MINPSi: A Psychoeducative Tool

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Abstract: The tool presented is an alternative, empiric and analytic method based on the experience and the PDI’s. Its versatility allows being adapted to the Clinical and Educational Psychology. The objective to give access to all people a friendly-user tool with a touch screen that stimulates and catches the attention, enabling to teach knowledge, skills and values. It is divided in 2 complementary and interdependent parts. On one hand, the mixed contents are found in the Digital Boards (interactive and dynamic) structured in sessions that are combined into an entire psycho-educational program. This program facilitates the comprehension, acquisition and practice of the learning object. On the other hand, the process and the instructions of the material are described by a script which contributes to a better attitude that attracts the participants and stimulates to keep on learning. The efficiency and value of the methodology is evaluated at the beginning and at the end of the learning process, showing quantitative features in graphs and a weekly field study gathering the qualitative data. The Average improves significantly in every group, apart from the program that was used (Emotional Skills, Self-esteem, attention, Sexuality, Self-control, Problem-solving) and also in every individual according to the specific target of every subject. The application of this tool enables to diversify the knowledge to every area of the Psychology. In this sense, experts and participants enjoy the Education interactively in a recreational way reinforcing the Emotional and Social Intelligence.

Key words: Digital interactive Board, psycho-educational tool, educative methodologies, E-learning, intellectual disabilities.

1. Preface

The educational psychology is a dynamic area that develops parallel with the social changes of the community. The intrusion of new technologies in the daily life is also part of the new perspective in which the education is conceived, it is for this that I present a psychoeducational tool based on new digital devices. Its functional application adds knowledge and skills to the society for the development of people. The possibility to adjust to any profile and content, given its versatility, not only allows us to take advantage of the technology in the educational area but also in the areas of personal and clinical development.

Its principal objective is to increase the efficiency of the process of teaching-learning to strengthen the actitudinal predisposition towards new knowledge and the progress of each of the people that benefits from its use. The presentation of the content, which requires to continue its supervision, appears in a more accessible, flexible, participative and dynamic format.

On the other hand, it is a tool that benefits our profession, adding the role of the psychologist, as a professional that offers a service, the role of a creative able to implement ideas, training especific competencies and/or the application of other alternative methods that reaches out to more people, whatever condition or limitation they’re in.

This psychoeducative tool is based on an analytic empirical study model since the results are based on data collected through the experience. It also contemplates the training of whatever ability and at the same time, it teaches positive values that are present during the process of learning. The format in which it is presented is divided in two parts. On one hand, there are created mixed contents for the digital boards (dynamic and interactive), structured in sessions that form a program and allows the comprehension, acquisition and practice and the recopilation of the evolution of the participants. It is fullfilled with a script that describes the activities...
execution created with this content based on a cognitive behavioural framework where modelling techniques are emphasized, overcorrection, reality contrast etc. and the predisposition to a better attitude towards the sessions and with it, a better use and retention of the content gain. This type of learning is attractive to every user and encourages them to continue with the process of assimilation and accommodation.

Both parts are complementary and interdependent, in this way we obtain positive results for the material elaborated as well as for the way of using it.

2. Method

2.1 Participant

Its design permits it to be accessible to all the professionals of the educative, clinical and social areas due to its intuitive handling and to its tactile interface. It has been applied to a total sample of 161 individuals older than 21, of both genders which present intellectual development disorder of mild, moderate and major severity whose comorbidity happens with other neurodevelopment disorders as communication disorders, autism spectrum disorder, schizophrenia spectrum disorder and other psychotic disorders; as well as disruptive, control impulse, behaviour disorders in and some of the users of more advanced ages the intellectual development disorder is present with mild or major neurocognitive disorders due to multiple etiologies.

