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Problems and trends in contemporary education

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ABSTRACT
Innovation management, as well as organizations in general, public and private, deserve a continuous analysis and follow-up of the variables of the external context that impact them. In this sense, it should be noted that educational agents are the ones who do the innovation, and hence their management and direction play a key role. Education professionals, more than ever, need to know how to come to understand and comprehend the complexity of what external variables mean and their impact on educational work. Next, a model and method for its follow-up is presented. It is an invitation to know and to take possession as agents of change in the practice of creativity and innovation, without neglecting at any time the impact of the external context of the school, as it occurs in the Dual Modality (school-company relationship).
The school as a quality school organization and educational innovation represent two areas called to be properly related, carefully analyzed, strategically planned, and encouraged for their joint development.
The relationship between the school as a quality school organization and educational innovation has to be seen and justified both at the level of theoretical argumentation and in the functioning and institutional life of schools as educational spaces both in it and in the Company when applying Dual mode. It has to be projected, in time, in the articulation of the educational policy of a country and in the school practices that occur in the classrooms.
I believe that in our country, this double task is yet to be accomplished. So far, we have not managed to develop a solid tradition of pedagogical thought that has adequately explored the mutual implications between school quality and innovation as an educational process.

1 INTRODUCTION

It is important to begin by highlighting that the right to education, as a basic human right, was established ***in the Universal Declaration of Human*** **Rights (1948) and reaffirmed in** [1] the Convention on the Rights of the Child (1989),[2] Which has been almost universally ratified. However, there are still millions of people in the world for whom this right has not been realized. The right to education, according to the Convention on the Rights of the Child, must ensure access to education for every child, without any discrimination and inspired by equal opportunities, that primary education is compulsory, free, and of quality, and guarantee that school discipline is consistent with the rights and dignity of the child.

[1] Article 26.1
[2] Articles 28 and 29 refer to the right to education.

The World Conference on Education for All (Jomtien 1990) aimed to address this situation. For the first time, world leaders faced the challenge of tackling exclusion and inequalities in education. One of the recommendations of this Conference was to universalize primary education and promote equity by taking systematic measures to reduce inequalities and eliminate discrimination in the learning opportunities of disadvantaged groups.

Ten years later, the evaluation of Education for All showed that, despite the efforts made, the objectives defined in Jomtien were still far from being achieved. Therefore, at the **World Forum on Education for All (Dakar 2000),** countries reaffirmed their commitment that every child, youth, or adult has the human right to receive the benefit of an education that meets their basic learning needs in the best and fullest sense of the term, that is, an education that promotes "learning to know, to do, to live together and to be."

On this occasion, it was concluded that, despite the powerful agenda of equalization of opportunities of the Education for All movement, high rates of exclusion and educational disparities persisted. For this reason, it was stated that the needs of the poor and disadvantaged, including working children living in remote and nomadic rural areas, children, youth, and adults affected by conflict, hunger, and ill health, must be taken into account, and those with special learning needs.

The Education for All frameworks of action of Jontiem (1990) and Dakar (2000) consider the quality of education to be fundamental to achieving these goals. In the framework of Dakar Action, the 6th objective refers specifically to the quality of education and is also present in a transversal way in the objectives related to the universalization of primary education and the increase in the expansion of early childhood education.

Achieving higher quality education for all is not only an international agreement but is one of the main aims and aspirations of the educational reforms of the countries; however, first, usually face the objective of universal access to education and then think about the quality of it, since they are two closely related aspects. Indeed, quality education makes a difference in the learning outcomes of students, and in the levels of attendance and completion of studies, so ultimately, the quality of education influences its expansion.

1.1 WHAT IS QUALITY EDUCATION?

The question asked by many researchers, decision-makers, teachers, and families is as follows; What is quality education? Is it a universal concept, or is it mediated by culture? Can we talk about quality education if it is not for everyone? Answering these questions is not easy since there are different approaches and interpretations regarding the quality of education depending on factors of an innovative, ideological, and economic nature, what the meanings assigned to it at any given time, the

different conceptions about human development and learning, the demands and changes in society, to name a few. The quality and innovation of education, therefore, is not a neutral or univocal concept.

