Learning by doing: : an innovative method of teaching management disciplines in a higher business school

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Abstract— The purpose of this article is to present and discuss through an experience the contribution of learning by doing method in teaching management discipline and particularly Strategic Management in a constantly changing context.

Indeed, globalization, markets opening, digitization have led to a crucial change in business world. In terms of human resources and to meet the needs of this constantly changing market, teaching methods must be called into question. The teaching of management disciplines must have the flexibility to promote acquisition of knowledge necessary for this new context.

In this paper, we start by underlining the importance of questioning management teaching methods, we present learning by doing approach and specify its usefulness in Strategic management courses.

Next, we present and discuss our own experience of teaching Strategic Management using the learning by doing approach with students of Master 1 at a higher business school. We present the method we have followed while specifying its advantages, its limitations and also the role of the institute in encouraging this type of creative pedagogy.

The results of this experience have shown that the learning by doing approach despite its constraints and limitations, constitutes an effective innovative teaching method for teaching management disciplines because it allows knowledge development, know-how and knowing how to be. Indeed, it offers students the opportunity to acquire theoretical knowledge by practicing it within a group in an innovative way and in real market. However, the success of this educational approach necessarily requires commitment and support of the institute.

Index Terms— Learning by doing, learning methods, innovation, knowledge, strategic management

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1 INTRODUCTION

From large movements mutation generate worldwide effects of unprecedented proportions: on one hand, the wave of globalization is continuously making our planet a single market where all businesses in the world are facing a demand from all corners of the earth and face universal competition. Furthermore, digitization has created a technological revolution making it increasingly widespread and available at very low costs or even insignificant.

In such context, companies are faced with more demanding and competitive environment. There by calling into an objective review of operating modes is necessary to preserve economic and strategic relevance. Morocco as a developing country aspiring to socio-economic evolution of its population is not spared by this wave too.

Moroccan companies once overprotected by customs barriers under pretext of protecting national industries are now forced to face global competition given that the country is strongly committed to a process of openness and free trade. .

Recognizing this challenge, Moroccan companies, private and public, whatever their size or sector of activity, are facing the need to enhance their competitiveness in market.

In a globalized, open and rapidly accelerating world, transformation is a necessity for all companies. Indeed, the desire to develop internal efficiency, boost company, reorganize itself, improve quality of service, reduce costs, commit to a social responsibility policy, internationalize, design a new strategic vision or embark on digitalization… All of them are triggers for transformation to the company of

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tomorrow.

This transformation is reflected in a set of complex and multidimensional projects that must be steered by company in addition to daily operational work. Thus, sharing a clear vision, mobilization and commitment of actors or taking quick, efficient and focused decision, remain the success factors of any transformation process within every company.

Therefore, in order to carry out these changes, the current business needs versatile staff, that head obviously with strong technical skills but most of managerial skills such as initiative taking ability, sense of innovation, ability to work in a group ...

As a management researcher professor in a Business School training future executives and managers and facing all these changes, it is time for us also to question our teaching way and our educational means. Long taught in a classic classroom with a theoretical course explained by a teacher to mostly passive students, learning of management disciplines must now take on a new pace and follow transformation that is taking place beyond classrooms.

Management education should allow student to understand technical concepts but also to experience them. The experience will allow students to interact with each other, to ask questions, to question theories, to carry out group projects, to solve problems ... Ban passivity, act to learn is a way for students to forge a profile allowing them to integrate easily into an organization in constant changing world.

Learning through action or action learning is an approach developed in 1945 in England by Professor (R . Revans , 1998) which had proposed to managers of industry coal to meet and learn from each other and thus better solve their problems. This researcher believed that "There can be no learning without action and action (healthy and deliberate) without learning ".

The learning-by-doing method did not spread until the 1970s, first in Europe then in North America and Australia, thanks to the establishment of European subsidiaries. The development of this method is based on the idea that experience of managers is poorly exploited and that they learn best by taking actions, reflecting on these actions and by talking with other managers.

(Reynolds, 2011) states that the 'learning by doing is solving real-life approach that involves action and reflection on results. This helps to improve problem-solving process and simplify solutions developed by the team.

