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PROMOTION OF EDUCATIONAL INNOVATION THROUGH THE USE OF TAC IN CHIAPAS

Rodolfo Humberto Ramírez León
Members of the CA in Consolidation: Sustainable City, Management and Public Policies (CISGEPP)

Wílder Álvarez Cisneros
Members of the CA in Consolidation: Sustainable City, Management and Public Policies (CISGEPP)

Octavio Grajales Castillejos
Members of the CA in Consolidation: Sustainable City, Management and Public Policies (CISGEPP)

Abstract: Technologies for Learning and Knowledge (TAC) are essential for the economic, political and social development of countries, and they make sense given the existence of the knowledge economy. The absence of an information and communication technology policy in public schools increases inequality between countries and people. The United Nations Educational, Scientific and Cultural Organization (Unesco) predicts that building knowledge societies contributes to the Sustainable Development Goals. However, the use of new technologies in teaching includes endless tools like never before. Hardware, such as classroom computers, laptops, tablets, smartphones and software such as apps, web browsers, file readers, data stores or different multimedia supports. Knowing them and using them is today a key factor in university classrooms. This work is related to the most unprotected contexts of Geography in Chiapas, Mexico, and aims to stimulate the use of technological tools in these spaces, so the challenge is great.
Keywords: TAC, educational technology, New educational paradigms.

INTRODUCTION

According to Trejo Delarbre (2005), the citizen requires specific skills to survive in this new environment: "TraningeitherI don't knoweitherit to find informationeitherny knowing how to discriminate between it, but also to place content on computer networks, has become an essential requirement in cultural training, job competitiveness and social options of people.

Joan Majó (2003) "the school and the educational system not only have to teachñar the new technologiesYoaye, I don't knoweitherthey have to follow itñteaching subjects through the new technologies, but these new technologies, apart from producing changes in the school, produce a change in the environment and, since what the school intends is to prepare people for this environment, if it changes, the school activity has to change." (Jose Luis Orihuela, 2006)

It must be added that the responsibility is not only of the students, but also of the teacher, for which the following is established in the plans and programs:

The performance indicators for teachers in the use of ICT are:

- Use digital tools and resources to support understandingeitherNo knowledge and concepts.
- Apply concepts acquired in the generationeithern new ideas, products and processes, using ICT.
- Explore questions and topics of interestandyes, alsotos to plan and manage research, using the ICC.
- Use collaboration and communication tools, such as email, blogs, forums, and instant messaging services, to work collaboratively, exchange opinions, experiences, and results with other students, as well as reflect, plan, and use creative thinking.
- Use models and simulations to explore some topics.
- Generate original products with the use of ICT, in which critical thinking, creativity or problem solving based on real life situations is used.
- develop investigations or projects to solve autonomous problemsandntics and/or significant questions.
- Use productivity tools, such as word processors for creatingeither No of documents or researcheithern; software for presentationeitherno integrationeithern of research activitieseithern, and software to process data, communicate results and identify

trends.

- Use social networks and participate in learning networks applying the rules of digital etiquette.
- Make responsible use of software and hardware, whether working individually, in pairs or in a team.
- make useandethical, safe and responsible internet and digital tools. (Syllabus 2011)

As Cardona (2002) states, it is necessary for everyone to be able to enter the knowledge society, especially schools in less developed countries, since otherwise they will find themselves excluded from social progress.

Therefore, the incorporation of ICT in society in general, and in Education in particular, is linked to equality policies, and must be carefully and strategically planned. In short, the role of a State that aspires to make productive and critical use of these new cultural products available to all citizens is essential. Burbules Nicholas C. (2007)

ICTs help prepare young people for the knowledge society. ICT in schools offer young people tools to develop life skills in relation to information management and communication with other people. With ICT, a school can be connected to the world, regardless of its geographical location, and take advantage of the educational resources available on the Internet. Young people can participate in those activities carried out by young people around the world (music, games, social spaces, content production, etc.). Hepp Pedro (2007).