The sample has benefited itself from the methodological tools from 2012 until 2018, consecutively, (although the results are based on the ones from 2012 to 2017) in which they have been trained with such resource in multiplicity of values, knowledge, competency and skills throughout different specific programs designed to be carried out with the tool. From the programs created and implemented in 2015/2016, 129 individuals were trained in social habililies, 161 in emotional habililies, 100 in self-steem, 93 postural hygiene, 123 in attention and concentration, 134 in knowledge of the body and sexuality, 31 in self-control and 8 in interactive theatre as part of the second fase of emocional expression. During the course of 2016/2017, it has introduced, for first time, two more new programs, one of prevention in conflicts resolution in people with intellectual disability, being applied in a experimental way to a sample of 42 individuals with moderate intellectual disability and the other one of physical and verbal bullying, which is going to be applied to a reduced sample of 6 individuals.

Currently, there is a programme of awareness and prevention of parental abuse, for people with intellectual disability, in process.

2.2 Measurements

It is a psychoeducative tool based on a diversity of specific programs where the evaluations are mostly by qualitative tools, getting primary data characteristic of educational investigation. It is framed principally in the investigation based on design (henceforth known as IBD), born under the linkin paradigm between investigation in the educative field and innovation design, which open a new way to carry out formative research to test and refine educational designs based on principles derived from prior research, as it is recently mentioned by Allan Collins, Diana Joseph & Katerine Bielaczyz [1].

As IBD method it has explored in educative innovation contributing in this way to a better comprehension of the nature and conditions of learning for certain groups. They are applied in several contexts tipology and breadth being the experiment for the faculty training development and the studies form organizational changes.

The learning process is becoming digital in mostly all the developed countries as an example of it, we find an accurate description of this phenomenon placed in USA, in the book: Rethinking Education in the Age of Technology: The Digital Revolution and Schooling in America, by Allan Collins, Richard Halverson, 2009 [2].
The qualitative measures used are specified below:

- Pre- and post-test evaluation, individual and group ad hoc observational register of continued and semistructured nature.
- Pre- and post-test structured and semistructured interview.
- Check-list.
- Analysis and conclusion extracted from the weekly field journals where it collects any qualitative data not contemplated at the start.
- Systemic analysis and communication of relevant data in the final report provided by the professional that administers it each year.

Even though the IBD is focused in the generalization of the causal explanations about new learning process the programs carried out under that psychoeducative tool improved after its perfectionism. This has given way to experimental pre- and post-test design where the defined and identified variables are quantifiable. Consequently they established a bi-variable statistic analysis and percentage data of the individuals of the selected sample have reached the proposed objectives.

2.3 Procedure

As research design based on design, the cyclic application and the design reformulation is constant but the phases in which it is developed maintain stable over time.

2.3.1 Design and Creation Phase

We study the needs of the population (intellectual level, ages, disorders presence, cognitive levels, communication levels, etc.) on which we are going to use the educational tool.

After the process of studying the competences, the skills and knowledge which are going to be trained throughout the psychoeducative tool there is a exhaustive selection of the materials used to configure the exercises and activities with certain hyperlinks. Once established the priorities and following the bases of progressive and significative learning, the sessions and the standard of execution are planned.

Once created the specific program with the use of the psychoeducative tool presented, we continue with the research and creation of the evaluation instruments to value the efficiency and validity of the tool in that program and the acquisition of the objectives proposed to the participants.

2.3.2 Experimental Phase (Application and Evaluation)

The tool application is done under a established timeline. Considering that the total duration of its application depends on the program that is being executed, of the interactive material and the audiovisual that is created during the application process and the participants profile.

These have a introductory phase in which they get used to the technology resources whose use they have to control to obtain the applications full performance.

Finally, we evaluate the participants to verify the results and the conclusion, to establish the changes needed to increase the tools efficiency and validity.

2.3.3 Specialized Training Phase

The instruction of its use is trained and organised by different professionals that are going to carry it out. There is an itinerary included for the material created and a guide to follow in each stage of the program. In the same way, they receive a review of their performance and possible contribution which are included in the following reformulations.

They are provided from the same educative strategies with the final purpose to be applied in the most natural way it is possible and under the same learning philosophy.

The pre- and post-evaluation is done in each group, and to continue the professionals are trained in the following competences:

- The capacity to observe and do a detailed register of the attitudes, behaviour and performance.
- The ability to encourage a positive climate that promotes a positive interdependence between the
group members increasing and the result of the groups cohesion and the cooperate value.

