



# An Instructional Model for Guiding Reflection and Research in the Classroom: The Educational Situation Quality Model

**Fernando Doménech Betoret**

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Developmental and Educational Psychology,  
Universitat Jaume I, Castellón

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**Spain**

*Dr. Fernando Doménech Betoret*, Psicología Evolutiva y de la Educación. Universitat Jaume I, 12071 Castellón, Spain. E-mail: [betoret@psi.uji.es](mailto:betoret@psi.uji.es). Tel.: +34 964/729550, Fax: +34 964/729262.

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## Abstract

The purpose of this work is to present an instructional model entitled the "Modelo de Calidad de Situación Educativa" (MCSE) and how teachers can use it to reflect and investigate in a formal educational setting. It is a theoretical framework which treat to explain the functioning of an educational setting by organizing and relating the most important variables which according to the literature contribute to student learning. There are scarce educational setting model that provide a methodological way to investigate in the educational setting, however, the MCSE, besides to be a conceptual model, offers a methodology and instruments to obtain data in order to improve the teaching/learning process and academic achievement. Hence, the main objective of this tool is to guide the research conducted by teachers in the classroom and encourage them to investigate in the educational setting context. In this work, characteristics and functioning of the model are explained; moreover instructions and measure instruments are offered in order to be used by any teacher interested in improving the quality of student learning and achievement.

**Key words:** Instructional model, theoretical framework, research in the classroom, reflexive teaching, educational setting.

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# Un Modelo Instruccional para Guiar la Reflexión y la Investigación en el Aula: El Modelo de Calidad de Situación Educativa

## Resumen

El propósito de este trabajo es presentar el "Modelo de Calidad de Situación Educativa" (MCSE) y cómo el profesorado puede utilizarlo para investigar y reflexionar en la situación educativa formal. Es un modelo teórico que trata de explicar de forma coherente el funcionamiento de una situación educativa formal, organizando y analizando las principales variables que intervienen en el aprendizaje escolar, así como las relaciones que mantienen entre ellas. Son escasos los modelos de situación educativa que aporten una vía metodológica para investigar en el contexto de la clase; sin embargo, el "Modelo de Calidad de Situación Educativa", además de ser un modelo conceptual, ofrece una vía metodología capaz de aportar datos para mejorar el proceso de enseñanza/aprendizaje y el rendimiento escolar. En este sentido, esta herramienta ha sido creada con el objetivo principal de guiar las investigaciones que se desarrollan en el contexto del aula e introducir al profesorado en la investigación psicoeducativa. Sólo obteniendo datos y evidencias de la situación educativa real se podrán iniciar acciones efectivas de mejora ajustadas a la realidad en la que se trabaja. En este trabajo se explican las características y el funcionamiento del Modelo, y se ofrecen pautas e instrumentos para que cualquier profesor, tanto universitario como no universitario, pueda utilizarlo para mejorar la calidad del aprendizaje y el rendimiento de sus estudiantes.

**Palabras clave:** Modelo instruccional, marco conceptual, investigación en el aula, profesor reflexivo, situación educativa.

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## Introduction

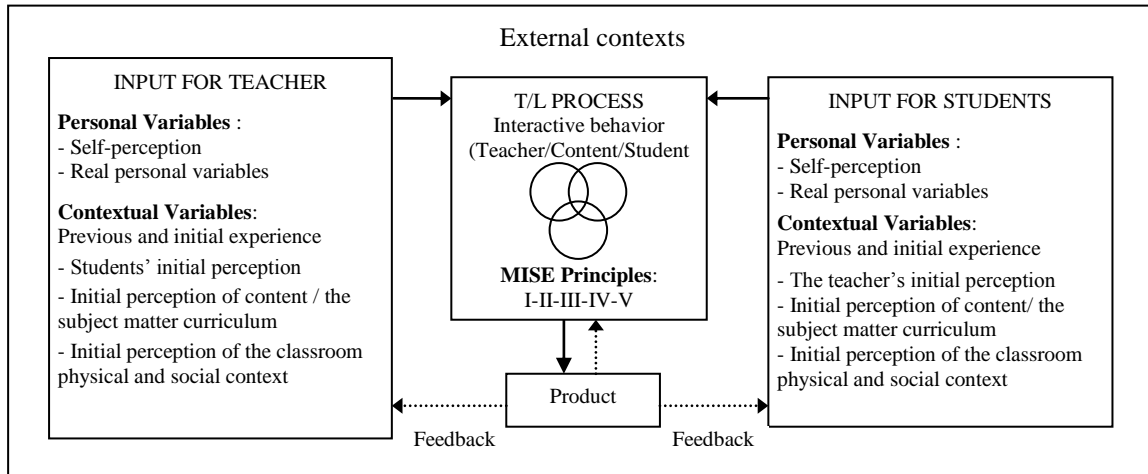
To date, many educational setting models have been developed by educational and instructional psychologists for the main purpose of providing a conceptual framework and for guiding research work in formal educational situations (Anderson & Burns, 1989). However, there are very few educational setting models that provide a methodological way to conduct research in the educational setting, and which globally consider the teaching and learning process (henceforth referred to as the T/L)