The dimensions mentioned above vary in the timeline and from one context to another, so it can be said that we are facing a living and changing concept. As Inés Aguerrondo points out, quality and innovation are socially determined concepts; that is, they are read according to historical and cultural patterns that have to do with a specific reality, with a specific social formation, in a specific country, and at a specific time.

Quite often, as in industry, the concept of quality is reduced to efficiency and effectiveness, which is why indicators related to coverage, repetition, and academic performance are used. There is growing agreement that student outcomes in certain areas of learning, especially in language and mathematics, are not sufficient to define the quality of education, although this is what is usually measured in most countries.

Determining whether education is of quality ultimately involves making a value judgment based on certain criteria and values. Although there are different approaches and approaches to the concept of quality, UNESCO, in the latest monitoring report on Education for All, establishes three elements to define quality[3] education: respect for people's rights; equity in access, processes, and results; and the relevance of education, to which should be added the relevance component. These dimensions are closely interrelated, and it is the set of all of them that defines quality education.

2 DEVELOPMENT

Technical-vocational lyceums are often faced with the task of designing and implementing educational projects. These projects aim, in general, to improve the quality of the educational offer by making it relevant to the requirements of the business world, to achieve an adequate labor insertion of the young person.

Dual Training appears as a different concept of innovation and quality by introducing a second place of learning: ***the Company,*** which qualitatively distinguishes it from traditional technical Training in terms of facilitating the overcoming of the gap between education and working life through cooperative action based on a close and continuous relationship between high school and Company.

Dual Vocational Training in Chile has been implemented in the line of formal education, at the level of technical-professional high schools, with the advice of the FOPROD Project (Dual Vocational Training), an organization established through an agreement between the Chilean and German governments (MINEDUC-GTZ).

3 Education for All Global Monitoring Report. *The imperative of quality*. UNESCO/Paris 2005

To date, it has achieved curricular innovations in Technical-Professional Education, which arise in response to the demands of qualified human resources, complementing school teaching with learning in the Company.

For the beginning of this action, it is essential to have the existence of two prerequisites:

1. Careers that have an occupational field
2. A sufficient number of enterprises are available, suitable according to teaching plans to provide the corresponding instruction.

For this reason, the Dual Modality is not defined as the only alternative for modernization but as an adequate response for high schools that meet the aforementioned prerequisites and aspire to quality curricular innovation.

The model developed by FOPROD (MINEDUC) provides that the young person, at the end of the training process, receives not only the classic accreditations (secondary education license and intermediate level technician title) but also a certification of professional aptitude (CAP) granted by the learning company or trade association of the corresponding productive sector. To facilitate insertion into work and allow labor mobility, this certification accredits the competencies required and defined by the same companies ensuring the quality of learning.

In-company learning is in itself the hallmark of Dual Training, transferring much of the practical instruction (teaching) from school learning workshops to the production center. "Learning by doing" in the production process is the philosophy that guides it. The learning of skills, abilities, and work behaviors in the Company is carried out during the 3rd and 4th years of the technical-professional Lyceum.

This is part of systematic education. In this way, it differs from Professional Practice in that the latter is conceived as the application of what has been learned and not as the systematic acquisition of knowledge, skills, and abilities.

2.1 IN THE FIELD OF DUAL VOCATIONAL TRAINING

Currently, the Chilean economy presents a positive balance. The economy shows very important growth rates; inflation is one of the lowest in Latin America, and the external debt has stopped growing.

The growth strategy with an open economy considers requirements of high competitiveness, both in the international market and also in the national market. This reality has caused "bottlenecks" in certain product areas due to a lack of qualified workers who respond to the technology necessary to maintain that competitiveness.

There is consensus that an economic-productive transformation with equity requires investments in human resources, but without neglecting that, we work with human beings. These investments must:

1. Provide the productive sector with a qualified workforce according to its needs.
2. To maintain and improve their levels of competitiveness, producers of goods and services require workers with personal and specific skills differentiated by specialties and levels.
3. Ensure young people their social and labor insertion, as well as due flexibility and mobility at work.