- The use of positive language during the whole teaching-learning period.
- Abstention of making valued judgement or connotative use of the content taught.
- Behaviour techniques, collecting additional information from the weekly field journal, confidenciality and extra material related with the planned content.

2.3.4 Adaptation and Generalization to Other Population

The psychoeducative tool forms program method whose application is endless while there are areas to learn and develop at personal and professional levels.

That is why every year the tool is updated and sophisticated, getting a more faithful adjustment to the reality surrounding them, optimizing the capacities that they have and adding other useful information for their progress in any field.

3. Results of the Psychoeducative Tool Applicated in the Training of

3.1 Emotional Habilitities

Period 2012/2013: With a sample of 58 individuals divided into 5 groups (better results in 4 groups of 5 in identification and detection of significant emotions according to field journal and submitted reports).

Period 2013/2014: In a sample of 31 individuals divided into 4 groups, there is evidence of a generalization of emotional expression and an increase of the total of the final average related to the initial one.

3.2 Social Habilitities

Period 2012/2013: in a sample of 55 individuals divided into 5 groups they reached the proposed objective at the beginning of the program, in addition to collecting adjacent positive results from participants and professionals that applied to it defining themselves as more efficient and creative.

Period 2013/2014: it is applied to a group of 65 individuals divided into 5 groups. Between the objectives proposed, the most relevant result was the tone and volume decreased in both groups: the generalized one and the professionals involved one.

Period 2014/2015: this programme is applied to a group of 9 individuals who achieved 8 out of 9 trained social abilities successfully.

Period 2016/2017: in experimentation process.

3.3 Self-confidence

Period of 2012-2014: 3 experimental groups were applied, where an increase in the manifestation of the free expression of their fears, insecurities and complex was observed. This has produced an effect of positive conscience and control over their lives in the different groups. At the same time, they learnt to detect and modify their behaviours, attitudes and languages; that generate rejection from the rest of the people, renovate the activities with emotional, positive self-talk, and the research of new experiences. As they get started in the decision making of their lives it increases the interaction with the rest of the individuals and improve the reception and realization of constructive critism.

We have to highlight their capacity of better self-knowledgement, of accepting their caracteristics and motivating themselves to feel better each day.

Period 2014-2015: the tool is applied to 3 groups of a total of 37 individuals, whose level of satisfaction is very high. The method applied to a construct that they were not familarized permits them to get conscious of their virtue and defects, the importance of the mutual respect, the aceptation of reality and the need of being self-critical to achieve notorius changes in their self-valoration and as result in their lives. They learn to think over about the aspects if their personality and of others personality. They feel more integrated in the group more understood and closer to their companions and they get conscious over the need of avoiding unnecessary conflicts and suffering. The episods of
anxiety are minimized and some of them, are able to create a self-concept adjusted to the reality. They get familiarized with the terms of emotional expression that permits them to be able to describe themselves in a more comprehensive way.

Period 2015-2016: it is applied to a sample of a total of 22 users of medium level and 29 of help to third parties.

In the case of the units of help to the third parties it is applied an exception in the program of self-esteem due to the low level of cognition and autonomy they have. That is why the activity is divided in two courses in this way they will centre the first part of the program in achieving the objective proposed for sessions 1 to 6 and in the next course they will continue with the consequence of the sessions from 7 to 12.

In the groups of the users with moderate disability they obtained this result:

In general, we obtain a clear sociogram of the group that supports for future programs and manages to understand deeply the concept of self-esteem, its categories and its influence in its routine. They change their idea about the self-esteem being something static and immovable and therefore they assume the responsibility to improve it making use of the techniques learned. This group in particular shows its preference to change things of perspective.

They have learned to know each other better and assume their needs to generate changes to be able to be happier, to have a higher self-esteem as well as make use of its freedom in making decision about what to do and what not by the feeling they have.

In the unit of help to the third parties they experiment a general enjoyment of the more ludic activities. The motivation to participate is high and it maintains them enthusiastic during the practice, especially in the grupal ones. The best ones are registered in individual cases and not grupal.