After a previous review (Doménech, 1991, 1995, Rivas & Descals, 2000) of the main conceptual models of the educational situation, Doménech (2006, 2007, 2011a, 2011b, 2012) designed a new model called the Educational Situation Quality Model (MCSE ‘*Modelo de Calidad de Situación Educativa*’). This model shares similarities with certain causal models (e.g., Biggs, 1978; DEDEPRO by De la Fuente y Justicia, 2007; Dunkin & Biddle, 1974; Pascarella, 1985; Stufflebeam & Skinfield, 1989, etc.), but it also shows important differences: first, it is *integrative*, because it is composed of the three learning essential elements (teacher, student, and contents); second, *sequential*, because it is a cycle with three differentiated phases called input, process and product; third, *systematic*, because it works as a system with plenty self-regulation capacity to meet the proposed objectives; fourth, it is not only a theoretical model, but it also *offers a methodology and the instruments* to obtain data in order to improve the T/L process and academic achievement.

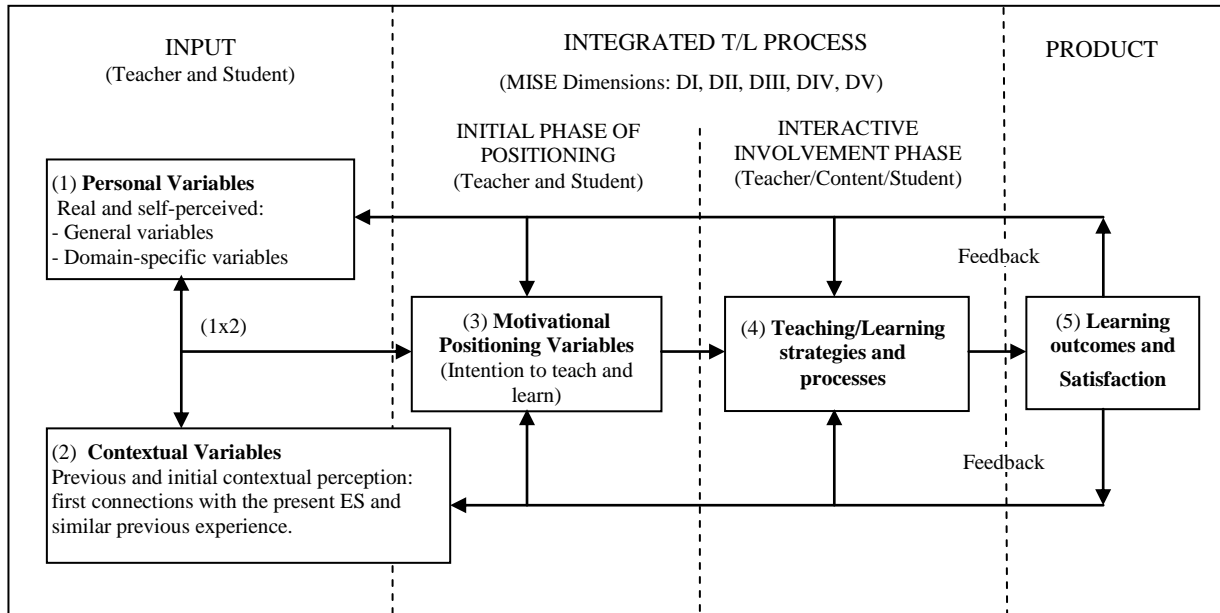
The Educational Situation Quality Model (henceforth referred to as the MCSE) is shown in Figures 1 and 2. Figure 1 offers a global view of how an educational setting operates, with the simultaneous participation of teacher and students and the interrelation of the three major components: input, process and product. Figure 1 is extended in Figure 2, where the functional organization between components is represented.

