Digital literacy in young people with mild intellectual disability.
A case study in the city of Saltillo, Mexico

Alfabetización digital en jóvenes con discapacidad intelectual leve.
Un estudio de caso en la ciudad de Saltillo, México

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Abstract

The development of new technologies is causing rapid changes in the school curriculum. In this way, it is necessary to emphasize the training and learning, by part of the students, of a correct digital literacy due to the rise of the Internet. In this line of study, it should be noted that there is a sector of the population, which presents an intellectual disability in any society. In this sense, the present study is to evaluate the development of the communicative ability in young people with mild intellectual disability, using an electronic environment that stimulates the behavior and ability to process information that will enable to launch media literacy for the good interaction in their own environment. The methodology in this research is quantitative, using an evaluation model based on the dimensions selected to study. In this way, we analyzed a total of 6 subjects, belonging to the Center of Attention (CAM) of Saltillo, Coahuila (Mexico). Among the most relevant conclusions, it can be noted that delay in respect to a good media literacy. However, the study clarifies that interest was awakened in the young people for the digital platforms, despite the fact that educational institutions do not support this teaching methodology.

Keywords

Digital literacy, intellectual disability, ICT, cognitive development, Electronic media, Internet.

Resumen

El desarrollo de las nuevas tecnologías está provocando cambios vertiginosos en los currículos escolares. De este modo, es necesario hacer hincapié en la formación y aprendizaje, por parte del alumnado, de una correcta alfabetización digital debido al auge de Internet. En esta misma línea de estudio, hay que señalar que existe un sector de la población, que presenta alguna discapacidad intelectual en toda sociedad. En este sentido, el presente estudio trata de evaluar el desarrollo de la habilidad comunicativa en los jóvenes con discapacidad intelectual leve, empleando un medio electrónico que estimule el comportamiento y destreza para procesar información que permita iniciar la alfabetización mediática para la buena interacción en su propio medio. La metodología planteada en esta investigación es de corte cuantitativo, empleando un modelo evaluativo basado en las dimensiones seleccionadas a estudiar. De este modo, se analizaron un total de 6 sujetos, pertenecientes al Centro de Atención Múltiple (CAM) de Saltillo, Coahuila (México). Entre las conclusiones más relevantes, se puede destacar que el atraso considerable respecto a una buena alfabetización mediática. Sin embargo, el estudio clarifica el interés que se despertó en los jóvenes por las plataformas digitales, a pesar que las instituciones educativas no apoyen esta metodología de enseñanza en sus currículos.

Palabras clave

Alfabetización digital, discapacidad intelectual, TIC, desarrollo cognitivo, medios electrónicos, Internet

Introduction and state of the issue

New technologies have transformed the way we communicate, have allowed to break down time and ideological barriers of distance, and provide a new way of relating. However, in addition to economic and technical issues, it is necessary to have knowledge for the use and management of new digital resources, their scope and multiple benefits. In this sense, it is important to provide media literacy and, above all, digital literacy, to those young people who have an intellectual disability with the aim of improving their teaching and getting them to match the level of the rest of society.

People, who have a disability, constitute the minority, mostly disadvantaged in the world. According to the Convention on the Rights of Persons with Disabilities, it states that in this social group, those people who have physical, mental, intellectual or sensorial long-term deficiencies are

included. These limitations cause multiple barriers to arise, which impede participation and interaction in society and, similarly, there is no equality of conditions with different aspects of life. According to the National Institute of Statistics and Geography (INEGI, 2016), there are about 7.74 million Mexican people, who have some type of disability, representing 6.4% of the total population. Also, the Ministry of Social Development, indicates that there are 1.2 million people, who have intellectual disabilities of a total of 119 938 473 million Mexicans (SEDESOL, 2016).