Referring to the quote from Confucius "I hear and I forget; I see and I remember; I do and understand", which advocates learning by doing, the use of learning by doing as a pedagogical method of teaching management would be of great added value for the learner.

The objective of this communication is to discuss the contribution of this method of learning on management teaching. For this, we begin by theoretically apprehending the approach of learning by action and then we present and discuss its real contribution through a teaching experience carried out with a group of students in Master 1 of a high school of management.

2 WHAT IS LEARNING BY DOING?

Learning by doing is a practice that was born with Reginald Revans in 1945, the father of this discipline explains that the spirit of this practice will be destroyed the day it is taught in university.

Revans' formative influences included his experience as a physicist at Cambridge University. In meetings with a group of scientists, he stressed the importance for every scientist to describe his ignorance, to share experiences and reflect collectively to learn. Also, he used these experiences, as a business consultant, to further develop the method. He encouraged managers to meet in small groups, to share their experiences and to ask questions about what they saw and heard. This approach increased productivity by more than 30%.

Thus, for Revans, learning by action refers to a structured process of questioning and reflection. Action learning is an organized method that enables small groups to regularly and collectively analyze complex problems and take action which promotes individual and collective learning.

Over time, this method has interested several other researchers and practitioners, however, there is no consensus on the definition of learning by action, each defines it according to his own vision.

Not straying from Revans' definition, (Pedler, 1991) defines action learning as a way of thinking and acting that arises when people

learn from their actions in the real world. Learning by Action states that a group of people use their life experiences to make decisions. This method is based on practice as a source of learning for individuals or organizations.

To (McGill & Beaty, 1992), action learning is an interaction of reflections and thoughts between colleagues in order to solve a specific problem.Moreover, for (Weinstein, 1999) it is an approach that relies on potential of the individual. Indeed, according to him, learning by doing stipulates that our way of acting in the future is influenced mainly by what we have lived by taking the time to question ourselves, to understand, to reflect and to make discoveries. In summary, action learning can be defined as a collective process of reflection and interaction that made its proof in different institutions and organizations.

Indeed, learning by doing was recognized as a valuable way to support the continuing professional development of emerging professional trades. The Action Learning approach has been applied, for example, in the emerging professional field of global outsourcing, as reported by Hale ("Actual Professional Development", Training Journal, 2012). This supports the idea that powerful learning can occur at organizational boundaries, as Wenger suggests in his work on "communities of practice".

Organizations can also use action learning in virtual environment (Waddill , Action E-Learning, International Human Resources Development, 2006). It is a cost-effective solution that enables the widespread use of action learning at all levels of an organization. Action e-Learning (AEL) - as challenged and implemented by (Waddill , 2004) - is a viable alternative for organizations interested in adapting action learning process to online dissemination with groups whose members are not co-located. In addition, several universities confirm the effectiveness of this approach in education: According to a study by University of Chicago, students who physically experiment with scientific concepts go deeper and do better in science tests (S . Beilock , 2015) .

Brain scans showed that students who took a practical approach to learning had activation in sensory and motor parts of the brain when they then thought about concepts like angular momentum and torque.

Activation of these areas of the brain was associated with better quiz performance by college physics students participating in the research.

A final experiment took place in a college-level physics class, to see if benefits of the action experience could be seen on quizzes and homework taken a few days later. Students were randomly assigned to action or observation roles. Overall, Action Group scored about 7% higher on the quiz than Observer group, even though it had fairly similar scores on the other quizzes during the quarter. For Beilock, the results underscored the importance of classroom practices that physically engage students in learning process, especially in math and science. "In many situations, when we allow our bodies to be part of learning process, we understand better," Beilock said.

Having proven its effectiveness in terms of ease of learning in organizations and institutions , we decided to test this approach in teaching of a management discipline in a major business school . Thus, before starting our empirical study, it would be interesting to present principles of action learning approach.