As seen in Figure 2, the model is made up of five blocks of variables, arranged into three major sequential phases: input, process and product. The input phase consists of block 1 (personal variables) and block 2 (contextual variables); the process phase consists of block 3 (Positioning Motivational Variables) and block 4 (process and teaching/learning strategies); finally, block 5 includes academic results and satisfaction. Moreover, it is important to point

out that all these interrelated groups of variables are conditioned and affected by the external context in which they are framed (e.g., the education institution), and some other parallel contexts such as the family, which also affects this system. The phases and components of the model are discussed below.



**Figure 1. The Educational Situation Quality Model (MCSE): interrelation between Input, Process and Product considering teaching and learning as an integrated process.**



**Figure 2. The Educational Situation Quality Model (MCSE): Structure, organization and functional relationship among components.**

## **Input Phase**

The input phase consists of block 1 (personal variables) and block 2 (contextual variables). Psychological research has found that a person's behavior is determined by his or her personal and environmental variables. The cognitive model of Lazarus and Folkman (1984), explaining how people respond to a potentially stressful situation, is taken as a reference to support this idea. According to the aforementioned authors, before acting or responding to a particular problem or situation, people make an assessment of their personal variables (primary evaluation) and an assessment of the situation characteristics (secondary appraisal). Based on the information provided by these two assessments, the subject will respond to a potentially stressful situation in one way or another. We think that the proposal made by Lazarus and Folkman (1984) may be applied to the classroom context. In this sense, the initial motivation of the subject will depend on the outcome of the primary evaluation (personal variables) and the secondary evaluation (contextual variables) to a great extent. Based on this assumption, the MCSE model takes into account personal variables of the subject involved in the instruction, as well as the contextual variables. The level of motivation that teachers and students begin the T/L process With is measured through the so-called "Motivational Positioning Variables" (VMP), which will determine "Intention to learn" and "Intention to teach".

### *Personal Variables (block 1)*

The personal variables (block 1) are grouped into two categories: general and domain-specific. According to Boekaerts (1999, p. 44), general personal variables “indicate general feeling of competence or inclination to engage in scholastic learning”. Measurements of these variables “only describe properties that are common to a wide range of learning situations” (Boekaerts, 1999, p. 44). The general personal variables are characterized by their high stability and generality, and comprise variables such as personality, intelligence, aptitudes, styles, etc., as well as general personal dimensions (general self-concept, attributional style, anxiety as a trait, etc.). Domain-specific variables indicate the student’s tendency to react favorably or unfavorably to learning in a specific content domain (Boekaerts, 1999). They are more unstable and emerge in similar educational situations. This category includes variables such as previous specific domain knowledge, specific domain interest, etc., or specific personal dimensions (anxiety as a state, self-concept in mathematics, etc.). Currently the

personal variables that we consider to conduct our research in the classroom based on the MCSE model are: prior knowledge, academic self-efficacy, general interest in the subject, beliefs about the scope of subject training, and self-esteem.

*Contextual variables (Block 2):*

Contextual variables (block 2) refer to the first contact that the teacher and students have had with the current educational situation and their similar previous experiences. On the one hand, it is important to consider, since the beginning of the course, the perception (beliefs, judgments, attitudes) that the teacher has formed of students, the content to be taught and the educational context (physical and social) where he or she is to teach. According to Rosales (2000), "The perception that teacher is formed on the characteristics of students (more or less close culturally, more or less diligent in their work, more or less accommodating to the rules, more or less brilliant in their learning), evoke different expectations in teacher which leads to different ways of interactive behavior with them " (p. 47). On the other hand, it is also important to know the perception that students have formed of the teacher, the content they need to learn in, how their learning will be evaluated and the educational context (physical and social) of the classroom, since it will determine the way that students learn. Many previous studies have found that the perception formed by students of the learning environment has a significant influence on the quality of learning and academic achievements (eg. Doyle, 1977; Fraser, 1987, 1989, 1998, Ramsden, 1992; Waxman, 1991). Students cannot be considered passive recipients because they interact with the environment in which they live. It is obvious that learners study all the factors and the characteristics of the educational situation context before facing it in order to obtain a preliminary idea. Yet these variables are not associated only with the first contact that students have with the current education situation as they are also referred to other similar experiences lived. They all reflect the perception (beliefs, attitudes, opinions, etc.) that students have formed of the teacher, the content, the instructional scenery, the kind of evaluation they will receive, etc., and all this information will undoubtedly condition students' way of learning because they will act according to their first perception. The social context of each educational situation is different because it generates different student and teacher perceptions, and also to the conducts deriving from such perceptions (Erickson, 1986). Based on these theoretical considerations, a scale (Domenech, 2007) was developed which aimed to evaluate the students' initial perception of the course, and which has been recently reviewed (see Domenech, 2011, 2012).