Social insertion depends, to a large extent, on location and job projection. It is difficult to find work, especially for the first time. Work experience and specific competencies are the main requirements. Technological and work organization changes often occur, requiring lasting skills that facilitate adaptation to change.

In Chile, traditional Technical-Vocational Secondary Education shows weaknesses in terms of its link with the world of work. The insertion and labor projection of its graduates is hindered by shortcomings in their preparation.

Within the set of issues that concern and concern Technical-Vocational Education, some problems should be highlighted:

1. In general, there is little link between technical-vocational lyceums and the corresponding economic sectors.
2. The curricular conception is not related to the development of professional competencies.
3. The lack of unique professional profiles prevents a transparent certification of competencies applicable to the whole country.
4. Currently, to a greater or lesser degree, the available resources do not allow the timely equipping and financing of technical-professional establishments.
5. Because for almost two decades there have been no teacher Training careers in education for work in the country, it is the case that a considerable percentage of teaching staff without a teacher qualification work in Technical-Professional Secondary Education; It is the specialty teachers who need to be updated.
6. Currently, offers for teacher improvement and regularization are being made in various institutions. However, these initiatives lack consistency in the absence of a national teacher training policy for technical education.

In light of the problems identified, it is possible to think about the design of a global strategy that considers a relationship between "demand for labor resources - supply of vocational training," in which a school-company union is produced, that is, innovate in the curriculum.

In this modality, the school-company union requires a learning curriculum both in one place and in the other. The Company thus obtains duly qualified human resources both in the technical domains and in labor behaviors. Students achieve skills, abilities, and habits that allow them to operate with existing technology, deepen the fundamentals of those technologies, and overcome the historical gap between technical development and implementation of material and human resources of the technical school.

Vocational Training of this kind goes beyond simple cooperation between an educational establishment and several enterprises. The educational project of these establishments must be linked to the prospects for innovation and development not only at the local level but also at the regional and national levels. This means that the quality and relevance of Dual Training depend, among other things, on the development of policies and instances of coordination and support. What leads to plan and development: Studies on the REGIONAL ECONOMIC PROJECTION and the respective labor requirements, the elaboration and updating of Graduation Profiles according to the needs detected, the elaboration and updating of innovative curricular proposals for the respective graduation profiles, the elaboration of DIDACTIC MATERIAL, THE TRAINING AND THE METHODOLOGICAL AND TECHNOLOGICAL IMPROVEMENT OF THE TEACHERS by the requirements imposed by the curricula and learning for the achievement of educational quality.

According to the results obtained to date, Dual Vocational Training is presented as a methodological-operational model that in itself is not the total solution to the problems of education for work in general and secondary technical-vocational education in particular. It requires work in all the areas mentioned. However, with its potential (real link between educational offer and productive sector, optimization of the use of available resources, socialization of apprentices with the reality of the world of work and others), it has shown itself to be one of the interesting, innovative alternatives for the improvement of education.

This training methodology gives us several advantages:

1. First of all, the Dual System allows an **extraordinarily wide coverage**.
2. At the same time**, it greatly alleviates the burden on infrastructure budgets**, *as it reduces the needs of the school system's investments in technology, as well as the operating cost, using the inputs and technology installed in companies.*
3. It also ensures an **important degree of flexibility and mobility for students**, prepared in this way, both to adapt to the changing demands of their specialty in the future and to change towards other job offers, that is, the change of mentality between employment and employability.
4. Dual vocational Training is thus a strategic factor for the competitiveness of the economic system, with an innovative methodology relevant to the reality of the country.

Training in the Dual System means for apprentice students:

1. Quite safe possibilities of **initial incorporation into the labor market.**
2. **Integration into a job as a skilled worker** (Basic competencies)
3. They have no problems adapting to the technological and/or social conditions of the world of work because of the practical experience gained during their two-year apprenticeship.
4. The great **flexibility and mobility** that characterizes the workers trained in the Dual System not only allows them to adapt with advantage to changes in their specialty, it also facilitates the search for new horizons.
5. Important for the flexibility and mobility of these workers are also their fundamental technological knowledge and their mental skills acquired in the dual process that allows their subsequent Training for purposes of **updating specialization, improvement, and retraining.**

Dual Training in its application and development, according to the characteristics and particularities of the educational community and its environment where the experience will be carried out, presents potentialities and advantages for the actors involved in it, in this case, the student-apprentice, the Company, and the Lyceum, such as:

For students

1. Access to productive and working life.
2. Early integration and experience in the technical specialty.
3. Motivating incentives.
4. Better chances of getting a job.
5. Greater social and labor mobility.