3 WHAT ARE PRINCIPLES OF LEARNING BY DOING?

FIGURE 1: LEARNING BY DOING PRINCIPLES (REG REVANS, 1998)
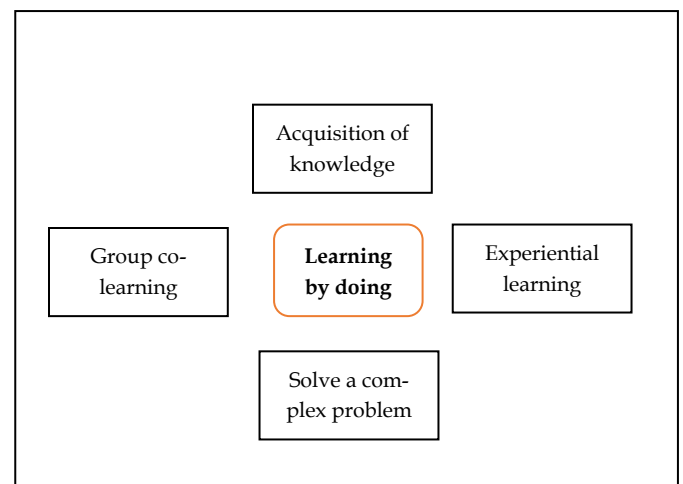
According to Reg Revans, to approach learning by action is to learn empirically while solving complex problems as a team by respecting four principles :

1. **Experiential learning**: In this approach, the emphasis is placed on learning by doing, ie learning by action. This approach assumes learner's participation in learning process.

2. **Creative complex problem solving** : According to Revans , this method is intended to solve complex problems, interdisciplinary, that require deep reflection to produce creative ideas. Learning through action is of no use when facing simple technical problems where number of appropriate solutions is limited. If so, the best is to tackle the problem by consulting experts, doing research or taking training.

3. **Acquiring of relevant knowledge**: Learning through action allows learning concepts by practitioners in a group. This method allows to develop three types of knowledge: knowledge (theoretical knowledge), know how (application of theoretical knowledge in the field) and soft skills (know how to behave in a group and deal with constraints: Time, budget, conflicts...). (D. Ricard, 2001)

4. **Co-learning group support**: Since this approach is based on interplay of reflections be individuals, it requires creation of a group, a team. it is an essential phase because the whole group must be responsible for the problem solution, it is imperative that the problem is that of the group, that all appropriate it although it is necessarily brought by one of them. To do so, the work on collective functioning must become an integral part of team's learning. To promote learning, learners should ideally have diverse but complementary qualifications (Marquardt, 1999). The number of learners in the team must be reduced, according (Weinstein, 1999), the richest groups are usually composed of five or six participants.

Therefore, after presenting the key elements of action learning approach, in what follows, we explain its usefulness in learning strategic management course in a major business school.

4 WHY LEARNING BY DOING IN A STRATEGIC MANAGEMMENT COURSE ?

Today, the business world is experiencing an extreme change: Competition is becoming tougher because of globalization, digitization and international trade, so the company must review continuously its development strategies while optimizing its resources as much as possible.

For this, company today is looking for employees capable of quickly adapting to changes and being operational immediately. " We have neither the time nor the means for a long period of adaptation of a new employee, " said Mr. Bennis, CEO of a large real estate group in Morocco. He also specified that "the challenge today for the winners of the great business schools is not what they learned but rather what they learned to do ".

However, if the theoretical concepts are important for the students, forming a strategy is a work of action, the strategy consultant will be led to think while acting on the ground. He must be able to analyze situations, observe the behaviors of others and their effects, as well as observe their own behaviors in action. Basically, he must be able to analyze the micro and macro environment and its impact on the decisions of the organization. This learning is not easy and theoretical lessons are no longer sufficient.

Few pedagogical approaches make it possible to put into practice these essential skills. Case studies are interesting but they have their limits, mainly with regard to the capacity development to manage constraints in the field work: to analyze in a real context, to manage teams, to manage time, to collect, to make reliable and process information…

Learning by doing allows integration of knowledge by using it in a real work context. According to (Dixon, 2000), it is mainly lack of contextualization in a practical universe that turns out to be the greatest handicap to knowledge transfer.

Faced with this situation, in our management department of the higher institute of commerce and administration, we considered important to review our teaching methods so as to best meet market requirements in order to facilitate our winners' integration. In this sense, as management teachers, we decided to test learning through action with a group of students in Master 1.

5 EMPIRICAL STUDY : ACTION LEARNING TO TEACH STRATEGIC MANAGEMENT

Higher management education based its model years ago on the principle of lectures in a context of relative information scarcity. Since

then, nothing or almost nothing has changed in how teaching and transmitting knowledge.