## Process Phase

The starting point to identify and organize the process variables was the Instructional Model of Educational Setting (MISE) developed by Rivas (1993, 1997, 2003). The MISE is not simply a conceptual model, but also offers a methodology that allows an ES to operate and to be captured from an inductive procedure. The MISE is made up of five principles or dimensions that systemically, sequentially and hierarchically organize the variables (referring to teacher, subject content and students) involved in the teaching/learning (T/L) process undertaken in a classroom, beginning with the formulation of objectives and concluding with the evaluation of students' knowledge: PI. Intentionality (objectives and motivation); PII. Instruction Design; PIII. Personal interactions; PIV. Knowledge Acquisition; PV. Evaluation. Thus, instruction starts with PI (objectives and motivation), which activates the educational process and remains until it has been completed. Planning to achieve the goals and educational objectives involves setting the following principle, PII (Instruction Design), into motion. Developing and implementing design in the classroom involve PIII (Personal Interactions), while PIV (Acquisition of Knowledge) is achieved and, finally, PV (Control and Evaluation) comes into play. PV produces feedback to the other preceding instructional principles. All five principles are formed by their corresponding indicators, which specify and operationalize it (see Table 1). The structuring of selected variables proposed by the MISE stems from the empirical research carried out in both university and non university educational settings (Gómez, 1993; Martínez, 1991, 1995; Doménech, 1991, 1995; Descals, 1996).

The process phase is influenced directly by the initial evaluation that students make of their personal and contextual variables. The process phase, structured according to the five principles or dimensions of the MISE model, is divided into two sequential subphases: the first is called "the initial positioning phase"; it refers to the initial motivation which determines students' intentions to learn and the teacher's intention to teach; the second is known as "the interactive involvement phase". The initial positioning phase (or preprocess) is operationalized by the block of variables (Block 3) we called "Motivational Positioning Variables" (MPV). Block 3 is represented by the first principle of the MISE (P1: Intentionality). The interactive involvement phase is operationalized by the block of variables (Block 4) called "Teaching/Learning strategies and processes". Block 4 includes P2



(Instruction Design), P3 (Personal interactions), P4 (Acquisition of Knowledge) and P5 (Control and evaluation) of the MISE. Below we discuss both the blocks forming the model phase process in more detail.

**Table 1. Principles and Indicators of the MISE and key elements (teacher/content/student) that are involved and measured in each indicator.**

<i>Principles and Indicators of the M.I.S.E. Key elements that are involved and measured in each indicator</i>			
<b>PRINCIPLE I. INTENTIONALITY (PI): Objectives and Motivation.</b>	Teacher	Content	Student
I. 1.1. Change in state of student.	x	x	
I. 1.2. Cognitive structuring.	x	x	x
I. 1.3. Personal significance.	x	x	x
<b>PRINCIPLE II. INSTRUCTIONAL DESIGN (PII): Planning of the teaching/learning process.</b>			
I. 2.1. Content structure, activities and control.	x	x	
I. 2.2. Teaching strategies.	x	x	x
I. 2.3. Logistics of didactic resources.	x	x	
I. 2.4. Exposure time and physical conditions.	x	x	
I. 2.5. Complementary individualization tactics.	x		
<b>PRINCIPLE III. PERSONAL INTERACTIONS (PIII): Classroom climate.</b>			
I. 3.1. At first level: teacher/student.	x		x
I. 3.2. At second level: peer relationships.			x
I. 3.3. At third level: functional syntagmatic relationships.	x		
<b>PRINCIPLE IV. KNOWLEDGE ACQUISITION (PIV): Learning processes.</b>			
I. 4.1. Evolution parameters: Conditioning and activators.	x		x
I. 4.2. Previous knowledge: Conceptions and contents.		x	x
I. 4.3. Knowledge: Declarative and procedural.		x	x
I. 4.4. Attention processes and representational system.		x	x
I. 4.5. Strategies, styles and learning tasks.		x	x
I. 4.6. Individual differences: Capacities.			x
I. 4.7. Time Parameters: Dedication			x
<b>PRINCIPLE V. CONTROL AND EVALUATION (PV): Feedback to all the preceding Principles.</b>			
I. 5.1. Control and evaluation during the T/L process: Formative.	x	x	
I. 5.2. Control and subsequent evaluation of the T/L process: Final.	x	x	
I. 5.3. Individual psychological effects: Anxiety / Stress.			x