Intellectual functioning, also called intelligence, refers to the general mental capacity for learning, reasoning, problem solving and so on. According to Matía (1993, p. 128), he affirms that a student has special educational needs if he has "learning difficulties that make it necessary to have special educational resources to attend to such difficulties". In Mexico, it was defined that a boy or girl who presents special educational needs was the one who:

> ... in relation to his classmates, he faced difficulties to develop the learning of the contents consigned in the school curriculum, requiring that his educational process incorporate more resources or different resources in order to achieve the goals and curricular objectives (Méndez & Faviel, 2008, p. 73).

In this way, these students are characterized by the generalized difficulty they have in the learning process, a limitation that affects all areas of development: autonomy, cognition, language, social interaction and motor skills (Egregius-Gómez, 2001). Consequently, they need more support to access learning, and appropriate school content. Their style and rhythm of learning is different from that of children and young people of their age (Ramírez et al., 2005).

According to the National Program for the Development and Inclusion of Persons with Disabilities 2014-2018 (SEP, 2014), which meets the international provisions on human rights, in its National Development Plan, it points to Mexico as example to strengthen quality education; expanding opportunities for access to education and promoting inclusive practices at school with young people with disabilities This record has shown that there are a total of 58 366 students, who have an intellectual disability.

On the other hand, the use of Information and Communication Technologies (ICT) as didactic and intellectual elements, has caused a change of role in the student. Now, the student becomes an active receiver and aware of the information, as it is presented. In addition, with their attitudes and cognitive abilities he can determine the possible influence

of the communication medium (Cabero, 2003). According to Area et al. (2012) affirms that the culture of the XXI century is multimodal. This implies that, the information is expressed, produced and distributed by the multiple existing supports through new technologies with new formats and new languages. In this way, Gutiérrez and Tyner (2012) identify the term of media and information literacy (Media and Information Literacy). This literacy model tries to integrate both approaches through the compendium of skills, competences and attitudes that every citizen should develop. On the other hand, Gutiérrez (2003) affirms that in the global concept of digital multimedia literacy the different literacies [multiple literacy] centered on information and languages are integrated. In short, many authors argue that digital or multimedia literacy, for the third millennium, will the be one, that enables people to use the appropriate procedures to critically face different types of text and assess what happens in the world and improve it in measure their possibilities, as well as transform information into knowledge and make knowledge an element of collaboration and transformation of society (Wilson et al., 2011, Scolari, 2016).

Finally, concerning the Mexican case, it can be seen that in this country there are still many restrictions on the implementation of a correct digital literacy. According to Álvarez (2013, p. 17):

> In Mexico, one of the biggest absentees has been accessibility to information and communication technologies for people with disabilities. That now is a constitutional right according to what Congress and the permanent Constituent approved.

On the other hand, Orozco et al. (2012), mention that only 40% of the population has access to the Internet of any kind. In short, education has become a right of quality practice on the part of students who have a notorious disability (Cruz-Vadillo & Casillas-Alvarado, 2016).

Materials and methods

The main objective of this study is to assess the development of communication skills in young people with mild intellectual disabilities, using an electronic medium that stimulates behavior and dexterity to

process information to initiate media literacy for good interaction in their own environment.

Therefore, the proposed analysis has been carried out through a quantitative study in order to measure the multiple variables of interaction of the subject with the electronic medium, quantifying, in the same way, the ratio of successes on the attempts of the sample.

These results will support the assertive or negative responses of the students. This research is based on the basic principles of the general theory of systems, which allows us to understand and explain the context to be investigated (Von-Bertalanffy, 2011, p. 33). In this way, we start from the premise of identifying the elements of study with the objective of making an approach based on the semi-algebraic model, which allows at an early stage to recognize the research variables. These results will support the assertive or negative responses of the students. This research is based on the basic principles of the general theory of systems, which allows us to understand and explain the context to be investigated (Von-Bertalanffy, 2011, p. 33). In this way, we start from the premise of identifying the elements of study with the objective of making an approach based on the semi-algebraic model, which allows at an early stage to recognize the research variables.