3.4 Attention

Period 2012-2016: Increases the performance in visual discrimination, immediate memory and spatial memory after the learning of searching organized symbols. This takes them to reduce the time used in each activity and increases the number of success within sessions. The black outs, the execution of the activity and the negativity to do the exercise disappear.

Seventy-five percent of the individuals increase their self-confidence and attentional capacities. They say that they feel satisfied with their performance up to the point where their competitiveness increases.

Regarding the mistakes made in the exercises, its decrease is significant in each group. It is variable in the results of omission errors where we can see it improves in only certain cases.

3.5 Postural Hygiene

Period 2012-2013: with a sample of 33 adults, older than 21, with intellectual disability of both female and male gender, the general objective to increase the life quality of this collective is reached through the acquisition of healthy postural hygiene habits.

They get conscious about the importance of correcting postural hygiene and their own capacity to have control over it. They get initiated in the practice of postural self-observation, to learn how to detect the postures that harm them and the ones that make them feel pain to be able to correct the inadequate postures they repeat mostly in their daily life. However, they require a periodic supervision to get them to automate it and change their patterns definitely.

They integrate the required concepts to be able to detect the materials and contexts where they have to increase their attention in the way they maintain their postural hygiene and avoid negative long- and short-term health consequences.

We also collect a great variety and quantity of audiovisual material. In this way the rest of users can work in situation with examples in which they can identify themselves and facilitate the imitation of
appropriate patterns.

A great level of satisfaction is registered within the users and the teachers in general, involving a high level of enjoyment and recreation in the sessions, mostly, in which they had to observe and correct the postures in different real contexts, visiting areas and professionals of the centre that they usually do not have access to.

An external module is included in the activity, with the finality of maintaining the consecution of the general objective in the users, being an specific practice and intervention for each user.

In this way, it increases the possibility of getting conscious about the postures which harm them, considering their previous pathologies and the motor difficulties some of the users have.

For it, each teacher creates a folder for their group with exercises, where they collect a series of exercises defined to improve the postural situation of each member in the group. They are instructed so that each one of them is able to continue the practice at home with the support of a personalized and illustrated guide.

Period 2013-2014: the total sample of participants in the program is of 34 individuals, initially, of which 32 remain in the postest evaluation.

The 46.87% of the sample obtains a consecution of objectives of 100%, acquiring the totality of the habits scheduled in each of the sessions. The 37.5% obtain the scheduled objectives targeted in 6 out of 7 contents established, while the remaining 15.63% reaches the planned objectives in 5 out of the 7 formulated sessions.

Between the difficulties found in the acquisition of the planned objectives, we have to highlight the injuries and illnesses that do not permit most of the samples execute determined patterns.

A high level of participation is recognized by the assistants, which highlight the entertaining atmosphere and a union that has been created in the participant group.

Period 2014-2015: the total sample is made of 19 individuals that belong to a group of people with serious disabilities of support to third parties.

The most remarkable in qualitative level is the active and voluntary participation of all of the users, their interest to develop the activities, as well as the perception of having been the workshop that until now has created major grupal cohesion in this specific collective.

The significant increase of the acquisition of healthy habits in their postural hygiene is unanimous and general.

They reach its maximum potential of learning in the corporal alignment, loads, domestic tasks and increase of the flexibility of the trunk.

Adjustments are realized, simplifying the programming, in view of their cognitive level and eliminating sessions that show absent activities in their daily routine.

The results show a 100% of success in all the sample towards the acquisition of conscious and the body alignment in the walk against the initial 47.37% and the 100% in getting up appropriately against the 84.21% we had when we started the program.

The percentage is duplicated in those that acquire the ability of sitting down correctly, adhering their back to the back of the chair and posing both feet on the floor.

The appropriate weight load to avoid back damages reached a 94.73% of the sample against the 61.15% which adopted the previous measurements in the application of the program.

According to the resting hygiene, a 78.95% of the individuals learnt to rest in the most recommendable (to a side) against a initial 57.89%.

