

Engineering of a training program for future teachers based on information and communication technologies

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ABSTRACT

The initial training of future teachers relies heavily on the pedagogical period to reinforce their professional integration. This is why it is part of the curricula, benefiting from a fairly important time slot. On the other hand, the classical design of the pedagogical course does not favor the maximum attainment of the predefined objectives. The break between academic knowledge and professional knowledge is the main cause; disciplinary acquisitions at the training center constituting the basic training of future teachers are little or absolutely not related to the reality of the profession. This state of affairs has forced those responsible for education policy in training to look for new opportunities for action to redress training and promote their professional qualifications. A new conception of the pedagogical course has been prescribed by the competent authorities in a form known as integrative alternation accompanied by a new spirit of professional socialization. The pluvale of the new design is explained by a new way to go about improving the training / employment adequacy. It is a question of adopting the reflexive posture to maximize the relations between the theoretical bases and the teaching practices by exploiting all the tools offered by the information and communication technology (TICS)

A questionnaire was sent to the trainers to identify the type of engineering used and the use of information and communication technology was optimized.

Key words : Engineering of a training program; Pedagogical internship; Integrative training; Reflective thinking.

1. INTRODUCTION

Whenever we pilot a teaching internship with future teachers, we are faced with the concerned reactions from them. Often, they protest that a huge gap between the theoretical foundations programmed into their training course and their practical application in the real activities of work. This gap is growing constantly among the learned doctrines and practical form inspired me and deserves to be given special attention.

The problem of the appearance constantly new concepts and little change at the practical level seems to me absolutely essential to conduct a thorough reflection on the relationship between academic knowledge and professional knowledge between basic training and qualification professional.

The formation of a future teacher is provided by two spaces and two different times, both contribute to the dynamic construction of professional skills of the teacher. Offer training for future teachers is organized around a set of planned content for the acquisition of knowledge and skills, while at the school runs an educational course for the acquisition of knowledge practices as well as familiarizing students with the actual activities of the teaching profession [1].

The educational course is not only a crucial time in the training course encouraging the employability of future teachers but also an occasion in which is the confrontation between two types of knowledge: academic knowledge and professional skills. Seeking an efficient practice pedagogy, pedagogical training contribution has evolved from a applicationist paradigm that gives nobility to the theoretical knowledge on practical knowledge to a paradigm or both types of knowledge coexist and impose equally. To this end, a new training device is set up to ensure complementarity between the different actors of the initial training of future teachers in order to unify and harmonize the training practices.

1.1 The data and the results collected:

Although the initial training of future teachers has undergone significant changes over the past decade, a clear deficit is visible at all levels; The classical conception of pedagogical training always dominates and marks its increased influence on all stages of the training of the future teacher. In addition, the pedagogical course is conceived as an opportunity for the application of programmed knowledge.

Reality shows us that we are still far from the expected change and that the new form of pedagogical training in the so-called alternation form seems to be mistaken for the old form. The impact on teaching practice has not been as expected, prescribes it is ahead of reality, the discourse far exceeds actual practices. This observation explains why negligence vis-à-vis the postulates has taken place; the attributes of the concept were ignored and therefore reductionism was the major factor in the simplicity of the results collected from this experiment. The established conclusion is that reflexive posture remains a hard-to-reach ideal and requires a change of mindset.

1.2 Context

All countries of the world including Morocco, have engaged in recent decades in a profound reform of the education system aimed at improving its performance and performance; the initial training of teachers of college secondary education has experienced a supposedly innovative reform. The Ministry of Education has opted for Integrative alternately as a privileged path to professional training. The education policy training wished form through professionalization competent people capable of facing the multiple challenges and issues in the news; to implement efficient practices that can meet the contingencies of the reality of the job ...

Choosing a training based on integrative alternation was the strategic option of Moroccan reformists; they intended to set up a training system capable of responding to all of these contingencies:

- Refinaliser and revitalize the initial training,
- Rethinking the initial training programs
- Renewing educational architecture
- Implementation of new teaching practices
- Promote a better balance between theoretical knowledge and those acquired in practical environment, engaging professional future in a reflexive exercise on practice

What are the results of this particular reform the latter purpose of seeking a better balance between theoretical knowledge and those acquired in practice environment; Are we had the expected change? Do we came to renew the training of future teachers through the establishment of new practices articulating the academic knowledge and act professional? The clinical approach and reflective attitude have they replaced the juxtaposition and the disciplinary approach of teaching practices of the teacher?

