STEERING PROFESSIONAL DEVELOPMENT SYSTEMS
FOR TEACHERS AS A LEARNING ORGANISATION

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ABSTRACT

This paper looks at the monitoring systems and the thought processes that took place in the organization, pedagogy, communication and technology, conceived by the F3-MITIC project managers (interstate project of The Geneva Education Department), to organize and supervise the learning of teacher educators. We present the results of 3 years of experience in managing a project, which emphasizes a socio-constructivist approach of teacher education, and which considers the reflexive approach system itself as a “laboratory” in constant evolution. Indeed, encountering frequent difficult situations forces us to imagine innovative solutions and to change our strategy in order to take into account the institutional and social setting and context.

Besides the description of numerous tools that we have set up to favour the development of competencies of MITIC teachers of teachers and in view of privileging collaborative learning and a reflexive approach (creation of scenario groups, learning teacher logbooks, work spaces for recollecting and building up experience, formative evaluation, learning process regulation, etc.), as well as steering the project (participant observation, external advisors expertise, participant productions and implementing analysis methods, etc.), we demonstrate the importance of the thought process, which accounts for the mental representations of the different actors and favours social interactions, which is important for the success of such networked education.

We present the benefits the management of education projects can obtain with methods aiming at developing in all participants a culture of critical analysis and reflexive thinking. We think that steering a learning organization, considering continuous learning as a central value and operational method, favours the professional development of teacher educators.

KEYWORDS
Teacher education, management of innovative projects, reflexive approach, professional development, collaborative learning, social interactions, learning organisation, media education, life long learning.

1. INTRODUCTION

Since the beginning of the F3-MITIC project, we postulated that a system, which ambition would be to work as a learning organization, should promote collaborative learning, development of reflexivity, priority of pedagogy over technology as well as exchanges between participants and the recollection and building up of experience (collective memory). We present here the development status of this system after three years of activity.

1.1 Brief description of the project F3-MITIC

F3-MITIC is a learning process for teacher of teachers (F3) in media, image and ICT (MITIC) started by the Canton of Geneva Education Department. The aim of F3-MITIC is to develop the motivation and competencies of teaching professionals to provide courses to further teachers or to operate as resource-persons in teaching institutions.

The project is part of the general program aiming at integrating pedagogical use of media, image and ICT in the teaching and learning processes at all education levels. It is an attempt to answer the growing needs in education of teaching personnel in this field (Morel, Domenjoz, Lachat et al, 2003).

1 F3-MITIC is a learning process for teacher of teachers (F3) in media, image and ICT (MITIC)
This education system named *Public-Private-Partnership-School on the net*, was created under the initiative of the Swiss Confederation, the Cantons and private economy for the 2002-2007 period. It aims at developing competencies at all basic levels in term of ICT and media teaching. The F3-MITIC project is supported by the Federal Office for professional education and technology (OFFT).

### 1.2 Basic ideas for the system set-up

The setting up and steering of a new learning system is a complex process threatened by multiple pitfalls (defensive routines, logistics, “polite interest” from the authority, simulation of a learning stance, fear of changes, difficulty to assume various roles, etc.).

It was all together necessary:

- To elaborate the outlines of a learning system in an established institutional setting
- To gather a team able to develop the thought process and to organise the contents of the learning system in practice
- To control the learning environment
- To assist the participants day by day
- To keep on target meeting the original project

Encountering difficult situations kept us in a constant research process and forced us to continuously look for new ways of improving our strategy in a systemic perspective.

### 2. GENERAL FRAMEWORK

The learning system became progressively more complex throughout the years until its current format. The synthetic representation of its main components is described as: a learning area, which goal is to offer a setting for the development of knowledge and competencies of the learning teachers, the steering of the system includes the project manager and the coordinator, who are both collaborating with the representatives and the external advisor expertise taking part to the development of the project. To ensure building up of available information, we created a communication platform to carry out the interface among actors involved.

