, Y. (2001). El maestro creativo. Algunas reflexiones en torno a su existencia. *Educere*, 5(15). Recuperado de: <http://www.saber.ula.ve/handle/123456789/19641>.
- Millar, S. (1994). *Understanding and representing space: Theory and evidence from studies with blind and sighted children*. Oxford UK : Oxford University Press.
- Mitjás, A. (1996). Creatividad en la educación especial. *Siglo XXI. Perspectivas de la educación desde América Latina*, 2(5), 28.
- Mitjás Martínez, A. (1997) Creatividad y educación especial. En Betancourt, J. Morejón, A. Mitjás Martínez, S. de la Torre, P. Solís. Cámara Resendiz *Pensar y Crear. Educar para el cambio*. (71-88) La Habana. Académica.
- Mishra, V. & Singh, A. (2012). A comparative study of self-concept and self-confidence of sighted and visually impaired children. *Internacional Journal of Multidisciplinary Management studies*, 2 (2), 148-157.
- Monreal, C. (2000). *Qué es la creatividad*. Madrid: Biblioteca Nueva. 57-62.
- Moreno, M., Huijbregt, L. y Ramírez, A. (2012). Conocimiento estético y percepción háptica en la experiencia del arte como motor en las relaciones humanas. *Red Visual*, 17 15-22. Recuperado de http://www.redvisual.net/images/PDF/17/redvisual17_02_moreno-huijberg-ramirez.pdf.
- Muñoz, A. (2015). *Manual de creatividad (Textos Docentes)*. Madrid: Fundación Universitaria San Pablo CEU, 1.
- Novaes, M.H. (1979). *Psicología de la aptitud creadora*. Buenos Aires: Kapelusz, Argentina.
- Núñez, M. (2001). La deficiencia visual. En Memorias del III Congreso “La atención a la diversidad en el sistema educativo”, Universidad de Salamanca, Instituto Universitario de Integración en la Comunidad. ONCE. Recuperado de <https://campus.usal.es/~inico/actividades/actasuruguay2001/10.pdf>.
- Penagos, J. C. (1995). *Efectos de los procesos de comunicación profesor alumno y de la práctica de técnicas de autoconciencia, en niños, sobre el aprendizaje; una aproximación epistemológica experimental hacia el constructivismo* (Doctoral dissertation, Tesis de maestría no publicada. Puebla. Cholula: Universidad de las Américas).
- Penagos, J. (1997). El origen de la creatividad. *Calidad y Excelencia*, 2(13), 4-8.