Participants

In the Multiple Care Centers (laboral MCC) of Saltillo, Coahuila (Mexico), there is a group called Pre-Workshop composed of eleven young people with different disabilities. For the sample of the research, only six were selected, which are the students with mild intellectual disability. According to their physical and intellectual characteristics, they stand out as the ideal candidates for the beginning of the development of digital literacy through the electronic means of communication. The ages of young people range between 15 and 20 years, among which, only three can read.

The MCC is located in the city of Saltillo. The majority of its students live in that colony or in nearby areas; it is considered an area of a low socioeconomic level. This data becomes an important characteristic of the study because it influences, to a large extent, the development of young people's abilities. As stated in the World Report on Disability of the World Bank and the World Health Organization (2011, p. 9) "people with low incomes, without work or with little academic training are at greater risk of disability".

Procedure

The proposed method is developed in the following way: by the proposition of the objective, this research is a diagnostic because it mentions the events. For the functional orientation is applied because it is done in a real institution, where through the results, can support to make changes or transformations in it. In the same way, it is phenomenal since the attributes show the reality of young people. By the way of execution it is prospective because future improvement actions are taken within the MCC. By the explanatory derivation it is showy because it exhibits the attributes, such and how, they were observed in the young people. Also, it is enlisting because it only lists attributes through a record; and enunciative because it is a work based on concepts to build a judgement.

The basis of this study is to identify organized structures to determine the boundaries and delimit their parts or subsystems that will facilitate the understanding of the raised problems. These subsystems, generally, are related to each other, and interact with objects or people, who perform specific tasks or functions. In the same way, it is important to identify models or procedures in the study related to:

- Communication development area
- Pronunciation and fluency in the expression, understanding and transmission of orders and instructions.
- Ability to process information
- Symbolic through reading-writing, pictograms and images.
- Not oral symbolic
- Digital means of communication.
- Behavior when processing information.

To carry out the data collection, multiple sessions were developed, differentiated by stages and depending on the level of the specific needs of each subject. First, the first sessions became explanatory spaces to know and understand the Internet applications Facebook, YouTube and Hotmail as well as concepts and internet icons with the purpose of showing the students these applications so that they could become familiar, since only two people knew the subject, this was done with the support of a Power Point presentation.

Likewise, it was explained how to enter these platforms, through pictograms, associating the images with words and simple texts, due to the illiterate condition that some of the young people presented (to associate images with words). Secondly, twenty sessions were held to carry out the evaluation of the students (Chart 1) with duration of three months, comprising one hour a day from Monday to Friday, except holidays. To carry out this practical class, it was explained how to access these platforms while advancing with the individual evaluations of the students, to those more disadvantaged, they were taught more carefully the chosen tools. It is necessary to emphasize that the selected sample, lacked computers so they run the risk of forgetting what they learned when they could not practice it.

On the other hand, a measurement instrument is elaborated, "Matrix of methodological congruence". This matrix includes three variables to be investigated and within each of them, the factors and indicators to be evaluated are analyzed from the established dimensions. From this matrix a chart is generated to record the observations and the interaction of the student with the electronic means of communication (Chart 1).

Chart 1
Chart of methodological congruence

Research questions	Variables	Evaluation terms
To what degree can oral/written expression and comprehension, the ability to discriminate image/sound in a young person with DB using a digital communication medium, be developed?	Ability to process information	The comprehension of a text is measured, the response to a written order is validated and this response can be written by pressing a button on an icon using the mouse pointer.
How does a digital platform such as the social network, email and the video repository influence the child's communication with DB?	Communicative skills	The comprehension of a verbal order is measured, issuing a response in written form, by selecting an icon with the mouse pointer. The comprehension of an oral narrative is measured by means of a video giving an oral response to an interlocutor who can validate it.
What changes can occur in people with DB in their attitude, attention, memory with the application of digital literacy?	Behavior to process information	The comprehension of an image, icon, or pictogram is measured by issuing an oral response, written or by means of an image shown to an interlocutor. The comprehension of a verbal order is measured by issuing a response in written form.