Figure 1. System components

*Project partners, steering and monitoring system, communication platform and learning area*
2.1 The partners of the project
The project was created by the Service Ecoles-Médias (SEM) at the Geneva Education Department in setting-up a partnership with the Canton of Valais. As described above, this project was generously supported by OFFT, who's responsibility is to regularly check that the project is developing according to its initial objective (controlling process). Since the beginning, the University of Geneva and some private partners were associated with the development of the project.

2.2 The steering
Steering the system is ensured by the Steering Committee, which includes delegates from the teachers staff department and a joint commission (authority/trade union) of the continuous education services, institutions ensuring initial education of teaching professionals, the SEM managers (responsible for the project) and the project manager. The coordinator of the Steering Committee carries out the follow up of the working group and works closely with the project manager, who assumes the setting-up of modules and follow up of the learning participants.

The system benefits from input of external advisors. Every year the team responsible for the project writes a final report to the controlling authority on the basis of data collected by evaluations done throughout the year at different levels. This document evaluates the results in relation to the initial objectives and presents a financial summary.

Geneva University staff and advisors from the private sector are associated to the project. Several studies supervised by Prof. Daniel Peraya (Geneva University) on the analysis of scenarios created by learning teachers, on the analysis of new modalities created for teaching and its steering as well as evaluation of the needs of teachers of teachers and resource-persons at the Education Department have helped us to put this project in place.

Several external advisors from private partners provided their knowledge for the teaching and took part in the analysis of the modules (participating observers) as well as the evaluation of the learning process at the end of each year. The observations of modules were done through the “scope” of adult education and the “gender scope”. Indeed, one of the specific objectives of the learning system is to develop the participant’s sensitivity to the gender issues (inequities). The outcome from these partnerships was available to the participants and many cantonal officers and were discussed in the Steering Committee meetings. The outcomes provide the project managers with valuable information and advice in order to step back if necessary and constantly innovate to improve the system. The outcome from these partnerships is essential to the steering of the system in view of a learning organization.

In order to give a feedback to the learning teachers, we created a readers forum, which provides hints on elaborated pedagogical scenarios. The reader is considered as a “critical friend”, a partner able to provide advice and support to other learning teachers in a cooperative way. In F3-MITIC, the “reviewer friends” are the people who already completed the same learning process. (Kember et al, 1997).

At the end of the learning process, each participant presents a reflexive work (reflexive personal final report) to an international college of experts, who are active in the field of MITIC pedagogy. The experts discuss and comment in public the participant’s work and deliver a synthesis report. This presentation day aims to be a step in the certification process and a period of reflection.

2.3 The communication platform
To collect, build up and emphasize the experience from the research, the learning teachers productions and the resources provided by the organizer, we created an exchange and communication network. This system aims at the creation of a shared culture by the actors, to exchange information with our different partners and finally to keep in touch with the teachers who already completed this course.

It is important to dispose of ways to collect, manage and provide information in and out of the system in an efficient way in order to enable our system to evolve.

The communication tools currently used are, despite we don’t have a full portal (cf. 3.1 below):

- A web collaborative tool (Twiki)
- A publishing tool (SPIP) for sharing pedagogical scenarios
- A “classic” website to present the learning system
- Electronic mail

The web site provides documents presenting the learning system. It is a static site today. The electronic mail, besides the interpersonal communication among learning participants, persons in charge and partners, is an important monitoring means since participants only meet every two or three weeks for the courses (modules). Electronic mail is used for all memos sent by the project manager and the coordinator to the participants on a need basis (due dates, technical information, announcements, general information).
The intense reflection and creativity expressed in this professional development environment throughout the year is evidenced by the important usage of the Twiki and SPIP applications:

Table 1. Usage of the communication tools Twiki and SPIP

<table>
<thead>
<tr>
<th>Role as</th>
<th>Twiki (collaborative web)</th>
<th>SPIP (Content Management System)</th>
</tr>
</thead>
<tbody>
<tr>
<td>participants</td>
<td>to write personal pages</td>
<td>to elaborate scenarios</td>
</tr>
<tr>
<td></td>
<td>to evaluate each module</td>
<td>to write a report on the creation of the scenarios</td>
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<tr>
<td></td>
<td>to contribute within each module</td>
<td>to publish scenarios</td>
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<td></td>
<td>to post suggestions</td>
<td>to discuss in the forum</td>
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<td></td>
<td>to participate in a chat</td>
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<td></td>
<td>to write the reflexive personal final report</td>
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<tr>
<td></td>
<td>to discuss in the forum</td>
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<tr>
<td>project manager, project coordinator</td>
<td>to dispatch reference documents</td>
<td>to discuss in the forum</td>
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<td></td>
<td>to post practical hints</td>
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<td>to display resources</td>
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<td></td>
<td>to save archives</td>
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<td></td>
<td>to pilot and monitor the participants</td>
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<tr>
<td></td>
<td>to discuss in the forum</td>
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<tr>
<td>readers (“critical friend”)</td>
<td></td>
<td>to give feedback reports</td>
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<tr>
<td></td>
<td></td>
<td>to discuss in the forum</td>
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<tr>
<td>educators</td>
<td>to display resources</td>
<td></td>
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<tr>
<td>researchers, observers</td>
<td>to share study cases and reports</td>
<td>to publish study cases and reports</td>
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<tr>
<td>experts</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>to give reports and suggestions</td>
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</tr>
</tbody>
</table>

3. THE LEARNING AREA

At the centre of the learning system, we have an immaterial entity which corresponds to an attitude that we constantly try to develop and which is at the heart of the learning F3-MITIC GE/VS - system values: the reflexive approach.

Figure 1. The learning area
The learning program spreads over a complete school year and is available for a maximum of 25 teachers per class. The professional development curriculum includes taking part to 11 one-day thematic modules, the creation in duo of 7 pedagogical scenarios and the writing of a reflexive personal final report, which is defended in front of a committee of experts. These thematic modules are completed during the year by 3 half days of exchanges to sum up the pedagogical scenarios created by the participants. A certification ceremony day ends the learning year. In order to keep in track the participants in the learning process, they are invited to maintain a personal log book. The program presents a total of hundred hours of direct tuition in addition to 150 hours of distant collaborative work.

3.1 Eleven thematic modules
The thematic modules offer the participants theoretical inputs and thoughts for the creation of specific strategies at the adult education level. In this perspective reflexive analysis and criticism of the experience gained from each modules is a very important component of this teaching system. According to the collaborative working approach, the 11 modules themes are:

- Status and roles of the media, image (MI) and ICT (TIC) in teaching and learning
- Cultural and social impacts of MITIC integration in education
- Information and communication systems, modelling and simulation
- Multimedia and Internet: integration of technologies in the learning process
- Adults education

For more information: [http://www.edu.ge.ch/cptic/f3mitic](http://www.edu.ge.ch/cptic/f3mitic)

3.2 Creation of pedagogical scenarios
Each module is organised on a theme. It is the opportunity for the participants to develop in duo (team working) a pedagogical scenario on a new project using MITIC in teaching/learning. This thought process aims at emphasising the creation of specific strategies for adult education and reveal transdisciplinary uses of media, images and information and communication technologies in education.

A pedagogical scenario is a way to explain and communicate a learning project integrating MITIC activities. The scenario must describe in detail how the authors imagine creating a learning situation. The scenario is organised for determined learners. The notion of scenario can encompass the terms of project, pedagogical sequence, pedagogical uses, learning-teaching tools such as those usually included in pedagogy. The reflexive and critical analysis of this live experience in each of the modules is an important component of the learning process.

In the process of learning, the creation of scenarios plays an essential role. The scenarios are seen more as a learning activity helping each participants personal development, rather than a way to evaluate the product to be publicised. Therefore, all means able to help trigger a feedback are valorised (reader reports, exchange day, add-ons to the scenario, other participant’s reactions via the forum) because they are the privileged means to develop the participants competencies. The scenario should thus be a reflexive way of learning and an opportunity to put in action a pedagogical project.

After having created each scenario and after having presented it to the group, the authors are invited to come back to it and to produce a short report summarising their thoughts, this “post scriptum” is then added to the scenario.