### *Motivational Positioning Variables (block 3)*

The Motivational Positioning Variables (Variables Motivacionales de Posicionamiento in Spanish-VMP) belong to the affective-motivational component that is generated or activated at the beginning of the T/L process in subjects taking part in a specific educational setting (attitudes, expectations, goal orientation, learning approach, etc.) according to their personal variables (blocks 1) and the information they receive on the days before and at the beginning of the instructional process (the contextual variables from block 2). These instructional variables are located between input and process, and are linked to a specific

context or educational situation that will determine and condition all later educational developments, and, consequently, students' academic achievement. The idea is similar to the way we form first impressions when we meet someone new. This impression is lasting and is difficult to change. They act as a wave passing over the whole T/L process until it ends, and during this journey, these variables can strengthen or weaken depending on the improved or worsened perception of the previously named elements (Doménech 2012). The same way as the first image of a person is formed, it is most likely that if the activation of students' motivational variables is initially high, it also finishes high, and the contrary is assumed if it is low at the beginning. (Doménech 2012).

### *Motivational Positioning Variables (VMP) generated in students*

The Motivational Positioning Variables (VMP) generated by students determine their “intention to learn”, which is caused by the interaction between the variables from block 1 (personal variables) and those from block 2 (educational situation variables). It means that students' intention to learn depends basically on their initial perception or idea formed as to how the T/L process will be developed during the course with a specific content and a specific teacher (initial contextual perception), modulated by their personal variables. This idea may have been generated before beginning the class, caused by previous experiences with a similar content type, or by the information students already have about the teacher, etc. It may also arise during the first days of class when they meet the teacher, find out about the study program, evaluation requirements, how the teacher is going to give the class, etc. Students now have sufficient information to enable them to answer three important implicit questions deriving from the Motivational Theory proposed by Pintrich (1989), Pintrich and De Groot (1990): Will I be successful in this subject?; What value has this subject for me?; How will I feel studying this subject? The answers that students give to these questions and the idea that they form during the run up to the start of the course and its initial days as to how the T/L process is to develop with that particular subject matter and that particular teacher will determine the way they face that process (motivational positioning variables) and, therefore, their learning. Nevertheless, these personal “motivational positioning variables” will continuously adapt and change dynamically in parallel to how students perceive the T/L process developed in the interactive implication phase (block 4). These questions were the starting point to develop the scale that aims to evaluate intention to learn.

### *Motivational Positioning Variables (VMP) generated in the teacher*

The Motivational Positioning Variables (VMP) generated by the teacher determine their “intention to teach”, which is caused by the interaction between the variables from block 1 (personal variables) and those from block 2 (educational situation variables). It means that the teacher’s intention to teach depends basically on his/her own personal idea as to how the T/L process will develop during the course with a specific content and specific students, modulated by their personal variables. This idea may have been generated before beginning the class, and may have been caused by previous experiences with similar educational situations, or by the information provided by their peers from the center. These perceptions will powerfully condition, from the beginning, the way to address the teaching process (involvement, dedication, effort, etc.).

Intention to teach is generated from certain mental processes and reflections that are specified in the following implicit questions deriving from the Motivational Theory proposed by Pintrich (1989), Pintrich and De Groot (1990): Will I be successful teaching this subject matter?; What is the challenge, value or importance I need as a teacher to achieved the objectives with this specific course?; How will I feel teaching this specific course?; finally, how much time and effort must I spend to achieve the objectives with this specific course? (deriving from the Expectancy Theory of Vroom, 1964). These questions will be the starting point to develop the scale (currently in process) which aims to evaluate intention to teach.