Source: own elaboration

Analysis and results

Measures of central tendency and variability

The results that are presented below have been found through univariate statistics with a maximum allowed error of 5%. With this margin included, we obtain the number of subjects (n), the minimum score (min), the maximum score (max), mean (x), the standard deviation (s), the median (md), the mode (mo), bias (Sk), kurtosis (k), z-score (z), coefficient of variation (cv) and frequency analysis. In addition, normality limits have been implemented with a standard deviation (s- = 2.07; s + = 2.87) in order to discover the averages of the variables that stand out, because they are greater or less than these limits. Below are the results of the analysis of means (Chart 2):

Chart 2
Analysis of means. Limits of normality

No.	Factors	Indicators	X
19	Attitude	Interest	3.17
24	Attention	Period of time	3.00
16	Ability to relate image/Sound	Understand the meaning of images	3.00
18	Ability to relate image/Sound	Understand the sound messages	3.00
2	Converses expressing his/her ideas with:	Order	3.00
5	Ability to identify by listening and observing	Thematic command	2.00
6	Ability to identify by listening and observing	Make judgments of the interlocutor's ideas	2.00
15	Ability to write what he/she thinks	Quality and quantity of written words	2.00
9	Ability to understand what is read	Interprets the content of the text in relation to its own knowledge	1.83
14	Ability to write what he/she thinks	Vocabulary	1.67

Source: own elaboration

According to the measurement analysis, it can be highlighted that young people have a great interest in media tools to use and consume social networks such as Facebook (x = 3.17). Also, this consumption tends to be for a limited period of time (x = 3.00). On the other hand, taking into account the specific ability to relate image/sound, it can be pointed out that adolescents manage to understand the meaning of images (x = 3.00) and sound messages (x = 3.00). Also, it is observed that they establish an order to express their ideas (x = 3.00)

When detailing the skills of "understand what it is read", "write what it is thought" and "identify when listening and observing", the ratings present lower results compared to the total of variables. On the other hand, those skills related to "identify when listening and observing", present a significant value (x = 2.0), as well as making judgments about the interlocutor's ideas (x = 2.00). In addition, it should be noted that the five variables that exhibit lower values, 2 of them correspond to the factor "Expression and oral comprehension" and 3 of them are related to "Expression and written comprehension". In relation to the ability to "write what you think", the sample has obtained a low score in the quality and quantity of written words (x = 2.00). In addition, we must add that they encounter difficulties with the vocabulary used (x = 1.67). Finally, in the ability to "understand what is read", the new content is associated to a lesser extent with their own formulated knowledge (x = 1.83).

On the other hand, with the help of the descriptive statistics of the 26 interval variables, it can be highlighted that, 7 variables show a zero bias (26.9%) with a symmetric distribution, 12 variables show a negative bias (46.2%) with a tendency toward higher values of the scale, and finally, 7 variables exhibit a positive bias (26.9%). In relation to kurtosis, a total of 16 variables (61.5%) reveal a flat tendency, indicating heterogeneity and greater dispersion of the data. On the other hand, only 10 variables (29.5%) manifest significant features, although only 4 of the variables in greater degree (k = 2.5) such as: To converse, expressing their ideas with order; performs judgment of the interlocutor's ideas; reality and number of written words; and attention for a certain period of time (Chart 3).