The classic model based on the succession of theoretical training and practical training requires first acquiring a culture of technical, scientific and didactic in the training center. The application is assigned to the host institution. Today, it is recommended that future teachers to build parallel professional skills which contribute the place of training and the workplace by a back and forth between the two training areas.

This new approach, postulates that the relationship between knowledge and skills plays in the investment of the future teacher on the combination of two training styles, the first style from the abstract to the concrete and the second takes the opposite path from the concrete to the abstract.

The new model desired and prescribed by proponents of reform encourages the key actors to renew their practices and new roles. It also encourages them to perform new tasks, each from his post is supposed to connect with others to achieve the ultimate goal is the acquisition by the student teacher professional skills guarantee the exercise of activities of the teaching profession with some effectiveness.

targeted reform can be summarized in two major purposes:

- 1) The empowerment of trainees;
- 2) The appropriation of a reflective mind.

These two objectives can be quantified by the renewal status of each player and the weaving of ties between the two training areas.

The three major players in the integrative alternation are called to take distance from their old practices and ownership of those new and promising.

Where is it in relation to the new training device?

The former (DDF) recommends alternating as training model to improve the training / employment report. It is based on the link between two worlds which contribute to a progressive and dynamic construction of professional skills.

In this model the college is designed as a place of exercise of the profession. The training center is considered the acquisition of knowledge of space and know-how in tending the actual activities of the teacher. In other words, this is to help future teachers to build the skills required to perform the activities of the teaching profession and offer them the opportunity to put them to the test in authentic conditions.

The trainer in this model is no longer seen as a transmitter of knowledge but rather as a facilitator and a catalyst for development. Thanks to his expertise, he accompanied his student that he appropriates the skills of the teaching profession.

The trainer in the classical model is content only to convey a general culture more focused on teaching paradigm than the learning paradigm. By contrast, it is recommended that the trainer as the new training device to help the student to build his professional identity based repositories of training and skills.

The student is the main actor on which focuses the new training device, it is the active agent of development. Its role is to know his craft and become familiar with its challenges, to fully understand its mission to accomplish them wisely.

The expectations are becoming more demanding, he is expected to connect between the two worlds that of training and the work by the appropriation of a reflective stance.

The student teacher is responsible for the construction of professional skills by linking and articulating between academic knowledge and professional knowledge; it is considered as manager and co-producer of his training [2].

The tutor is to provide professional situations conform to the specifications, promoting the integration of its fellow in the college and its environment as well as the acquisition of knowledge in action.

In college, there is no question of implementing the theoretical foundation acquired at the training center, but rather to invest in professional situations updates (MSP) which cover activity groups arranged so as to ensure functional progression. The supervision of these activities is provided by the actors of this medium. The organization of training in the two training areas to a single goal "help the student teacher to build their professional skills through reflexivity"

1.3 Problematic

The targets and we wish reach through integrative alternation, were they truly acquired? Efforts by officials to abound and bring the two places of training and work have they brought their fruit? The concept iteration advocated by proponents has he been assimilated by the users? The good and new practices traditional practices they have replaced summarized in the ancient form of teaching practice and anchored in the successive alternation? Why does it feel often increased break between training supply and demands in terms of skills of the teaching profession?

The iteration concept presupposes that the trainee, his companion and guardian together weaving between the two training sites, a connection between the different types of

knowledge, a back and forth between teaching practice and wellfavy and also a back and forth between a scientific theory and its implementation means [3].

It is understandable that the academic knowledge acquired its nobility and legitimacy of the formal aspect of the training program, the initial training of teachers provided a large part of its program to scientific knowledge in the form of laws and conventional principles.

The classic design is forcing trainees to assimilate and integrate this knowledge and to try later to apply them in the workplace. These trainees are expected to be consumer ready a culture and carefully formalized without any effort of adaptation and validation. This situation has resulted in placing the trainee before two major challenges: firstly perceive objects out of context of emergence and also invest in their place of work with tools that are not his and which it is not familiar.