### *Motivational theories that support the Motivational Positioning Variables*

Motivational Positioning Variables (PMV) and the scales created to study them derive from those classic motivational theories that attempt to explain how the initial motivation works and how it induces the following actions. In other words, this is the motivation which indicates if it is interesting to deal with a task or otherwise if it is better to reject it. In this way, it is important to discuss these theories briefly:

#### *Theory of Expectancy-Value (Feather, 1982, Vroom, 1964)*

According to the Theory of Expectation-Value, there are two factors that make students decide to strive to learn a subject or not:

1. The importance of the subject, which must have some value for students.
2. The probability of success in learning the subject.

Indeed, experience tells us that no-one starts something that is not worthy, or when t expectations of success are very poor because, in such circumstances, completing the task is considered a waste of time. Therefore, the initial motivation to tackle a task depends on the product of these two factors, so that if one of them is zero, there will be no motivation at all. Although the concept of value seems relatively simple, it is not so because it has many conditioners. An object can have an intrinsic value, extrinsic and instrumental (as a step to achieve a longer term goal).

*The Achievement Motivation Theory (Atkinson 1964)*

The Achievement Motivation Theory can be defined as "the desire to succeed." The constituent elements of achievement motivation are reason, expectation and incentive (value or importance of the goal). Atkinson points out that human behavior designed to succeed is the result of the approach-avoidance conflict; that is, the motivation to achieve success and avoid failure. Someone has achievement motivation if the reason for "getting success" is greater than the reason for "avoiding failure". Only when this happens does the person feel encouraged to act in pursuit of a particular goal. Therefore, when an individual's reason to achieve success is stronger than his/her motive to avoid failure, the resulting tendency is positive and stronger when the task is of medium difficulty.

*Motivational Theory of Pintrich (1989), Pintrich and De Groot (1990)*

Pintrich and De Groot (1990) found that the intrinsic value given to the task influences students' initial involvement. At the beginning of the activity, the individual also adopts a particular goal orientation (Pintrich, 2000b) which starts to adapt, and even changes, in the implementation phase. The theoretical framework of motivation proposed by Pintrich and De Groot consists in three main components. The expectation component, which refers to students' beliefs and expectations to perform a certain task (self-efficacy beliefs). This component can be translated into the following question: Can I do this task? The value component indicates students' goals (goal orientation) and their beliefs in the importance and interest of the task. This component can be translated into the following question: why do I do this task? The last one is the affective component, which includes students' emotional reactions to the task. This component can be translated into the following question: how do I feel about accomplishing this task?

### *Teaching/learning strategies and processes (Block 4)*

This phase refers to how the three key elements (teacher, learner and content) relate with each other and interact in the T/L process conducted in a specific subject matter. The teacher's behavior covers everything that he or she can do for students to learn. Students' behavior covers everything they can do to accomplish the learning objectives. Through learning strategies we can process, organize, retain and retrieve information and, at the same time, we can plan, regulate and evaluate those processes by taking the objectives to be achieved as a reference (Beltrán, 1993, 1998). Based on these considerations, block 4 is formed by those variables relating to the teaching/learning strategies undertaken by the teacher and students to achieve learning objectives. Yet strategies not only derive from direct actions, but also imply processes and metacognitions to regulate planned behavior such as self-analysis, self-assessment, etc. (Beltran, 1993, 1998, Pozo, 1989). Therefore, this block also takes into account the variables relating to the self-regulatory and metacognitive processes.

The MISE Principles (except P1, which belongs to the previous block) were taken as a reference to organize and evaluate block 4, called "Teaching/learning strategies and processes": P2 (Instructional design), P3 (Personal interactions), P4 (Knowledge acquisition), and P5 (Control and evaluation). Based on these dimensions and on their corresponding indicators (see Table 1), we constructed the scales to assess the T/L process from an integrated viewpoint, recently revised (MISE-R for the teacher and MISE-R for students) by Domenech (2011, 2012). The questionnaires deriving from the MISE-R evaluate the T/L process from a global and integrated viewpoint; however, it is also possible to focus the evaluation on a particular MISE dimension or indicator by designing a more detailed and specific scale.