Today, the business environment is undergoing a radical change: Globalization and markets opening imply increasingly tough competition. The company is constantly on the lookout for versatile and immediately operational profiles. This is why learning from theories never put into practice in real situation is no longer enough.

Also, entry into digital age and arrival of "connected" generations require educational innovations. The observation is even truer when it comes to training future managers.

Strategic management is a profession of action; it is certainly very important to know and understand theories and basic concepts but the most important is to know how to practice them. This job also requires a great capacity for communication and personal adaptation with customers and business partners. A Marketer must understand consumers, environment in which he acts and know how to adapt to it. These skills can never be acquired through a classic lecture. A newly leaving school can never be easily operational in a company and will require a great effort of monitoring and supervision.

In this sense, we have thought about a new method of learning by action of strategic management which will allow the student to learn theoretical concepts, but also to practice them in real market. We tested this method with a group of Master 1 students.

The project is as follows: Each team will produce a tangible product (not a service) which will be intended to be sold in the open days organized by the institute.

For this, the students will be required, to carry out an environmental diagnosis and a market study, to design the product and to determine the appropriate strategies.

This project has three main objectives: Learning strategic management theories (1-Acquisition of Knowledge) through their implementation in real market (2-Acquisition of know-how). The idea is above all to bring the student closer to the constraints and concrete risks of the profession and to equip them with a minimum of skills allowing them to integrate more easily into job market (3-Acquisition of soft skills).

5.1   PROJECT IMPLEMENTATION PROCESS :

A- Clarify the project objective: Since the project is the heart of learning, its nature should be specified. First, it is about making sure that it is a real problem for people involved in this learning process. We started by presenting the project objective and explaining its importance in training. In action learning, the project should be complex making use of several disciplines. Thus, this project is a real problem and the solution is not simple, it is innovative and involves not only strategic management skills but also financial analysis, computer statistical tools ... and entails a concrete result: The sale of a tangible product

B- Build the teams: Given that we want the whole group to be responsible for carrying out the project, the choice of team members is essential. Indeed, we leave free choice of groups so that students already know each other and have already worked together successfully. However, we specify only one condition: The importance of diversifying skills of members within the team. Thus, each group must explain to the class how their team is diverse in terms of both technical and managerial skills. Groups are validated only if all the teams are formed in a diverse way with the consent of the whole class. This way is not ideal but allows all group members to be responsible for their choices and also minimizes the risk of conflicts within teams.

C- Specify the role of the teacher: The teacher is responsible for the smooth running of the learning in several facets: On one hand, he must provide the apprentices with the necessary theories, in our case, the course is recorded as a video and deposited in Blackbord tool [1], students receive a mobile notification announcing the course submission. This interactive tool also allows students to discuss the content with each other or with the teacher. It is also common to give additional explanations at the start of the sessions. On the other hand, Professor is careful to manage blockages that prevent learning, it helps to resolve communication problems and interpersonal conflicts. Our intervention was in two forms: General sessions where we bring together all the teams to present progress reports, clarify the theoretical content, recall objectives of the project and monitor compliance with agenda. Other specific sessions at the request of the group to handle particular problems to the team. In this type of projects, it is clear that the teacher must always be available to facilitate the progress of students, monitor the objectives and al-

so ensure the pedagogical authority to ensure that the teams' commitments are respected

D- Determine the evaluation of the project: 30 % of the mark is given to a written multiple-choice test where we assess understanding of theoretical knowledge, 70 % of the mark is given to the project (30 % to the report submitted at the end of the session and 40% to the final result (product)). To facilitate tasks to students and also to the evaluator, reports are of standard size and must necessarily contain all the team productions (Questionnaires, interviews ...). Also, to be fair, we give only one mark per group, up to them to make the distribution by members. In the majority of cases the distribution is fair, if the attribution is different, clear and justified explanations must be given.

E- Taking experience appraisal: At the end of the project, each team is required to present to the whole class learning acquired both in knowledge (theory), know - how (practice) and soft skills (attitudes and behaviors). This phase is very important because it allows students to share what they have learned and benefit from each other's experiences.

After the project was closed, we carried out an analysis of the results against the initial objectives set.