While the use of learning and knowledge technologies (TAC), refers to the use of technologies to learn (acquisition or reproduction), and this means that the use is carried out in a correct, pertinent, efficient and, above all, beneficial way before contemporary society. For (LOZANO, 2011) "The TACs try to guide the technologiesYoinformation aceeitherand the communicationeithern (ICT) towards formative uses, both for the student and the teacher, with the aim of learning mtos and better" p.1. That is why the need for the implementationeithern in schools to interfere with the lag or low level of technological skillseithergicas. AceYoSome people stay as users and it prevents their development of their thinking, because they think that everything has been solved in life, but nevertheless it is where the TAC of using technology to learn knowledge, not to stop being thinkers or using the brain, arises.

A good technological implementation in education means learning achieved and potential for improvement, due to the fact that greater competence is obtained in human qualities in experiential development. The institutions allow experiential training and direct intervention with field work and scientific knowledge, allowing the use of the necessary technological resources for the demonstration or verification of the acquired knowledge to offer valuable information to the school or social environment.

For an educational work that transcends in university students, it is not only about offering the necessary means or technological tools to apply their training practice, if it does not generate a good significance for them to want to implement new methods in their professional training and make use of of his ability and information in a procedural manner. The educational reality at the higher level is seen in front of subjects who know how to use digital and technological tools (internet, computers) to prepare for new challenges after their educational journey, so each one of them has the possibility of making efficient use of the technologies at their fingertips, learned by themselves and proposing new ways of experiencing their abilities that demonstrate their growing intellectual potential, undoubtedly with the

help of the teacher and a curriculum plan.

Youth today has been closely associated with technologies and the information media, although most of the time they access it from the social space that remains outside the institutions. Due to the educational policies of the state, the use of technologies has been implemented in many schools and they have recognized academic work with the help of the information media that provides certain benefits to students who use their activities from these resources within their reach. It is suitable for young students, especially those who are at the higher level, to access technologies and the information media to equip themselves with new future skills, although for the moment and during their university stay it is convenient to apply it academically, For this reason, Millan in Torres (2006) says that technologies can be a vehicle for education as long as they are applied in an adequate way and not in any other way that could break with the educational intentions.

The good use of technologies in educational institutions allows people to develop according to the current times, where teaching and learning are practiced in an innovative way, so that each person is prepared to access the changing society. Nowadays students are on the margin of educational experiences adjusted to changes and innovations in time, where it is possible to access technological tools and information media that serve for their educational and work practice, so it is essential to build from academic training a culture that takes into account innovative practices. Márquez (2012) analyzes that young people learn too much and not only within educational institutions, and that is due to the reach they have of the technological ones, the important thing in education would be to integrate the contributions of the media found around them and develop a better teaching and learning, opening space for each student to access institutionally to the media that can guide their training and at the same time be in contact with the information society.

Today in the educational environment where it appears what is the Technology of Learning and Knowledge. He tries to guide information and communication technologies (ICT) as he says that he made more formative uses for both students and teachers and the objective of these is to learn and be better in the uses of technology and not only to ensure mastery of a series of computer tools. It also tries to know and explore the didactic uses that information and communication technologies have for learning and teaching.

As we know at the moment, ICT/TAC are creating debate in the educational field. Detractors of the term ICT say that it does not fit all uses that go beyond information and communication, especially in the educational world. the ICT model is excessively computerized, instrumentalist and not very motivating for what current teachers and students (and I dare to extend to citizens) need, and that they can learn to use. They even link the ICT model with the society of the 20th century and the TAC model with that of the 21st century. In some parts people are already beginning to talk about the ICT/TAC area to refer to both interrelated functions (informatics + pedagogy).

