ARTICLE

Incorporation of Media Arts for Chilean Young Students With Special Learning Needs

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ARTICLE INFO	ABSTRACT
	The present informal study of Information and Communication Technology (ICT) in special education through media arts. There are deep inequalities in the access of new technological opportunities and adaptive user experiences for students with special learning needs. Our goal as teacher educators is to improve enhance autonomous learning using the complementary subject of media arts. This new educational proposal aims to solve the technology usability problems for students with disabilities. The personalized autonomy of students' use technology in school learning is a key strategy for students with disabilities. For this study as with many schools, the technology resources and educational services to implement digital skills and new ICT teaching-learning strategies for the complementary subject of media arts is not available. Finally, implementing these digital skills is an essential part of the educational-labor system for adolescent students with disabilities.

1. Introduction

1.1. Presentation and Justification of the Problem

This informal study reflects on the impact of the using Information and Communication Technologies (ICT) with adolescents that have different types of disabilities is best done at the time of procurement or development, rather than after a disabled person makes their presence known—an approach that is connected to the construct of universal design, […].[1] For this purpose, there will be a need to implement the mini-workshop activity for job training in graphic design as a pilot (test) for the young students within the special school. However, to begin we must determination access to ICT educational resources and the young students with disabilities ability to use the required computer-based technologies.

The present informal study of ICT in special education through media art reveals deep inequalities of access by special students seeking new opportunities for technological development and improved new adaptive user experience.

This informal study is about the participation of young students with disabilities in ICT supported by the complementary subjects of technological education and art education. Special education involves all social elements; as well as interactive participation and school coherence —of conceptual content, procedures, and attitudes— to favor meaningful learning in the ICT.

1.2. What is the Purpose of Complementary Subjects of Technological Education and Art Education?

Despite the skills and development of technological

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learning, it is very different from the approach by students with disabilities. Just as the learning scenario linked to graphic art depends on the context and adaptation of the class activity, the graphic design to configuration used will determine the practice and new tool required.

Just as the development of learning activities and teaching techniques is achievable through various methods of creating and motivating digital design that facilitate more participatory and entertaining experiences.

However, to analyze the task of the research study on the integration of ICT and art. This vision allows us to understand the artistic and technological methodology that is indicated herein:

What is the reason for teaching a complex task of the didactic tools in ICT through art education? How is the interdisciplinary curriculum and teaching based on ICT in the world of the arts properly planned? Where does technology come through media arts? What is it about educational technology in art and its diversity in the virtual classroom? How can I achieve and teach its users as students at the level of strategic learning?[2]

Interest in the way art and media representations shape the lives of disabled people is the intersection of two fields of study – disability studies and disability-focused arts, culture, and media studies.[3] There is a need to create the capacity for students and teachers in the special schools to implement a new complementary methodology in both ICT and media art, which will be strengthening digital literacy for everyone.

1.3. Preliminary Study of ICT Usability

This preliminary study of ICT usability for young students with disability incorporates the use of a desktop computer, digital tablet, and laptop. It turns out, that it is important to highlight the new technologies applied to special education. Thus, the interdisciplinary methodology of ICT and media art favors the use of technology for young students with disabilities.

However, in this section, we briefly explain some basic ICT tools through art for students in special schools. Each student has a different type of physical, deaf, and intellectual disability. Despite the current subject of Technological Education, it is recognized by the Ministry of Education of Chile to level their needs and desires with the new technologies applied to education.

1.4. Role of ICT in the Special School

As I have explained in the previous section, this study focuses on the synthesis of new technologies for special education and on the role of ICT in this educational context.

Obviously, since the technological application directly affects those students who make it difficult to adapt the presentation of user interfaces (or adapt the software to the user) special attention will be given to the specific use as the teaching-learning process within the virtual classroom.

It also will be difficult to account for the students with disabilities use of the technologies, unique course attributes, the creative ability of the users, and technology learning strategy used.

Our goal is to improve the need for autonomous learning to enhance the creation and quality of teaching based on the complementary subject of media arts.