Chart 3
Descriptive Statistics

Indicator	N	Min	Max	Mean	Est	Median	Mode	Mode	Range	Bias	Kurtosis
						Dev				Frec	
Var1	6	1	4	2.50	1.049	2.50	Multiple	2	3	0.000	-0.248
Var2	6	1	4	3.00	1.225	3.00	3	3	3	-1.369	2.500
Var3	6	0	4	2.17	1.414	2.50	3	2	4	-0.418	-0.859
Var4	6	1	4	2.33	1.033	2.00	2	3	3	0.666	0.586
Var5	6	0	4	2.00	1.049	2.00	2	2	4	0.000	-0.300
Var6	6	0	4	2.00	1.265	2.00	2	4	4	0.000	2.500
Var7	6	1	4	2.50	1.265	2.50	Multiple	2	3	0.000	-2.299
Var8	6	1	4	2.33	0.753	2.00	2	3	3	0.666	0.586
Var9	6	0	4	1.83	0.816	2.00	2	3	4	0.440	1.335
Var10	6	1	3	2.17	0.983	2.50	3	3	2	-0.456	-2.390
Var11	6	1	4	2.67	1.329	3.00	Multiple	2	3	-0.523	-1.875
Var12	6	1	4	2.33	1.169	2.00	Multiple	2	3	0.523	-1.875
Var13	6	0	4	2.33	1.329	2.00	2	3	4	-0.313	-0.104
Var14	6	0	3	1.67	1.366	2.00	Multiple	2	3	-0.523	-1.875
Var15	6	1	4	2.00	1.095	2.00	2	3	3	1.369	2.500
Var16	6	2	4	3.00	0.894	3.00	Multiple	2	2	0.000	-1.875
Var17	6	2	4	2.83	0.753	3.00	3	3	2	0.313	-0.104
Var18	6	1	4	3.00	1.265	3.50	4	3	3	-0.889	-0.781
Var19	6	2	4	3.17	0.753	3.00	3	3	2	-0.313	-0.104
Var20	6	1	4	2.67	0.753	3.00	3	3	3	-0.666	0.586
Var21	6	1	4	2.50	1.095	3.00	3	3	3	-0.490	-1.467
Var22	6	1	4	2.50	0.894	2.50	Multiple	2	3	0.000	-0.248
Var23	6	1	4	2.83	1.211	3.50	4	3	3	-0.711	-2.052
Var24	6	2	4	3.00	0.632	3.00	3	4	2	0.000	2.500
Var25	6	1	4	2.67	1.033	3.00	3	3	3	-0.666	0.586
Var26	6	1	4	2.33	1.033	2.00	2	3	3	0.666	0.586

Source: own elaboration

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In relation to the information of the variables, normality limits are established with a standard deviation (s- = 2.20; s + = 2.86), with the objective of observing the averages of the different variables, which stand out the most. In this sense, it can be observed that the sample relates the image with the sound (x = 2.94) and, similarly, its level of attention is in accordance with the assigned time (x = 3.00). However, the decrease in results is visible, linked to the ability to "identify when listening and observing" (x = 2.11) (Chart 4).

Chart 4
Information on the factors of the variables

Atributes of Factors	Description of the factor	X
1-3	Talks expressing his/her ideas	2.56
4-6	Ability to identify by listening and observing	2.11
7-10	Ability to understand what it is read	2.21
11-15	Ability to write what he/she thinks	2.20
16-18	Ability to relate image / sound	2.94
19-23	Attitude	2.73
24	Attention	3.00
25	Short term memory	2.67
26	Long term memory	2.33

Source: own elaboration

On the other hand, concerning the descriptive information of the subjects, a normality with a standard deviation is presented (s- = 1.61; s + = 3.34), in order to reach the necessary averages. In this way, subject 1 presents an ascending average (x = 3,769), demonstrating the positive effect of media skills on certain people. However, subject 5 shows a significantly low average (x = 1.115), due to the descending values of the 26 variables analyzed, with a minimum (0) and a maximum (2) being observed. On the other hand, subjects 2, 3, 4 and 6 present normal results, due to the correct use of media competences and in the same way, in the analysis of the multiple variables studied, minimum (0) and maximum (4) grades were found (Chart 5).