For the Lyceum

1. Permanent contact with the Company.
2. Educational offers according to labor demand.
3. Optimal use of resources.

For the implementation of Dual Vocational Training in a technical-professional lyceum, components that relate to both institutions and people must be considered, each of them playing different roles and functions, but innovation and quality in the achievement of competencies are essential.

Of these, two are the vital institutions in this type of vocational Training: the **Lyceum and the Company.** Their interrelationships are decisive because, to the extent that the Company is "prepared" with its constituent elements and corresponding functions, it is enabling the beginning of learning in the Company and the consequent alternation in school. Both require compliance with aspects related to information, material, human and financial resources.

The students/apprentices ***and the*** teacher guide ***also play an important role***. Your willingness to participate is imperative to the success of the project.

Each of the components involved in the implementation of the Dual modality is defined and explained below.

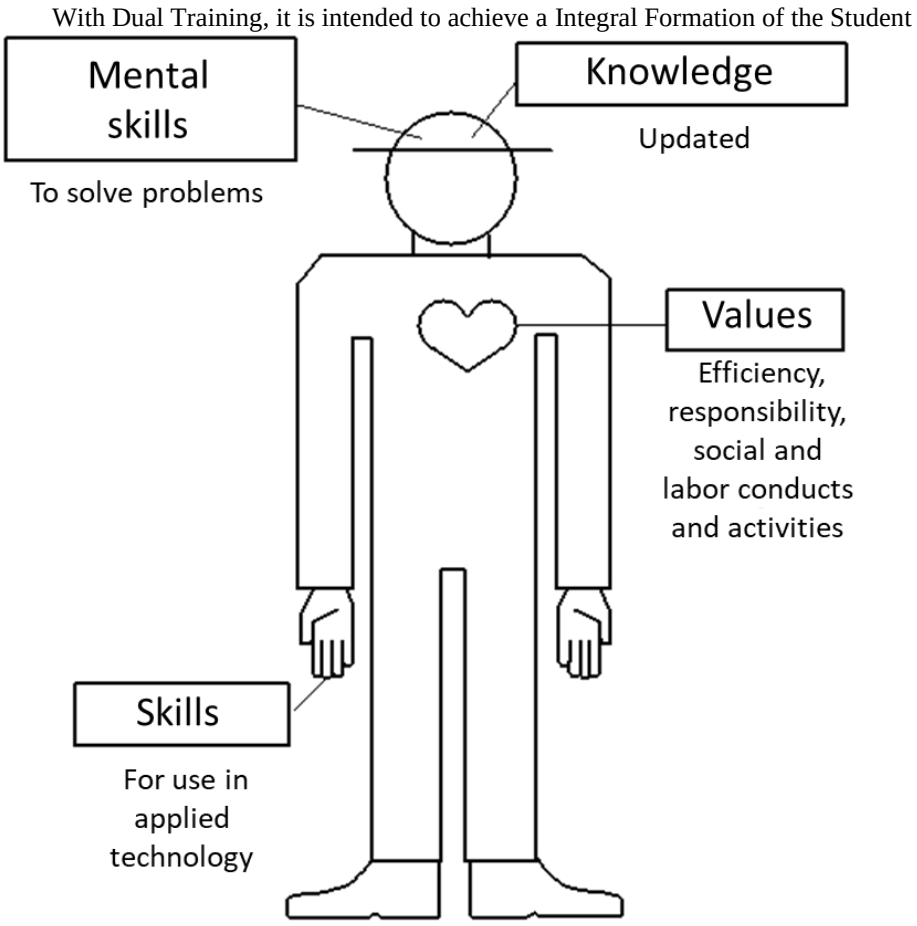
2.1.1 Students/Apprentices

The students/apprentices are students in the 3rd and 4th year of Technical-Vocational Education in the Dual Modality who maintain their status as students. However, to learn in the Company, they are considered apprentices.