Today, the key challenge is to find a compromise between two apparently antagonistic models, one attaches great importance to scholarly doctrines built outside the education system in specialized areas such as laboratories or other production fields knowledge and ensures its implementation in the training school and its representation in the curriculum; the other does not just apply to models built outside the training school but rather to invent their own models and their own tools through the formalization and theory of teaching practice. However, that deal with this challenge, how to enjoy both information sources and how to handle this delicate situation to reduce disruptions and improve consistency between the various parties.

Therefore, another professionalizing design is needed advocating education that values iteration reports Practice-Practice Theory- ... Opting instead for a different model likely to think continuity and complementarity between the two areas of work and training: working situation becomes as much a training situation that the training situation is also a work situation [4]."

Individuals are then invited to develop a reflexive stance in relation to their action to transform an experience "in action" by experience "sweats". Practical analysis implemented in the training devices is then supposed to articulate the two areas of work and training. One speaks therefore not only theoretical knowledge but also knowledge of action which have as much a place in training. Hence, the need to find a different mode of operation and the search for new rules [5].

Professional place is no longer a place for the application of knowledge from the training. The reality is very different work situations are also trainers. Moreover, it is abundantly clear that the knowledge from the training does not automatically transfer into practice. The transfer is rather seen as a skills building process; the idea that - theoretical knowledge is prerequisite to effective professional action, the training location is positioned in a place of prescribing and professional field in a user site - is not designed for everyone. The professional action conceals equally effective knowledge; sometimes more than from science [6].

2. METHODOLOGY

2.1 Purpose of research

The objective of the survey is to survey key players which addresses the proposed reform, we decided to undertake a survey of trainers working within CRMEF. Our ambition is whether teachers practices have revolutionized the traditional process of teaching practice, ie the new practices its corrected the shortcomings of the conventional method of the course. We decided to collect all information on the training offer to the collegiate secondary education particularly the training system and mediations to ensure the link between academic knowledge and professional knowledge. Our sample of persons acting training centers (CRMEF) that ensure the management function and which have the task of renewing teachers instilling new practices. To this end, we have proposed a form as a Likert scale. It quantifies the qualitative information may result in a score.

2.2 Research Questions

- 1) Is it the new training system brought new practices?
- 2) There's he emergence of new practices analysis devices?
- 3) The trainees were they familiar with the new concept of teaching practice another form of integrative called alternation?

2.3 Assumptions Research

- 1) The reflective thinking remains an elusive ideal;
- 2) The reflexive stance is focused much more on solving the problem of the investment on the inductive method;
- 3) Lack of coordination exists between the main actors of the analysis of professional practice

2.4 Research Objective

Check the degree of achievement of the major objectives of initial training of future teachers reform is that of explicit

incentive to use reflective practice in training situations and the establishment of the spirit of cooperation of stakeholders

3. RESULTS AND DISCUSSION

Reflexivity (individual size and organizational dimension). Table 1 shows results on individual demotions while table 2 shows the results related to organizational dimesons.

Table 1: Results of Individual Dimension

Individual dimension				
Profile	Activity	Rate	reverse activity	Rate
Trainee	Passive and receptive	63%	Active and producer	37%
Former	Transmitter of knowledge	75%	reflexive	25%
Home Master	Enforcement Officer	55%	Tutor and accompanist	45%

Table 2: Results of Organizational Dimension

organizational dimension				
		Rate		Rate
CRMEF	Source of academic knowledge	67%	Source of professional knowledge	33%
Middle School	Enforcement space acquisitions	77%	Space probation acquisitions	23%

53% of teachers believe that students are purely consumer profile; 75% of teachers believe their main task is the transmission of knowledge; 55% of respondents believe that the profile of the application is still master artisan; 67% agree that the knowledge provided by the training center is a purely academic knowledge; 77% always find that the college remains an enforcement gap learned doctrines taught by the CRMEF

4. DISCUSSION

In our discussion we focus on the root causes of the problem that prevent key stakeholders by reflective thinking to do without the traditional practices and to promote the emergence of new practices.

Although the initial training of future teachers has undergone significant changes over the last decade, however a net deficit is noticeable at all levels. The classic design of student teaching still dominates and marks its increased influence on all stages of the training of future teachers. The attributes of

the classic design can be summarized in four main components:

1) Getting the student teacher with work: The educational course is designed as an enforcement opportunity programmed knowledge, taught and learned at the training center, the future teacher has to acquire all the theoretical requirements set within programs for them to be reused in the workplace. Generally, student teaching is always scheduled at the end of the intern training program to facilitate its integration into the social and educational life of the school.