3.3 Exchange modules
The exchange modules are an opportunity for the participants to analyse the scenarios they created and to develop a reflection on themes chosen by the managers of the learning system. The participants can also experiment the use of models developed by TECFA (University of Geneva) and others to analyse and to criticise the modules in a constructive way. In the learning process, the exchange modules are privileged periods allowing the participants to share experience, to try to enter scenarios of colleagues as well as to identify their knowledge and lack of knowledge.

3.4 Certification ceremony day
At the end of the year, participants who followed the entire course successfully are to present their reflexive personal final report to a college of experts. This day is dedicated as much to reflexion and sharing of experience as to the official certification. It brings the class and invited people together: members of the steering group, State officers, research advisors.
At a round table, participants present their oral contribution emphasising a chosen aspect of their learning process and discuss it with the experts. This moment represents the culmination of a reflexive work conducted throughout the year by the participants.

4. THE REFLEXIVE APPROACH
The system presented essentially aims at enabling the participants to acquire a reflexive and critical attitude from the very beginning of this education system. As Philippe Perrenoud, inspired by Schön's work (1983), showed in several books and papers, it is essential to put the reflexive practice at the centre of the learning project in order to reach a true professionalization of teacher educators (Ph. Perrenoud, 2001). We therefore elaborated multiple means to stimulate the development of the participant's state of mind presented here. We not only encouraged the participants to develop this state of mind, but the organisers also submitted their own activities to these reflexive procedures so as to get their own feed-back. The constant analysis of activities and their critical review is for the people in charge of steering the learning process, essential in order to allow its evolution.

4.1 Evaluation of modules to module analysis
From the first year, asking for a feedback and an evaluation of each module, was a constant concern and in coherence with the general view of learning monitoring. This satisfaction survey model rapidly showed its limits. It appeared to the organisers that to take into account the specific teacher of teachers attitude, a reflexive dimension should also take place in the feedback suggested at the end of each module. The module analysis concept in use today answers practical expectations. It is based on:

- Feeding the personal Log Book
- Sharing the different points of view on the learning process
- Emphasising reusable facts and knowledge in the scenarios

The organisers therefore suggest an oriented reflection in order to put forwards pedagogical, methodological, institutional, organisational, etc. aspects, so that the participants can position themselves away from the learner attitude and acquire a teacher or resource-person profile. It is necessary to ensure steering of the learning process in the short and long run through directed or open questions and through an exchange of information between participants, organisers, and teachers.

However, the concern to emphasise relevant elements in the contents (meaning) is increased by the organisers concern to offer the learning teachers:

- Various reflexive tools to analyse learning situations (models, indicators)
- Feed-back processes (written, oral, graphic, mandatory, optional, reactions to organisation auto-evaluation).

In order to adapt to real life situations and to the steering needs, questionnaire of evaluation are used for each module.

The module evaluation by the learning teachers is completed by the external expert’s observation reports and the evaluation day at the end of the year.

4.2 Personal Log Book
F3-MITIC learning system participants are invited to keep a personal Log Book throughout the year. This Log Book seems well adapted to collect information in the adult education process. According to Daele (2000), the Log book is a personal tool which contents can be freely shared with everyone. It is a document, which should be, a reflexive tool as well as a self-evaluation tool. It could contain reflections about concepts discussed in the modules, notes on interactions (observations, opinions, reactions, etc.) and encountered issues (understanding, collaboration, formation evolution) or personal feelings. The Log Book should help to better evaluate the progress made and be a valuable resource while producing the personal final report.