2.1.2 Master Guides

He is in charge of enforcing the Learning Plan in the Company, becoming a tutor of the student in it.

The expression curriculum, used in the Dual modality, means something like "a set of principles, contents, processes, methodologies, through which we want to achieve the integral formation of the student."



Other particularities of the dual vocational training in the emtp

ACTIVITY	ENTERPRISE	HIGH SCHOOL
Curriculum vitae	Learning Plan	Study plan
Learning Technician	Skills and abilities Specific	Technological know-how and Basic skills
Learning Social	Socialization in the Company	Personal, cultural, and civic Training
Investment in the learning	Productive sector	State
Responsible of Training	Master-Guide	Teacher

2.2 THE VIABILITY OF THE DUAL MODALITY

Innovation means change. For committed actors, change means stepping out of their routine, which usually provokes resistance. In the case of Dual Modality, the changes must be made both in the high school and in the participating companies.

Without underestimating the problems and difficulties involved in the application of the Dual Modality and less the efforts required of all the actors involved, the quantitative development during the experimental phase demonstrates the viability of the Dual Modality in Technical-Vocational Secondary Education.

The proper functioning of the Dual Modality implies having innovative work planned, programmed, and adapted to the dynamics of a cooperative effort; That is, it is not feasible to maintain a routine whose dynamics are regulated exclusively by the calendar and school events.

3 SUMMARY

In the current curriculum, Differentiated Technical and Vocational Training in the last two years of secondary education is closely related to a product or service sector. That is, with a specific field of work. Aware of this, the Professor sees that a "Program with the Dual Modality" is a way that allows students **"real contact with the Company, verify learning achieved in high school, motivate the student towards the improvement of their personal and professional Training and complement the Training they receive in high school**. "

Undoubtedly, placing students in a real context surpasses the "simulation," no matter how good it is. It is in the workplace where students will face emerging and contingent "real problems." There they will have to test the learning achieved in the Lyceum. This type of situated learning causes transformations that are noticed by teachers, and that is expressed in **"how the student returns to classes again**." Something that happens when joining the world of work is that students take more responsibility for themselves and, as a consequence, **"take school work with greater commitment**

and there is greater awareness of the importance of their dedication to studies," which helps to achieve quality**.**

Suddenly, those school demands that sound alien to their reality become important: "They **understand and efficiently apply different resolution processes" and "they experience the importance of good vocabulary and expression of ideas in different contexts**."

This highlights the importance of the interrelation between General Formation and Differentiated Formation. Students must not only apply the knowledge acquired in the specialty but also become aware that in the workplace, they must use an adequate and precise vocabulary, and they must be able to express their ideas clearly in the different contexts with which they are faced. Skills are expressly indicated in the Transversal Objectives on Thinking Development and particularly in the Language and Communication sector. This is only a small sample since, most likely, associated with technical knowledge, they must constantly resort to many others from the learning of mathematics, such as.

This work provides new clues regarding the importance of the relationship between the Lyceum and the workplace, on which there is a rich practice accumulated in Dual Training, where the student expands his learning scope both in the Company and in the establishment. Certainly, this requires organization and supervision and, also, and commitment: "the **pedagogical leadership of the Director is also key when embarking on experiences of this type" to achieve an innovative society where "the company is the scene of learning."**

Innovation management, as well as organizations in general, public and private, deserve a continuous analysis and monitoring of the variables of the external context that impact them. In this sense, it should be noted that educational agents are the ones who make innovation, and hence their management and direction play a key role. Education professionals, more than ever, need to know how to come to understand and comprehend the complexity of what external variables mean and their impact on educational work.

The school as a quality school organization and educational innovation represent two areas called to be properly related, carefully analyzed, strategically planned, and animated for their joint development. That is why these must be contemplated and justified both at the level of theoretical argumentation and in the functioning and institutional life of schools as educational spaces; Project, over time, in the articulation of the educational policy of a country and in the school practices that occur in the classrooms.