In terms of the objective in healthy habits in the execution of the basic domestic tasks as sweep and scrub, the percentage increases exponentially going up from a previous 36.84% to a final 94.73% while the flexibility of the trunk is duplicated according to the percentage obtained in the pre-test evaluation.

Period 2015-2016: the total sample includes a total
The following results were collected in the post-test phase:

The 6 participants out of 9 who initiated the program were evaluated after applying the program. They acquired knowledge about the concept of postural hygiene and a correct practice of the resting. Although they do not manage to realize the remaining articles correctly, they acquire the awareness on the existence of the postural hygiene, about how postural patterns are present in their daily life and for it they modify their corporal alignment, their way of sitting down, as sitting down in front of the computer and realizing basic domestic tasks, they assimilate the knowledge on the stretchings and understand that its use allows them to increase and relieve their pain.

3.6 Sexuality

Period 2013-2016: in a sample of 16 individuals divided into 2 groups, they approach the relational, recreational and reproductive aspects about sexuality.

A change of vocabulary and an improvement in the tolerance towards the rest and the respect for their bodies, they accept their sexual condition and they initiate a process of raising awareness and zero tolerance towards sexual abuse. They assimilate basic knowledge on sexually transmitted diseases and contraceptive methods.

During the course of 2015-2016 it is generalized into 2 groups, given $N = 24$, we obtained satisfactory and significant results in 18 out of 36 analyzed variables. This corresponds to the 50% of the objective reached.

Fifty percent of the variables that did not throw significant results correspond principally to the block of erotic components, as most of the participants are adults who do not practice sex or are limited to basic practice where the erotism and recreation of the pleasure does not take place. In minor percentage, the sexual abuse area, which covers sexual abuse without contact as the part that corresponds to understanding the concept, the prevention measurements and the resources where they have to ask for help, obtained positive and significant results.

The block related to sexual diversity did not register significant results. Most of them repeat thinking patterns and conducts rejection associated with these thoughts that they imitate or reproduce after their parents. Those, in the main, reach very advanced ages and have adopted an absolut rejection position towards homosexuality as a valid sexual orientation.

There is neither a register of significant changes in the knowledge of sexually transmitted diseases in a specific way, but they understand the general concept of the assumption of the risks for their health if they have sexual intercourse without protection.

In the same way, we do not reach significant results in the knowledge of menstruation and getting pregnant as they are taboo topics in most of their families. This topic only concerns female participants whose representation is minimum regarding to total group.

Fifty percent of the objectives were obtained with significant and satisfactory results. These are shown below:

The knowledge of the human body, its parts and principal functions. The development of the human body from girl/boy to woman/man.

The discovery of the different parts of sexual organs, the importance of its hygiene, the several ways of having self-satisfaction. The knowledge, in most of them for the first time of the erogenous parts and the possibility of enjoying without the need of the complete practice. The raising awareness on the diverse contraceptive existing methods and its correct use.

3.7 Interactive Play

Period 2014-2015: in 8 of the individuals that make up the experimental group we recorded improvement in the areas of expresive and communicative capacity, differentiation between harming criticism and constructive, logic organization of the acts and an
increase of the desinhibition in the individuals that until now were not expressive. A major creativity is observed in the elaboration of projects and a major capacity of spontaneity. A major capacity to solve daily conflicts and of historical memory is promoted.

3.8 Self-control

Period 2014-2015: the experimental group formed by 8 individuals learns how to identify aggressive behaviour patterns and frequent negative reactions. The episode of self-aggressiveness and hetero-agresivity, as well as obsessive and anxiety episodes appeals to the shown techniques and the resources that they count with.

They add alternative behaviours to their repertoire of behaviours to substitute and/or minimize the need to express their rage and frustration. The tools allow them to observe and visualize the situation of being out of control and how this affects their surrounding and themselves.

Period 2015-2016: it was applied to 2 groups formed by a sample of 12 individuals with moderate disability. Although we cannot collect conclusive results as we could not end the application of the program due to external reasons, their reception and motivation to continue with the program was quite demanding, for the reason mentioned before, we will reschedule the programme in a forthcoming future, considering to widen the new sample and also the users that were involved in the previous year, during the period of 2016-2017.