2. Method

The new educational proposals are aimed at solving usability problems for students with disabilities. Likewise, this educational stage is a complementary subject, especially to inclusive school users.

2.1. Pre-activity Preparation

To introduce these important educational extensions mini-workshops are for short-term planning (Table 1). Some of the information in the mini-workshops will require prior knowledge of technological applications, but the focus will be a complementary subject of media arts.

Put simply, if teachers understand disability through disabled people's profiles and art, they feel more confident in including such materials in their teaching.[4] So, the flexibility of ICT enables art education for disabled students through the use of multimedia tools and graphic software. And each student, it will be able to promote their own work in the creation of visual information.

2.2. Participants

In the special school of the Rigoberta Menchu Educational Corporation of La Pintana, the participants included nine students with different types of disabilities: hearing, physical, and intellectual with ages (average) between 13 and 16 years of age.

2.3. Activities

2.3.1. Experimentation with Digital Photography (Sessions #1 and #2)

Each student has the freedom to photograph in different positions, reinforcing it with the use of a camera or other device at different points on the ground (or courtyard) inside the school. For example, photography is a creative medium to promote different dialogues, as well as interdisciplinary work (on teaching art and technology). Since, the appearance of the digital camera, and even the

Table 1. Planning of the Digital Photography Mini-Workshop – Basic Level

Duration / sessions	1 hour / 4 sessions
Short description	The mini-workshop is aimed at students interested in learning and knowing the practice of digital photography in different media (smartphone, tablet, or camera), providing basic and simple training to enable the acquisition of personal skills, experimental work, and creative images.
Objectives	- Train students in the use of operation and management of digital photography in different media. - Train students to express themselves creatively with photographic images in any digital medium through group computers or your own smartphone - Train students to express themselves creatively with photographic images in any digital medium through group computers or your own smartphone.
Content and sessions	Session #1: Introduction to basic photography and getting to know our digital medium. Session #2: Pre-production in photography and its importance (wide angle, normal, zoom, etc.). Session #3: Production in photography and its basic principles of composition. Session #4: Post-production and editing of images in an installed application and/or a free software.
Methodology	This mini-workshop corresponds to a practical class and free topic, this depends on the use of digital media. Application exercises and practice of content are addressed in the field/patio exit with natural light (sessions #1 and #2) and in the computer lab class (sessions #3 and #4).

Source: Self-made

smartphone basic principles of photography are easier and students can easily express themselves. The photographic exercises facilitate the students with disabilities ability to share their different views of the artistic world.

In each photo (Figure 1 to 4) it can be seen that the young students are playing with the most friendly, creative, and fun photographic experimentation during the workshop.

Figure 1: A student is experimenting with the camera on the ground (in the courtyard) during the mini-workshop activity. Source: Own image.

Figure 2: (Left) Two students are experimenting with their own smartphones. (Right) Several students are simulating with their own camera apparatus. Source: Own image.

Figure 3: (Left) Several students are experimenting with their own smartphones at different points on the ground (in the courtyard). (Right) A student looks at her own digital tablet image. Source: Own image.

Figure 4: (Left) An image sample made by a student. (Right) Several groups in different positions of the photograph in the field (inside the school). Source: Own image.

Thus, the photography art connects with students with disabilities in different technical aspects and ideas, strengthening the ability to visualize and express sensitivity, creativity, and personal identity through experimentation in creative photography.

2.3.2. Knowing the Use of Photoshop (Sessions #2 and #4)

This computer material is especially aimed at students without basic experience in the usability of tools in Photoshop. This tool works similarly to input effects and image filters. Some tools start at:

- Open, create and save a new Photoshop document;
- Import and edit one or two images;
- Select the gallery of filters;
- Save and export a file in JPG format.

Most of the students are unaware of the programs and interface of this image editing program. Each student should create a new folder with their name (and also the name of the Photoshop document) so they don't lose their archived work. Many students were motivated by the activity about access to computers or other computing devices such as laptops, so the difference of access to the Internet (without the need to be connected or a wireless Wi-Fi interconnection within the school) it moves away from navigation, and although it interrupts the loss of time during the activity of said workshop (Figure 5 to 7).