In our country, this double task is yet to be carried out. A solid tradition of pedagogical thinking that has adequately explored the mutual implications between school quality and innovation as an educational process has not yet developed.

Although the training lyceums with the Dual Modality promote a change of attitude in such a way as to break the persistent tendency to undervalue the less academic inclinations of young people and to reward only those who have been successful in the instructions given in the classroom, that is why it should be noted that the activities of this modality not only focus on the school but also outside of it. The greatest motivation generated by this is the application in companies of the knowledge acquired in the Lyceum, which can be seen as another innovative benefit of this type of Training. The same happens with the maturity and appropriate behavior that the apprentice student acquires by being in permanent contact with a Master-Guide.

Deepening cooperation between schools and companies to bring the world of education closer to that of production is an increasingly important challenge in today's world, where technological change requires workers to constantly renew their knowledge. Moreover, it has been shown that the ability to acquire new skills is directly related to the student's experience. When a young person finds in his studies an answer to problems that have been posed to him previously in his work, he internalizes the solutions much more efficiently.

The central objective of Dual Education is to provide the student with theoretical and practical Training alternately. As learning takes place in school and the Company in a complementary way, students have the possibility of acquiring specific knowledge and skills of their specialty, learning to use new technologies "in the field," really knowing how a company works, knowing how to relate to their colleagues and superiors, developing important values such as responsibility and industriousness, and, at the same time, complete their studies.

4 CONCLUSIONS

To conclude this work and analysis of education, I quote **Paulo Freire,** who clearly states what should be the qualities and virtues of an educator who seeks to innovate in quality in his educational management:

- The first is that the educator not only loves the subject of education, the child, the youth, the youth, and the adult but loves the ***very process of loving*.** It means that I love the very act of loving someone. This act of loving, for me, cannot do without passion. I believe that without immense passion, no love is possible. Deep down, for me, love is the relationship between love and passion for something, for someone. The progressive educator must strive to create, to invent because no one is born with these skills. The educator is also an artist, an architect of beauty, and must have the passion to love the child and the suffering people and somehow influence their environment positively.
- A second quality I value in a progressive educator is ***competence*.** It is vigilance over oneself, over oneself. It is the permanent investigation: What did I do today? Or What

should I have done today better than yesterday? The competence in terms of the contents that the educator teaches, what skills and abilities he must have, and the update in new teaching methodologies.

- Another virtue is the ***coherence*** between what the educator dreams, which is a society that is liberating itself, not free, but a society that is permanently liberating itself... The coherence between the dream of the educator and what he does to materialize that dream. He must be a demanding critic and creator.
- One virtue I find indispensable for the progressive educator is ***belief in the people***. To trust him without being naïve, to trust knowing him precisely because he is the people and does not have complete wisdom, nor whole morality, nor whole goodness. But believe in it and ensure the right to quality education with equal educational rights.
- I believe that another quality of the popular educator ***is hope***, in society, in people, and thinking that it is possible to innovate in education.
- Understanding history as a possibility places me in search of another quality of the progressive educator, that is his quality ***of being utopian***, precisely because of the understanding of history as a possibility of permanent change.

To these qualities mentioned above, I add others that will help to understand how innovation and educational quality is inserted in the philosophy of the Dual Modality and also other characteristics that an innovative teacher must-have for the achievement of a Quality Education, among others, are:

- It must have a pedagogical leadership that influences its peers and students, motivating them in the search for new learning strategies.
- Another no less important aspect is that this modality forces the teacher and student to develop their creativity, both in the Company and in their pedagogical work.
- Finally, every educational process must have a teacher who is re-enchanted with what he does, with his work as a trainer, permanently and who continuously loves what he does.

I believe that these qualities are aprioristic, I have not invented them, but I have seen them brewing in the struggles and practice of today's progressive educators.

With this thought, so philosophical, I think it represents the teacher we want to see in the classroom, that utopian teacher with hope, who believes in students, who are consistent with their actions, who have the skills and virtues to be a teacher, and above all loves the process of teaching. This teacher is re-enchanted with his profession and can help change the future and progress in new pedagogical practices, which will improve education.

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