4. Discussion

In a society where the technology is present in every thought, decision, action, and reflection, the actual educative base is based, each day even more, in technology resources, electronic dispositives and interactive interphases not only towards academic levels but also towards personal, clinical and social development.

In a process of such an imperative advance, it is indispensable to adapt the needs of education and learning to the new resources, as consequence, I pretend to include a tool that optimizes the educational format [3].

This tool substitues the magisterial speech, the passive-receptive role of the student and the teachers active role by a process of assimilation and knowledge accommodation, values, skills and bidirectional competences, flexible, attractive, interactive and polyvalent.

What makes it useful and efficient is the capacity to solve limitations and difficulties in the people which receive the content, as it includes material that they are able to manipulate through the digital boards, where they analyze their progress and the aim is to reach what are viewed in situ, both in lifetime by its representation as through external audiovisual hiperlinks or made by themselves.

The implication in the learning requires motivation from both, participant and teacher, who find themselves involved in an atmosphere of individual and grupal overcoming. Through the progression of scheduled sessions where the interaction is given by the facilitator tool of the understanding and acquisition of the subject with the contribution of their companions. The diversity of the resources involved in a same session, the variability of the material according to the group characteristics and the application that reaches to any field in psychology, converts this psychoeducative tool in a unique method for its development, feeling secure in their learning process and implies a continuous updating and recycling of the teacher responsible, who requires to boost their communicative habilities, the observation and the analysis to be able to do each session significative and unrepeatable.

The stimulation capacity of the material is high due to its changing nature, aesthetically attractive by the presentation of the activities and playful by the part of dynamic and hiperlinks that it incorporates.

However, the success of the psychoeducative tool is
not possible without a specific technological equipment and a qualified staff, with a proactive character.

The commitment to be able to increase the transferability and generalization of the results took me to communicate with research professionals who are able to solve difficulties found in the evaluation collected after the experimental design, adding to the practices a complementary quantitative study in certain areas that support the qualitative data that offers and guarantee the dependence criteria and confirmation.

Following the texts of Rossman, G. B., and Rallis, S. F. 1998 in their book Learning in the Field: An Introduction to Qualitative Research, research is about learning, can and should be useful and a researcher should practice the highest ethical standards to ensure that a study is trustworthy [4].

It would be appropriate to add the implication of the families or tutors in charge, in those cases in which the population was juvenile child or with some type of disorder that requires a tracing and feedback of the educative advance.

I propose to continue applying the psychoeducative tool in new programs and to extend its use to other dispositive, encompassing not only the educative and social community but also on the area of Clinical rehab.

5. Conclusion

Based on the results obtained, the design methodology meets the rigor criteria of qualitative research methodologies in credibility and transfer. This format promotes a high level of interest and estimation between the ones that benefit from it, due to the inclusion of multiple resources of different nature and an educative climate of enjoyment and self-relaxation in each practice.

Based on a positive language philosophy, constructive criticism and thought over each audiovisual material exposed as activity to analyse, promotes a dynamic functioning of positive interrelation where the team work is essential to obtain successful results and in which the training in observation and indirect analyzes and constant that all of them experiment, permits them to be more self-critic and conscious of their own performance.

The motivation is maintained active during more time because the participants are active agents and the professional acts as an advisor and moderator. Paying attention to the more playful part of the tool, they learn by the in situ experience, the immediate feedback and the physical feelings they experiment.

The psychoeducative tool permits access to a major quantity of information from the resources that are used for its application, adding a plus of reinforcement in those contents where they show more difficulties.

Since the content is shown in a visual way it makes possible the learning of those people with difficulties or limitations in abstract thought, this facilitates the interiorization and automatation of the knowledge and abilities that they did not understand.

The capacity of correction of the group, progresses progressively allowing them to have a major open to renewing and perfectioning themselves.

In the same way, the interaction between groups is potentialized, increasing the confidence between them and where the knowledge about them is full. This causes a double educative process of contents at a group level and potential at individual level.

The use of this psychoeducative tool has supposed an organizational change in the laboral dynamic of the implicated center and an indispensable condition to its teaching team.

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References