Chart 5
Descriptive information of the subjects

Subject	Mean	Standard Deviation	Minimum	Maximum	Range	Digital mean
Subject 1	3.769	0.514	2	4	2	93.8
Subject 2	2.692	0.549	2	4	2	84.1
Subject 3	2.500	1.208	0	4	4	61.4
Subject 4	2.115	1.211	0	4	4	50.7
Subject 5	1.115	0.653	0	2	2	41.4
Subject 6	2.654	0.562	2	4	2	66.8

Source: own elaboration

On the other hand, with a standard normality and standard deviation (s- = 46.6; s + = 86.1), and in reference to the use of the "electronic medium" as a media proposal through Facebook, YouTube and E-mail, it can be highlighted that the values obtained correspond to percentages of number of correct answers/number of intent of the 10 variables studied. In this way, subject 1 shows a high average (x = 93.8), while subject 5, on the other hand, exhibits a significantly low average (x = 41.4).

Finally, with normality and standard standard deviation (s- = 56.48; s + = 76.24), the averages of the variables are located, highlighting that young people largely comprise an image, icon or pictogram (x = 77.67), they know select a video through an image (x = 83.17) and manage to discriminate between the different exposed videos (x = 79.00). However, the understanding of a verbal order through a text presents lower data (x = 55.50) (Chart 6).

Correlation analysis

The data analyzed below establish a Pearson product-moment correlation. Therefore, Pair-wise processing has been carried out, considering the significant correlations with a probable error ≤ 0.05 and a r ≥ 0.81. In this way, it is seen that all variables have significant relationships. On the other hand, the limits of normality are clarified with a standard deviation (s- = 4.2; s + = 11), to know the variables with the least number of significant correlations.

Chart 6
Digital means of communication

Indicator	N	Min	Max	Mean	Est	Median	Mode	Mode	Range	Bias	Kurtosis
				Dev				Frec			
Var27	6	33	100	77.67	29.28	91.50	100	3	67	-0.917	-1.186
Var28	6	0	100	57.42	36.57	62.00	Multiple	1	100	-0.606	-0.245
Var29	6	33	75	60.58	14.60	66.00	66	3	42	-1.690	3.367
Var30	6	33	100	60.33	26.93	50.00	50	2	67	0.816	-1.291
Var31	6	0	100	60.33	37.29	70.75	Multiple	1	100	-0.892	-0.139
Var32	6	33	100	83.17	28.09	100.00	100	4	67	-1.519	1.331
Var33	6	50	100	79.00	19.62	79.00	100	2	50	-0.320	-0.930
Var34	6	25	100	55.50	27.78	50.00	50	2	75	0.776	-0.147
Var35	6	25	100	64.50	33.15	64.50	100	2	75	-0.028	-2.374
Var36	6	25	100	65.08	31.87	66.25	100	2	75	-0.114	-1.760

Source: own elaboration

Those variables with smaller reach manage to reach a computation of 15.38% of the total of the 26 explored variables. Likewise, it is observed that the selected sample is identified by the exposure of its own opinion on the content of the text (0.85), as well as the use of a correct vocabulary and a clear display of its ideas (0.87). Undoubtedly, these results are supported by short-term memory retention (0.85). In addition, in relation to the time established to write their opinions, it can be highlighted that young people consider it important enough the time needed to express themselves with coherent writing (0.84) and revision (0.91) and comprehension of the written text (0.87). Regarding the vocabulary used, they point out that the lexicon is an important tool for good writing (0.84). Likewise, with the help of short-term memorization (0.90), the contents provided become indispensable elements to express their ideas clearly (0.89) and share their personal opinions about it (0.94). Finally, the analyzed group indicates its interest in communicating. They listen and observe the interlocutor's ideas (0.84) with special interest in a short period of time (0.84) and, associate the image of the presentation with the sound (0.89) to understand the multiple sound messages and their meanings (0.84).

Integrational analysis

At this level, a factorial analysis is carried out with the method of extracting the main components (3 factors) and with normalized varimaz factor rotation with a probable error ≤0.01 and a confidence level of 99%. In this way, the centroid method was chosen to obtain the minimum number of factors and the highest level of explanation. Therefore, in relation to the three factors with eigenvalue, minimum of minimum of 1.00 (Kaiser criterion) represent a total of 93.57% of variability explained. Then you can see the result of the analyzed factors.