Figure 5: (Left) Student groups observe the desktop computer, using the Photoshop program. (Right) A student is grasping his usability of the graphic arts program. Source: Own image.

Figure 6: (Left) A student is designing her own artwork. (Right) A student is observing and collaborating with her classmate through the graphic arts program. Source: Own image.
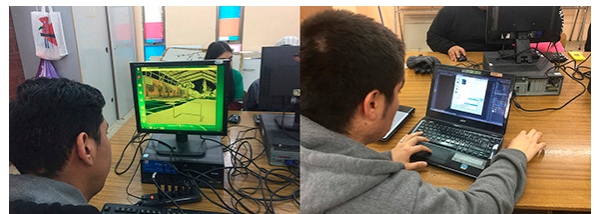

Figure 7: (Left) A student is observing with the image filter. (Right) A student is finishing her personal work. Source: Own image.

Independent with individual/group users with the support of collaborative work, and sharing with the same simple tool, depending on their personalized skill and creativity to work artistically. However, important to socialize good behavior from peers as the future of human relationship within the classroom.

3. Results

The complementary subject teaching of art media was facilitated with the autonomy of technological learning for young learners through access to ICT and art. The proposed instruction included both a new level of technology use in school learning and the students' personalized autonomy. Key to the inclusion of the new instruction was the school's motivation to offer the mini-workshop.

Now we will examine the usability of technology by the students as a complementary subject in different general observations about the effectiveness of the artistic tool.

3.1. Sample of Final Works

A good example of the work completed by each student (Figure 8 to 11). However, young people in a condition of disability, therefore, have been especially valued and learned the new experience of usability together with the Photoshop program for simple artistic work.

Figure 8: Final result of the assessment of different jobs by young students with disabilities from the Rigoberta Menchu Educational Corporation of La Pintana. Source: Own image.

Figure 9: Final result of the assessment of different jobs by young students with disabilities from the Rigoberta Menchu Educational Corporation of La Pintana. Source: Own image.
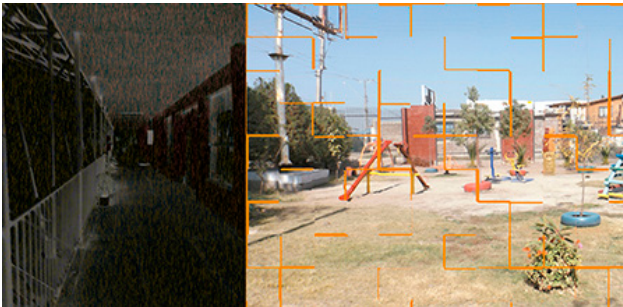
Figure 10: Final result of the assessment of different jobs by young students with disabilities from the Rigoberta Menchu Educational Corporation of La Pintana. Source: Own image.

Figure 11: Final result of the assessment of different jobs by young students with disabilities from the Rigoberta Menchu Educational Corporation of La Pintana. Source: Own image.
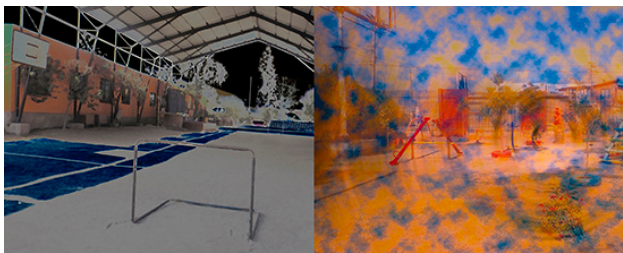
Added to these differences in Internet access between browsers or viruses are greater time losses, different failures in school performance and the low level of learning compared to the motivation, autonomy, and creativity of young students with disabilities. Therefore, it was important to reinforcing the idea of the use of ICT in the complementary subject rather than including Internet access during the activity in the mini-workshop.