2) Consolidation and strengthening acquired: The teaching practice is for prospective teachers, a moment of consolidating the gains accumulated during his training curriculum and their exploitation in the workplace. So the student who returns to the didactic transposition of all the learned doctrines he has assimilated, this alone is to seek how to go about making operative academic education in its field of action

3) Application of theoretical knowledge: The teaching practice is considered an auspicious time to operationalize all the ideas conveyed by the training program. The relevance and usefulness of these ideas are measured by their degree of transferability. The student is supposed to use the knowledge acquired at the training center for successful teaching spots with his students.

4) interactive exchange between the student and the class group: This is the school where the public school is located, it is recommended to practice teaching to promote the integration of the trainee and his interaction with the class group, the animation class group is the student to understand its customers to become familiar with their expectations and needs

5. INTERPRETATION

The reconfiguration of the educational architecture has revolutionized the form without touching the bottom. Indeed the new configuration is explained by the establishment of a canvas following a biannual progress based on modular training. The blocked internship was replaced by updates in professional situations spread throughout the year. Two profiles have been defined one input and one output separated by mastering levels.

A return trip is always between two training areas, the trainee attempts to articulate its education and training through an iteration between two seemingly separate locations.

The desirable values integrative alternating iteration and clinical approach, it prescribes about being both consumer and producer, it ensures that the student is learning at the training center to be then producer and mediator in the educational establishment. The knowledge gained at the training center will be tested in the exercise of his teaching profession. But reality shows us we're still far from the expected change and the new form of student teaching (integrative alternation) seems to misunderstand the old form. Moreover reflexive posture remains an elusive ideal [7].

It is to move from a successive alternating integrative alternation, achieving this goal is not as simple as you think. The desired impact is far from being up to date as new practices do not arise overnight, they require a heuristic and rational methodology that encourages a questioning of the action, a reflection posteriori on his intervention and mutual exchange with oneself and with others.

This methodology inspired by the clinical approach, which values the development of schemes of perception, operations formalization and conceptualization.

The return on the action does not happen only to identify the problem by seeking possible solutions but it is an approach that promotes accountability and autonomy of the speaker is a new training paradigm that encourages the about being the architect of its own development, it is to him belongs the construction of their skills and their validation [8].

The development of reflective thinking is not a substitute for academic and scientific thought but it is a supplement and it is an alternative that adds to our directory to improve and invest. Indeed, it is not using search results in vitro and in vivo transpose effortless adaptation and validation, it is not either to apply scientific laws that are made elsewhere and are strange to the specifics of the human.

The impact on the teaching practice was not as intended, the prescribed is ahead of reality, the speech than many actual practices. This explains well as negligence vis-à-vis the assumptions held; the attributes of the concept have been ignored and therefore reductionism was the major factor in the simplicity of the results collected from this experience [9].

6. CONCLUSION

Rethinking traditional design reports Education / Employment, renew the idea rooted which states that the first theory, then practice for a successful marriage between action and reflection, between the benefit and its formalization, between the hypothesis and verification ...

The desired challenge is to shift from a teaching to a professional logic, instead of separately think the report Training / employment, it makes sense to rebuild this report as a unified combination and linking these two variables into a

coherent and meaningful.

Acquisitions and knowledge learned at the training center have meaning only in relation to the reality of the profession, the converse is true, the actual practice of the profession have meaning in relation to the foundations and theoretical foundations provided in the training center. A dialogic anchor should substitute the rational mind of the student, the knowledge acquired during the training should undergo a validation effort putting them on probation during his work by exercising the teaching practice. The disciplinary knowledge should be didactisé and instrumentalized to serve the educational act in its operative form. Conversely,

When the student is faced with a problem situation, its workplace becomes a trainer space prompting him to seek possible solutions and pragmatic alternatives by a rigorous methodology of problem solving; However, his effort only makes sense in the finalizing and seeking the merits of the thing. This back and forth between training and work instills in the student through a dialectical issue a reflexive and iterative thought allowing it to broaden its skills and enrich their academic and professional cultural repertoire. This mode of alliance between learning and production is a training vector articulating both the abstract and the concrete in a homogeneous whole called sandwich courses or integrative alternation.

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