4.3 The personal reflexive final report
At the end of the F3-MITIC education, each teacher under training writes and presents a personal reflexive final report in which he/she brings a critical look at his/her training path and situates him/her-self in the learning process. This personal report therefore identifies acquired competencies, deficiencies and personal needs, explains why the learning process shifted his/her representations or practices in term of the following parameters:

- MI and ITC fields complementarities
- Adult education specificity
- Pedagogical process diversity
• Transversal competencies implementations
• “Collaborative” type work

Participants can select out one of the five parameters without ignoring the others. They are free to emphasise for example in class work (module) or distant work (creation of pedagogical scenarios). The personal final report is the result of a reflexive and analytical process which the participants are invited to practice throughout the F3-MITIC curriculum. The personal final report therefore interacts with other documents which the participants produce during the learning process such as:
• Pedagogical scenarios which evidence the reflection conducted for each module
• Module evaluations carried on as a self-evaluation of one’s own conduct of the learning process
• The personal Log Book

At the end of the year, all participants meet to present their work to the project manager, the coordinator and a group of expert. Attendance to this day is compulsory for certification.

5. LEARNING ORGANISATION

5.1 A research-action perspective
Thanks to the support provided, the learning system was able to develop a research component, which lead to studies and analysis of the system itself and its environment (observation, modelization, and advice) which constantly fed the reflection of the steering staff and the learning participants. This thought process allowed us to build an inside expertise, which lead to enrichment of the steering tools. We also relied on partnership with our University and the private sector for their expertise. Since the beginning, we adopted in our work an action research learning perspective following Kurt Lewin works.

5.2 Towards a learning organisation
A learning organisation considers the systemic approach and permanent learning including its operational processes as it's central values. It uses groups of participants for its continuous development; sub-system’s learning at all levels, with the external support (Senge P., 1990).

Our learning system tends more and more to apply a definition of the learning organisation in line with Alain Bouvier's (Bouvier A., 2004) suggestion :

"une organisation intelligente ou apprenante est un système d’actions, de conduite de l’action et d’apprentissages collectifs, qui s’organisent pour apprendre en permanence, capitaliser ses savoir faire et ses compétences, pour les transmettre et se transformer volontairement pour atteindre ses objectifs en fonction des évolutions de son environnement, de ses ressources, de sa culture et des représentations des groupes d’acteurs en son sein. Pour cela, elle s’appuie sur les techniques de résolution de problèmes, les simulations et les expérimentations, la régulation de ses procédures, la remise en question de ses processus (par opposition à une approche centrée sur les tâches ou sur la stratégie) et sur une adaptation permanente à son environnement. Elle s’inscrit dans le paradigme systémique et la pensée complexe (au sens d’Edgar Morin). Elle assure une veille épistémologique, ontologique, éthique, scientifique et technologique".

5.3 The foresight spirit
Over the past years, passionate talks took place in our learning system group about the role and importance of creating scenario units.

As creating the future presupposes banishing the lack of foresight in order to avoid being put under pressure or faced with obsolescence, innovation in pedagogy must follow the same pattern.

It is indeed well known that facing the uncertainties of future potentialities (evolution of the public educational system, integration of MITIC in teaching and learning, etc.) the three main attitudes could be:
• Remain passive (undergo changes)
• Be reactive (wait for changes and act)
• Be prospective in the sense of pre-activity (be prepared to an anticipated change) and pro-activity (provoke the desirable change).

The main basic characteristics of a foresight stance are:
• A pluridisciplinary systemic inspired attitude
• The will to consider the “long term” dimension
• The will to integrate breaks (threshold effect, rule modification, innovation, etc.)
6. CONCLUSION
The survival of an innovative system is often related to the possibilities there are of transforming the institutional setting in which it is included. It therefore implies the need to be able to force changes in other actor's minds. This is why interfaces such as, in our case, the “steering committee” are of such importance. This is a strong constraint.

The F3-MITIC experience is part of an inevitable process of teaching staff professionalization at all levels. This phenomenon is reinforced by the evolution of the setting in which the educational system takes place, such as the world becoming more and more dynamic and demanding regarding information, knowledge and communication tools. For our population of teachers this means acquiring new pedagogical, technological, communicational, organisational and citizenship competencies. The concern regarding professionalization is therefore very important.

In term of learning organisation management, it is more and more obvious that it becomes essential to review the steering system which cannot only rely on quantitative and economical criteria, but needs to turn towards basic criteria, values and strategies involving all participants of the system so as to make them actors of their own learning.

REFERENCES

AUTHORS
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