The reading of the integrational level is presented, first of all, in an intrafactorial way to show, then, the factors through the multidimensional variables. In this way, significant factorial loads, according to the number of valid cases (n = 31) are > 0.70, demonstrate the reading synthesis of factor 1, achieving a total of 15 variables with significant factorial load. Likewise, normality limits are established at a standard deviation (x = 0.85, s = 0.10, lower limit (s -) = 0.75, upper limit (s +) = 0.95) to achieve concordance between the different factor loads. In addition, factor 1 supports the 37.34% total variance of the phenomenon explored. In this line, the importance

of acquiring the necessary skills to understand the meaning of images when using electronic media to be informed (Facebook and YouTube) is demonstrated (Chart 7).

Chart 7
Factor 1: Long-term skills and attitudes

Location	No.	Variable	Factorial load
Talks expressing your his/her with	3	Logic and coherence	0.73
Ability to identify by listening and observing	6	Makes judgments of the interlocutor's ideas	0.73
Ability to relate image / sound	16	Understands the meaning of the images	0.99
	17	Can interact when responding to an iconographic message	0.87
	18	Understands sound messages	0.92
Attitude	19	Interest when communicating	0.92
	20	Enthusiasm when communicating	0.82
	21	Perseverance when communicating	0.91
	22	Initiative when communicating	0.80
	23	Responsibility when communicate	0.91
Attention	24	Period of time to maintain Attention	0.73
Digital means of communication: Facebook	27	Understanding an image, icon or pictogram	0.92
Digital means of communication: YouTube	29	Understanding an oral narrative through a video	0.70
	30	Understanding the sequence of images	0.87
	33	Discriminate between several videos	0.98

Source: own elaboration

Concerning factor 2, a total of 34.45% of variance has been reached. Likewise, a total of 11 variables with significant factorial load have been integrated. The limits of normality are defined based on a: $x = 0.89$; $s = 0.08$; lower limit $(s -) = 0.81$; upper limit $(s +) = 0.97$. Therefore, it demonstrates

the importance, again, of the skills of know-how (Identify by listening and observing, understanding what is read, writing what is thought and relating image/sound) and knowing how to be (Attitude and attention) (Chart 8).

Chart 8
Factor 2: Performance in the short term

Location	No.	Variable	Factorial load
Ability to identify by listening and observing	6	Thematic command	0.94
Ability to understand what it is read	7	Understands the general meaning of the text	0.84
Ability to write what he/she thinks	12	Readability	0.79
	14	Vocabulary	0.77
Ability to relate image / sound	17	Can interact when responding to an iconographic message	0.97
Attitude	21	Perseverance	0.93
	22	Initiative	0.91
Attention	24	For a period of time	0.78
Digital means of communication: Facebook	27	Understanding an image, icon or pictogram	0.99
Digital means of communication: YouTube	30	Understanding a sequence of images	0.86
	33	Discriminate between several videos	0.87

Source: own elaboration

Finally, factor 3, characterized by 7.84% of the total variance, integrates a total of 5 variables with significant factorial load. The limits of normality are exposed with a standard deviation (x = 0.84, s = 0.12, lower limit (s -) = 0.72, upper limit (s +) = 0.96). In this way, the ability to "understand what you read" and "write what you think" offers security in making decisions, albeit for a short period of time due to the use of term memory (Chart 9).