- Penagos, J. y Aluni, R. (2000). Creatividad, una aproximación. *Revista Psicología* (Edición Especial), 1-8.
- Peña, N. (2014). *Otras visualidades: crear y enseñar fotografía desde la percepción invidente*. (Tesis inédita de doctorado). Universidad Complutense de Madrid. 29-110.
- Pérez-Pereira, M. & Conti-Ramsden, G. (2013). *Language development and social interaction in blind children*. Psychology Press.
- Pitman, D. J. (1965). The musical ability of blind children. *Review of Psychology of Music*. Vol. 2(2), 19-28.
- Pinquart, M. & Pfeiffer, J. P. (2012). Body image in adolescents with and without visual impairment. *British Journal of Visual Impairment*, 30(3), 122-131.
- Pujolás, P. (2010). No es inclusión todo lo que se dice que lo es. *Aula de innovación educativa*, n.º 191, 38-41.
- Revesz, G. (1950). *The psychology and art of the blind*. London: Longmans Green.
- Riley, S. (2001). Art therapy with adolescents. *The Western Journal of Medicine*, 175 (1), 54. Recuperado de: <http://www.ewjm.com/cgi/content/full/175/1/54>.
- Rocío, G. (2011). La cultura NO es para todos. De cómo abordar desde una perspectiva educativa y social la atención a la diversidad utilizando como vehículo el Arte. Temas para la Educación, *revista digital para profesionales de la enseñanza*, N° 14. pp 1-7.
- Rodríguez, J.A. (2002). *La mente de los creadores. Un estudio de los procesos creativos desde la neurociencia y la psicología*. Madrid: Biblioteca Nueva.
- Rodríguez, A. (2003). Integración escolar de alumnos con deficiencia visual en España: Algunas sugerencias espaciales y contribuciones tecnológicas y tiflotecnológicas. *Estudios pedagógicos* (Valdivia), (29), 143-153.
- Rosa, B. (2008). Estrategias docentes en el desarrollo de la creatividad escolar. *REDHECS: Revista electrónica de Humanidades, Educación y Comunicación Social*, 3, (5), pp. 65-76.
- Romo, M. (1997). *Psicología de la creatividad*. Barcelona: Paidós.
- Romo, M. E., López, D. y López, I. (2006). ¿Eres visual, auditivo o kinestésico?: Estilos de aprendizaje desde el modelo de la Programación Neurolingüística (PNL). Universidad de Chile. *Revista Iberoamericana de Educación*, 38(2), 6. Recuperado de: <http://rieoei.org/1274.htm>.
- Romo, M. (2012). Algunas investigaciones sobre el impacto de la creatividad en el ámbito educativo. *Good Morning Creativity*, 123.
- Romero, S. (2013). Creativity in education, its development from a pedagogical perspective. *Journal of sport and health research*, 5(2), 221-228.
- Rubin, J.A. (2009). *Introduction to Art Therapy*. Londres: Routledge.
- Rubin, J.A. (2011). *Child art therapy. 25 th Anniversary Edition*. New York: John Wiley & Sons. 90-110.
- Runco, M. A. (2014). *Creativity: Theories and themes: Research, development, and practice*. Elsevier.
- Ruiz, M. (2004). Discapacidad y sociedad: un programa educativo en el museo dirigido a personas con discapacidad visual. *Revista de Enseñanza Universitaria*, (23), 47-62.
- Salas, J. (2015). Sinestesia y arte. Hacia la autoinvestigación creativa. (Tesis doctoral). UGR. Recuperado de: <https://hera.ugr.es/tesisugr/25934922.pdf>.
- Sternberg, R. y Lubart, T. (1997). *La creatividad en una cultura conformista. Un desafío a las masas*. Barcelona: Paidós.
- Tapia, I. C. (2007). *Psicología de la ceguera*. Recuperado http://www.integrando.org.ar/datosdeinteres/it_psicologia_ceguera.htm.
- Tisdall, W. J., Blackhurst, A. E., & Marks, C. H. (1971). Divergent thinking in blind children. *Journal of educational psychology*, 62(6), 468.
- Tilley, P. (1991). *El arte en la educación especial*. Barcelona: Ceac.
- Toro, J. (2008). La creatividad del “co-razón”. *Creatividad y sociedad: revista de la Asociación para la Creatividad*, (12), 6-20.

- Torretti, R. (2008). Pseudo-Longino, De lo sublime. Traducción de Eduardo Molina C. y Pablo Oyarzun R. Noticia Preliminar, Notas e índices de Pablo Oyarzun R. *Revista de filosofía*, 64, 264-265.
- Uno, T., Gargiulo, R. M., Sears, J. D., Mauter, M & Rowe, J. (1976). Creative Behavior of Trainable and Educable Mentally Retarded Adolescents. *The Journal of Creative Behavior*, 10 (3). 221.
- Vanlierde, A. & Wanet-Defalque, M. (2005). The role of visual experience in mental imagery. *Journal of Visual Impairment & Blindness (JVIB)*, 99 (03) 165-178.
- Warren, D. (1994). *Blindness and children: An individual differences approach*. Cambridge: University Press.
- Witkin, H. A., Birnbaum, J., Lomonaco, S., Lehr, S., & Herman, J. L. (1968). Cognitive patterning in congenitally blind children. *Child Development*, 39, 767-786.

Footer

[1] Equality and non-discrimination (Article 5), Inclusive Education (Article 24). (www.inclusion-europe-org/en/rights). The ONCE and its Foundation have contributed to the design and defense of the new European Disability Strategy 2010-2020, which links its proposals to the EU2020 Strategies, from the ONCE and its Foundation, there are provided strategies and claims to the future European Accessibility Law.