The common objective is to provide citizens with basic skills that allow them to be informationally autonomous: public libraries with user training plans, information literacy and extensive training workshop offers; the school ones linking the library much more to the teaching and learning processes, and the university ones experimenting with new models of integral and transversal services such as the resource centers for learning and research.

Based on the requirements of educational policies, what is called Learning and

Knowledge Technologies (TAC) arises, which deals with:

… guide towards more formative uses, both for the student and the teacher, with the aim of learning more and better. Its objective is to have a special influence on the methodology, on the uses of technology and not only on ensuring mastery of a series of computer tools. In short, it is about knowing and exploring the possible didactic uses that ICTs have for learning and teaching, that is, TACs go beyond merely learning to use ICTs and are committed to exploiting these technological tools by service of learning and the acquisition of knowledge. (Granados, López, Avello, Luna, Luna y Luna, 2014. p. 290). Based on this, technologies offer a new work model, another way of informing students, creating learning spaces for students to learn through digital media. This other alternative of knowledge allows teaching to be more dynamic and non-traditional. Faced with this situation, as teachers we need to be more prepared and stay at the forefront of the use of Technologies, as indicated in the following section:

The demand for these changes is especially focused on the actors present in an educational setting (teachers and students) demanding from them the transformation of paradigms in the conception of teaching and learning and, likewise, of competences and abilities related to the appropriation of the ICT in the role and function they fulfill in an educational setting (Valencia M., T., Serna CA, and others, 2016. p.8).

General objective: Analyze the educational interventions of teachers through the implementation of innovative projects that promote the use of TAC in the classroom, in order to know their certainties and inserts in this regard.

The Users of the information generated are the teachers themselves, academic authorities and those interested in educational technology.

METHODOLOGY

A mixed investigation was carried out, with students of the Master's Degree in Teaching, San Cristóbal de las Casas, Chiapas, during the period of January-April 2019, based on the activities planned in the Academic Competence Unit Technologies for Learning and Knowledge, corresponding to the second semester. Participating 23 subjects, of which only 1, is a Pedagogical Technical Advisor and the rest Teachers in front of the group.

On the one hand, quantitative variables were considered for the analysis, including sex, age, years of service, etc. And on the other, the qualitative aspects were analyzed, such as their appreciations about the use of ICT in the classroom, the environments where they work, among others, in this approach the latter aspect is considered.

RESULTS

During the implementation of the innovation proposals, there are several that had an initial partial success, due to the adverse scenarios where the projects were established whose main characteristics are: extreme poverty, unfavorable gender culture and poor care provided to vulnerable groups, In addition to the fact that the main problems faced by teachers are: Different teacher-student languages and the terrible conditions of school infrastructure. However, it is fair to recognize the great willingness and commitment of the participating teachers for the development of educational interventions in conditions of extreme poverty. Below is a summary of the projects carried out:

Location	School/Level	Issue	Progress
San Cristóbal de las Casas	Intercultural University of Chiapas, Degree in Language and Culture	The Tseltal Municipalities and their cultural references that define them as native peoples	implementation of communication and dissemination actions were carried out through radio programs.
Choyho Community, Mpio. santiago el pinar	Ignacio López Rayón Elementary School, 4th Grade	Literacy skills development	Literacy has been achieved for 6 children, through activities of stories, movies and arts (music)
Community of Nachig, Zinacantán	Jaime Sabines Gutierrez High School, 3rd Grade	Importance of chemical elements in the organism and in the environment.	Commitment of the students in favoring activities for the care of the environment was generated.
San Cristóbal de las Casas	Child Development Center Number: 2, (CENDI)	Proposal for educational guidance, aimed at preschool teachers, to stimulate oral language through the story	The purpose is to be useful in any preschool, because the activities that will be developed are accessible to carry them out, in addition to the materials that are used, they are available in most schools and because their content will also be flexible to be able to apply it and resume it in their plan of education. job.
My. from Oxchuc	Esc. Valentín Gómez Farías, 3rd Grade Primary	Support in the reading-writing process	It uses the story as the main element, electronic slides, with mixed syllables between Spanish and Tzotzil, audio, music, among others.
San Juan Cancuc, Chiapas, Chicjá community	Bilingual Elementary School "Juan Aldama"	Literacy, sociocultural activities, and knowledge and understanding of concepts that make it difficult to translate into the Tzeltal language	There has been success in the management tasks by involving Parents and Authorities. In the school environment, it contributes to collaborative work and group socialization.
Ejido Nuevo Reforma del Mpio. of Meritorious of the Americas.	Itzcoatl Kindergarten, 3rd year.	Acquisition of basic skills in Spanish	Attractive and interesting activities were carried out for the children, without forgetting that they are formative, since it seeks to develop their skills in writing, letter recognition and reading short words.
Community: Il Tzajalch´En Chilon Municipality	Amado Nervo Kindergarten, 3 levels	How do I learn with others?	Various activities were promoted to achieve group integration, through the use of videos, stories and songs.
Ejido Constitución, Municipality of Simojovel	Bilingual Elementary School "Constitución"	Using TAC to develop children's creativity and imagination	Use of games such as kite and pinwheel for the development of skills in children
Ejido Constitución, Municipality of Simojovel	Bilingual Elementary School "Constitución", first grade	Literacy acquisition in children	Songs and videos are used to support classroom work.
San Antonio neighborhood, Mpio. from Chilon	Kindergarten for girls and boys "Pablo Sorozábal", Third Grade	Awareness work for Parents on gender equality	Use of videos, integration workshops, among others.
Community of Guadalupe Victoria, Pantelho Municipality	Preschool "Cuauhtémoc"	The Natural World and Recycling	The students were able to participate in actions to care for nature, valuing it and showing sensitivity and understanding about the need to preserve it.
chilon	School: Alfonso Fabila, Fourth grade educ. Primary	Reading comprehension in the teaching-learning process	The children had their first introduction to personal computers, showing great interest in learning how to use them.

Location	School/Level	Issue	Progress
Ejido Constitución, Municipality of Simojovel	Bilingual Elementary School "Constitución", first grade	development of motor skills and reading	Activities with drawings, letter games, figures and videos were provided, arousing the curiosity of the minors.
Wonder Tenejapa	School Supervision Number: 506 Tenejapa	Workshop on ICT and TAC concepts for basic education teachers	The interest of the participating teachers was aroused, through the use of videos and playful activities.
San Sebastian neighborhood, Mpio. of the daisies	Technical Secondary School Number: 29	Use of CAD-CAM in the Industrial Design Workshop	Activities for craft design in technical drawing are developed through the CAD-CAM design tool
Ukuntik Community, San Juan Chamula	Ukuntik Elementary School, 4th grade	reading comprehension	Use of the story as a significant learning tool, through videos, sounds and images.
Ejido Chiquinshulum, Mpio. from Chalchihuitan	Elementary school "Venustiano Carranza", 3rd grade.	Literacy Activities	Innovation activities were promoted through the use of videos in class, as well as knowledge of the basic operation of a computer.
Las Ollas Community Municipality of Chamula	Miguel Hidalgo y Costilla Elementary School	Literacy Activities	The interest of teachers and children was awakened through activities promoting the use of TAC, with videos, images and sounds.

Some of the conclusions reached by teachers that are worth highlighting are:

Teacher 1.

"My functions focused on education have maintained my commitment to the main subjects with whom I see myself surrounded, students are by far a reason to give the greatest effort in each action that affects their school interests, considering that this significant learning can serve for the benefit of their formative journey. The constant activation in each of the functions within the classroom stimulates the educational task, opening up new training possibilities for both the teacher and the students, since renewal processes are being applied in educational practices, ways of teaching as well as of learning through innovation to the field of work.