5.2   RESULTS AND DISCUSSIONS OF THE EMPIRICAL STUDY:

Through this project, we noticed that the students were more motivated to learn because it allowed them to test the usefulness of the theories and techniques on real problems, and are able to see for themselves what can be usefully applied, and what cannot be.

Indeed, we noticed that the students who followed the project had an average mark which exceeded by 3 points students who were satisfied with lectures and case studies.

Also, we underlined improvement of student interactions following replacement of lectures by recorded videos: Students are more comfortable, they can see and review the course freely. This approach made the sessions more fruitful in terms of interactions and questioning given that the students were already familiar with the course.

During the realization of the project, we noticed a real change in attitude of our students, moving from passive students whose only concern is validation of the module to students who are more active and curious to learn. They did not hesitate to ask for help from teachers in other disciplines such as finance, human resources, IT ...

As a result, not only were we pleasantly surprised by the quality of the reports submitted but also by the sense of innovation and creativity of the final result: The students for the most part of them designed products that we could easily find on the shelves of supermarkets with very well adapted strategies.

During the open days organized by the institute, we had the pleasure of admiring stands of our teams worthy of real companies. Posters, banners, advertising spots, demonstrations… All the groups fought to market their products.

Thus, the action-learning approach allowed students to develop self-confidence and maturity necessary to take responsibility and take initiative, to make connections, to communicate and to bond with others more effectively, to learn while working, to develop leadership skills and finally, to promote creativity and innovation.

However, this project is far from ideal, it was the first experience in its type, the students complained about the time needed to complete the project, given its complexity and requirement of other modules, we should reflect transversally with the heads of other departments to review the place that the module should take in the program and project deadline.

Also, as project managers and given the workload that we had, it was difficult for us to manage the various collective and individual work sessions, to record lessons on video, to manage team conflicts ... Unlike classic courses which end with the session, this type of approach requires great availability from professors. Thus, it would be preferable to have a committee made up of professors from different modules, not only strategic management, to ensure, with the teams, the follow-up of the project realization. This point should be discussed with the pedagogical staff in order to encourage these innovative approaches.

Indeed, this kind of innovative teaching methods requires a budget, a specific organization, well-equipped work rooms… This cannot be achieved without the encouragement and support of the institute. Any organization concerned with changes in the environment should put in place the necessary means to promote creative teaching to its students in order to facilitate their professional integration. The task is not

always easy especially for public schools with limited budgets, however, if they are aware of importance and effectiveness of such educational innovations, they would make it as a priority. In our institute, the will toward educational innovation is present, we have already implemented the tool "Blackboard", three meeting rooms are equipped to make it a suitable place for group work. Several projects are underway but require even more effort to prepare the necessary budget.

In addition to the institute, companies must, within the framework of social responsibility, contribute to improving education and participate in building profiles they will need. In addition to sponsors and financial aid, companies must open their doors to students and provide them with the supervision and information necessary for the success of this type of projects. Business leaders must also participate alongside with teachers in improving pedagogical approaches to bring education as close as possible to market needs.

Furthermore, the research center science institute drew our attention to the fact to maintain a balance between theoretical learning and practical actions: He believes that the recorded lectures are insufficient for a student wishing to enter a Ph.D. in strategic management. Given that, this is an initial training for which the outlets are either professional integration or a doctoral thesis, it would be important to strengthen the theoretical content. The problem that arises is how to add content without falling back into old lecture halls? The challenge for us is to ensure this balance between learning and actions in our future projects.

6 CONCLUSIONS

Learning by doing is a rich process in teaching, it is an innovative method that could have a great added value on management learning. In this paper we have tried to share our first action learning experience of strategic management module. Our approach has several advantages but also many limitations.

However, action learning is a flexible approach that is constantly open to change and improvement. The objectives are not static; we can always translate them into action according to the purpose of the teaching. This is how we create our own learning theories (Whitehead, 1999) . Faced with the various changes that the business world is currently experiencing, our teaching methods must be called into question in order to allow acquisition of knowledge necessary to support this change; Thus, the action-based learning approach, despite its constraints and limitations, constitutes an effective innovative teaching method for management disciplines because it allows development of knowledge, know-how and interpersonal skills.

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