4. Discussion

This will involve acknowledging and understanding unfolding concepts, institutions, and realities of disability rights in relation to technology, as a bedrock for charting and addressing digital inequality and inclusion challenges.[5]

Currently, that school does not have resources and educational services to implement digital skills and new ICT teaching-learning strategies for the complementary subject of media arts on the special school. It also will even be necessary for adapting the frameworks of professional skills for teacher's duo (or inclusive teaching's duo[①]), and other non-teaching professionals. So, the use and exploitation of technology and art as a

① The inclusive teaching duo corresponds to a capacity for cooperative and collaborative work in interdisciplinary educational programming courses such as the complementary subject plan.

recognized and valued labor-formal practice will need to be integrated into the general training processes of teachers.

4.1. New Proposal of the Practice of Social and Labor Insertion

The purpose of this informal study was to determine if it was feasible to propose complementary instruction of ICT in media arts for young students with disabilities. Challenges include teaching personalized photography before computer use. In an effort to foster inclusion and mobilize access in higher education, digital collaborative making encourages students to work collaboratively on the creation of multimedia projects.[6] So, we propose that the methods and techniques of ICT teaching for the complementary subject of media arts are essential assuming the commitment for young students with disabilities. This is how we propose the improvement of our quality of life of education in autonomous learning.

However, ICT in media arts should be thought of as a teaching resource for the development of skills using different learning scenarios. Therefore, each student has a different human capacity through a social-labor construction towards visual communication — visual, advertising, artistic language, and more precise; thus, knowledge based on the exchange of ideas and visual messages such as the use of time and space towards greater flexibility in the learning process and personal autonomy.

So, the contributions of labor training for young people with different types of disabilities to ensure the acquisition of autonomous learning, of course, the skills required for each area or employability profile, and the new experience towards labor inclusion in Chile.

From the impact of new technologies on the labor market to carry out work in better conditions and understand the various natural phenomena that they offer or seek to identify in a better way to live such a useful life. In other words, for all students with disabilities who take advantage of the new opportunities for subsequent generation of technological learning processes for the artistic project and new technologies through visual communication, depending on the area to which they belong.

Another question of complex participation for both formal and non-formal education and also for special education, in both cases accepting the mutual recognition of the completion of different modules of inclusive labor training.

In this sense, the methodology and teaching of the Training Center or other parameters such as an assessment, validation, or accreditation of key skills that

have significance in the inclusive labor market through the context of the subject.

4.2. Lack of ICT Access in the Virtual Classroom

Despite the lack of access to ICT in the virtual classroom, and this originates in several social changes and the inequality of students with disabilities regarding the competence or implementation of ICT in the teaching-learning processes at school.

It is the most common that affects the insertion of the complementary subject regarding the new technology applied to art education in the curriculum of teaching studies in ICT on the use of educational software specialized in graphic design or digital graphic art. However, the majority of ICT teachers do not have the knowledge to provide a sociocultural space, favoring it with the support of the practice of social and labor insertion, especially for vulnerable youth and those excluded by accessibility in educational institutions at the school level.

5. Conclusions and Recommendations

One of the problems facing teachers for the incorporation of ICT into educational practice is in many cases the lack of both technological and instrumental, as methodological and strategic training.[7] There is a pedagogical model for the development of ICT standards, but it does not favor innovation and significant change for art education in special schools.

These paths of the complementary subject towards the opening of new autonomous learning scenarios, and different technological-artistic educational contexts. Just as the use of the didactic method through ICT for the classroom. Therefore, the special school to adequately meet their needs in an environment of respect, ethics, and tolerance.

Finally, there is very little space in our educational-labor system for adolescent students with disabilities to give them the opportunity to: learn their personalized autonomy in ICT in professional art or the future of study, both professionally and self-taught, assuming it with the development of skills and abilities for the students.

The lack of opportunities in training and specialization

of teachers to transform autonomous technological learning through visual communication on the transmission of ideas towards the important role of understanding the different message.

Conflict of Interest

There is no conflict of interest.

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