The educational practices in my teaching work allow me to act from a formative purpose for the students, although many times these practices need to be renewed and broadened to allow the integration of applicable tools and resources to develop not only knowledge but also skills. In the actions applied from my experiential space, I was able to realize the importance of recognizing the technologies that surround my field of work to contribute to university education, in addition to the fact that today the implementation and access to innovation is essential, In this way, it is a duty as a teacher to keep this medium in mind in school situations, to guide them pedagogically and to constantly recognize them and not only in common and monotonous practices.

In each of the activities (research, exhibitions, radio programs) implementing technologies I was able to experience promising sensations thanks to the students and their good mastery of some technological and information media, in addition to feeling motivated to try to be an innovative teacher who At the same time, he learns, especially in the radio activity where spreading knowledge extends outside the classroom. However, it fills me with emotions to continue

implementing these types of actions, since they open up new purposes for me in my work to know how to act and what to do, in addition to keeping myself prepared to break with the limitations in personal performance."

teacher 2.

"... the study of this UCA gives me good knowledge since I learned to handle power point in depth, likewise I was able to make a story with different animations and hyperlinks, I assimilated that to work with technologies does not only consist of using the computer and the internet, but also implement activities with music. The fact of studying this UCA has helped me reflect on being better every day, trying to innovate the classes and motivate students to attend school.

I showed interest in TACs, because since primary school I was familiar with ICTs, and from there my training has been forged in the search for information on the Internet, and to this day I continue to surf the net, it caught my attention to see that there is more ways and techniques to handle the computer, likewise the attitude of the adviser motivated us to carry out the work. My experience with the TACs in my teaching work was very pleasant because I dared to design and implement new activities that for students is something different from what they commonly do in the classroom.

At present, many teachers request and want to have computer resources and the Internet for their teaching, responding to the challenges posed by these new information channels. However, the incorporation of ICT in teaching not only involves the provision of computers and Internet access infrastructure, but its fundamental objective is: to integrate ICT in the teaching-learning processes, in the management of centers and in the relations of participation of the educational community, to improve the quality of teaching.

Teachers have the possibility of generating educational content in line with the interests or particularities of each student, being able to adapt to small groups or even to an individual student. In addition, the teacher has to acquire a new role and new knowledge, from adequately knowing the network and its possibilities to how to use it in the classroom and teach their students its benefits and disadvantages.

Teacher 3.

"The technologyYoa is a fundamental part of our daily life and shaper of our experiences by covering our communication needs.eitherlearning ny.

I take good learning and knowledge that I intend to implement in my teaching work and that I hope will have an impact on the life and understanding of my students.

The teaching of the use of new applications such as the development of slides with animation and stories, audios and the creation of web pages are a support to make the class more interactive.

Teaching has marked an important part of my life, having worked in some food industries I have had the opportunity to see other fields of work and I realized that working with students, other teachers and parents is a good experience and that It brings a lot of work and emotional satisfaction, since being communicative beings we can establish other types of interpersonal relationships, have empathy and achieve positive changes in our social environment, in favor of the

environment and our personal care, a teacher as an agent of change."

Teacher 4:

"In the Tandterm of trainingeithern of society, it is where I play as a promoter, guYoa, trainer, of a group of people who are competent before this evolving contemporary life. However, the most common obstacle is not having the technology for students to train in a practical way, thus giving rise to the teaching of technology in a theoretical or superficial way. Also, having the technology does not solve the problem, because many have, but do not have the ability to use it, from which the terms "technology" germinate.Yoto with pedagogYoto technologyeithergica".

Given the panorama of use of technology, another obstacle arises for the teachers' teaching method, because the students are immersed in technologies such as a simple television and radio, and continuing with traditional teaching makes the student lose interest. , because your life is associated with other existing technologies in your life. Now using these technologies is innovation for the teacher and for the student, it is not easy for the teacher but it is appropriate for the students, and with a pedagogically and emotionally satisfied smile, it rewards the teacher's sacrifice and makes said effort have a invaluable cost and motivates to continue innovating to continue forming a competent technological society."