Chart 9
Factor 3: Decide what you think

Location	No.	Variable	Factorial load
Ability to understand what it is read	10	Presents an opinion of its own from the content of the text	0.76
Ability to write what he/she thinks	11	Coherence	0.80
Attention	24	For a period of time	0.79
Short term memory	25	Retention	0.73
Digital means of communication: YouTube	32	Selecting a video by image	0.95

Source: own elaboration

On the other hand, in the second part, related to the interfactorial reading, it is possible to structure the variables linked to the ability to process information, the digital means of communication and the behavior when communicating. Each of these variables contains multiple factors that represent elements of a study based on digital literacy in young people with intellectual disabilities. In this sense, in the results linked to the "Ability to process information" dimension, there are 2 one-dimensional variables. However, a bridge with factor 2 is established through 2 two-dimensional variables. For this reason, both the understanding of thematic domains and that related to the meaning of images, consider making judgments of the interlocutor's ideas, as well as interacting when responding to an iconographic message.

Concerning the dimension linked to the ability of "digital means of communication", 3 bi-dimensional variables are appraised, establishing a union between factor 1 and 2. In this way, the understanding of thematic domains as that related to the meaning of the images, exhibit a concordance in the understanding of the images, icons or pictograms.

Finally, referring to the dimension related to the ability of "Behavior when communicating", one variable stands out at a one-dimensional level, even though a relation is established with factors 1 and 2 through a three-dimensional variable. In short, the factors linked to the understanding of the meaning of images, understanding of the thematic domains and the

decision on what is thought, consider attention for a period of time of utmost importance for media literacy.

Discussion and conclusions

The results obtained in the present study emphasize the considerable delay regarding good media literacy. In the city of Saltillo one can see a cultural gap with respect to the different developed countries. In this way, it is important and necessary to establish a teaching-learning method that is far from formal education. Therefore, the method proposed in this research has tried to evaluate the adaptive skills, corresponding to Special Education. For this, it can be highlighted that the set of explorations in the multiple local schools studied do not count and do not know a way to evaluate their students, using electronic means of communication such as the implementation of a good digital literacy (De-Andrés & González- Martín, 2012, García-Prieto, 2016).

Undoubtedly, the interests of those with disabilities do not always coincide with what companies that produce computer equipment (software and hardware) intend to offer society (Fierro, 2009). This is compounded by the lack of support from government organizations, from the Public Secretariat itself, as well as from the family of the youngest ones. Thus, in this study it was found that the socio-cultural environment in which these students develop, is a determining factor for the development of education, culture, health and above all, media literacy.

It should be noted that, the analyzed sample lives in low economic resources, where MCC students find it impossible to concentrate due to the lack of basic needs such as food, sustenance and health. Therefore, academic progress, by this group, becomes an important limitation. Therefore, according to the results, it is appreciated that in the variable related to the ability to "process information" and the use of only one medium such as the text, young people agree on the difficulty of understanding and follow the instructions and explanations. In addition, they highlight the obstacle posed when writing an own idea. However, this limitation changes when the instructions are related to a multimedia electronic medium, because the ability to "identify when listening and observing" presents an ascending value due to its interest in digital media. In short, the greater the understanding and ability to "process information", the communication established by the sample will benefit.

On the other hand, with the electronic average variable and based on the ability to "relate image/sound", it is appreciated that young people understand the meaning of images and react positively to the sound messages that the medium emits, they even get to understand better the narrative projected in the video. For example, on YouTube they are able to select a video, although that may require writing or transcribing. This learning helps them to a great extent to the use and use of pictograms, relating the image with the word without reading. In this case, it is also verified that the use and management of an electronic medium enables and improves communication of students, either by the exchange of e-mails, records in social networks (Facebook) and viewing and creating videos on YouTube. In short, it is possible to improve relations in the group, as well as to share the tastes and interests of the group studied.

To conclude, it is necessary to emphasize that throughout the study it has been possible to observe a significant progress in most of the selected sample. However, only subject 5, showed restrictions at the time of following the instructions and manipulating the means. In this way, the study clarifies the interest aroused in young people by digital platforms, despite the educational and governmental institutions in Mexico; they have very little time to start in this teaching methodology in their curricula and are still looking for alternatives. Therefore, we converge towards a change, where identification alternatives are proposed, to belong to groups, to establish collaborative learning environments and to learn by doing, reinforcing a correct digital literacy.

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