Teacher 5:

"At the beginning of the seminar I had basic knowledge regarding the use of tics, but I was completely unaware of TAC. This development in the field of education aroused a lot of interest in me, it is a new perspective at least for me and as such I consider that I must continue investigating more about its use and development inside and outside the classroom.

The activities proposed by the advisor were in accordance with the needs and it was not necessary to try to seek external support to understand the indications. I found the use of the Edmodo platform very innovative as a means to create a collaborative environment among us students who were studying at the UCA.

Keeping in mind that there is an online resource leaves the doors open to our creativity and our own interest, I had not worked with this strategy and it is attractive to me, I understood basic operations that I can implement at a certain moment in my preparation or work.

The tools found were diverse, and I also believe that I found a reflection on what I have been doing with technology, at times I confused what I wanted to achieve and used these resources only as complements. Now I distinguish the importance of knowing the purposes for which the resources were created and I look at this teaching task with new intentions and a more proactive attitude."

Teacher 6

"…David Ausubel, Joseph Novak and Helen Hanesian, specialists in educational psychology at Cornell University, designed the "meaningful learning theory", the first systematic model of cognitive learning, according to which to learn it is necessary to relate new learning based on the previous ideas of the student. It must be clear from this first moment in our explanation of significant learning that the learning

of new knowledge depends on what is already known, or, in other words, new knowledge begins to be built through concepts that are already possessed. We learn by building concept networks, adding new concepts to them (concept maps/concept maps). A second aspect, equally important, is stated by Ausubel, Novak and Hanesian when they affirm that "the same process of acquiring information produces a modification both in the information acquired and in the specific aspect of the cognitive structure with which it is linked". Consequently, to learn meaningfully, new knowledge must interact with the existing knowledge structure. In this line, Ausubel states that student learning depends on the previous cognitive structure that is related to the new information, understanding "cognitive structure" as the set of concepts, ideas that an individual possesses in a certain field of knowledge, as well as like your organization. What is crucial, then, is not how the information is presented, but how the new information is integrated into the existing knowledge structure. From this consideration, In the learning orientation process, it is of vital importance to know the cognitive structure of the student; It is not only a question of knowing the amount of information that he possesses, but what are the concepts and propositions that he handles, as well as their degree of stability.
In this experience I feel very safe since it allowed us to innovate, in addition to making us think about how a project can be carried out, and how a drawing is embodied on paper, later on a computer and finally make it a reality.
It makes me feel happy to know that students can let their imagination fly knowing that they can create what they want through the tools that they are being taught and likewise also continue learning as a teacher, since with these results obtained there has been a great improvement and it is intended to continue taking advantage of the resources that the community and the students give us."

CONCLUSIONS

Some of the most significant goals achieved through the implementation of educational innovation projects in contexts of poverty are:

1. 23 products referring to Innovation Projects in the Classroom were obtained, through the management of the TAC in educational tasks.
2. Significant learning was achieved in the Masters through individual and team tasks in favor of their technological literacy.
3. Reflection on the importance of the use of TACs in education was promoted, motivating teachers about their use as a didactic tool in the classroom.
4. The importance of MANAGEMENT that we as teachers must have was made clear.

Finally, some of the highlights of the work generated are:

A) Strengths found:
- Teachers with a lot of desire to innovate
- They invest in their own tools
- They give of themselves to the groups they serve

B) Weaknesses:
- Poor institutional support
- Communities deprived of everything
- Little idea of support from

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Committees

C) There is an uncertain future in teaching, due to:

- gear chain
- discouragement in a short time
- fall into conformism

Image 1. Children preparing documents on the computer

Image 2. View of the radio program made by the students in RADIO 101.5 FM XERA RADIO ONE

Image 3. Students preparing the School Garden

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