### **Product phase: *Outcomes and satisfaction (block 5)***

Finally, the product phase or outcomes making up of block 5 refer(s) to the learning outcomes obtained as a result of the T/L process by observing the formative changes in students, measured in terms of competencies in accordance with the European Area of Higher Education. This is an important aspect not only because it allows us to know the aims achieved by learners, but it also allows teachers to introduce corrective measures into the system to improve results in the future. The interactive involvement phase determines the

product or achievement reached. The opposite is also true as each product requires a kind of process and each process requires a kind of teacher, student, content and setting. The obtained product provides feedback to the previous phases (input and process), and tends to improve the quality of learning and achievement in the future T/L processes undertaken by the teacher and students with a specific subject matter. Finally, note that this block not only considers the results, but also takes into account the satisfaction experienced by both the teacher and students since it is important that the teachers enjoy teaching and students enjoy learning.

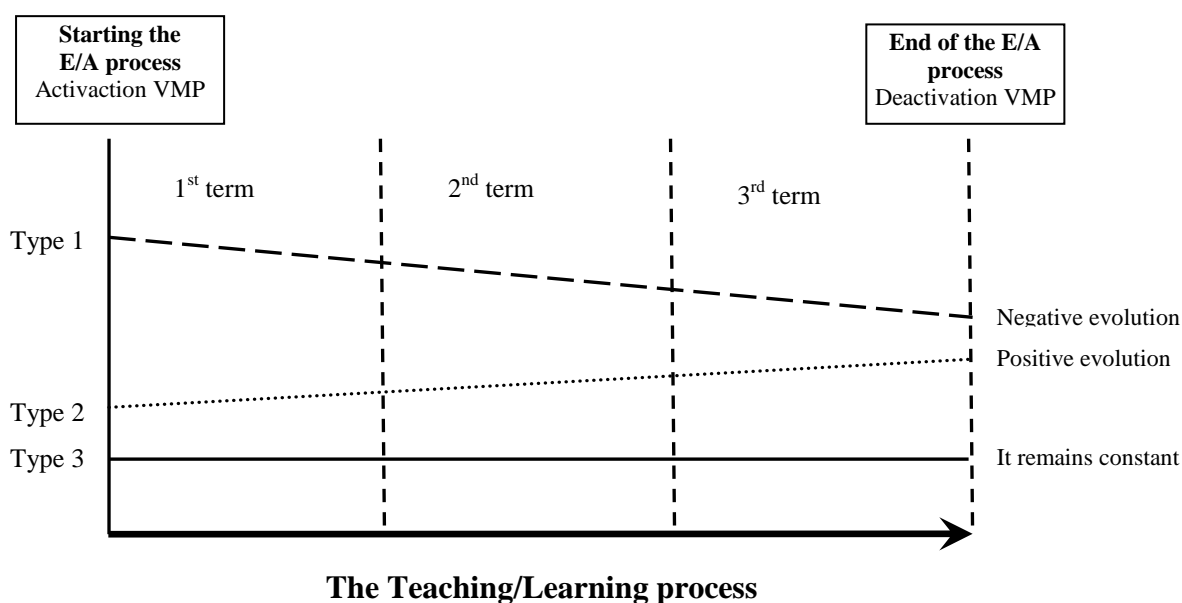
### **¿How teachers can use the model to reflect and investigate in a formal educational setting?**

Most authors consider that the development of reflective practice is the basis for the highest teaching competence (Cole & Knowles, 2000; Jay, 2003; Larrivee, 2000; Osterman & Kottkamp, 2004; Zeichner & Liston, 1996, and so on). The training programs currently promoted for both university and non university teachers are attempting to build a new type of *practica-reflective* professional with knowledge that he/she applies in practice and who reflects on the results of his or her action. From this viewpoint, teachers are subjects who conduct their own research in the classroom context (hypothesizing, measuring, collecting, analyzing and interpreting data, etc.) to improve their practice and professional competence (Schön, 1992; Zeichner, 1993). Studies conducted in this field indicate that teachers who investigate their own practice feel satisfied with their profession, especially because research helps them to understand and transform their pedagogical practice (Cochram-Smith and Lytle, 1993).

The MCSE model provides the conceptual framework and the necessary instrumentation to promote reflective teaching and to guide research in the classroom at any level of education. The provided scales are able to identify the strengths and weaknesses in the T/L process undertaken in the classroom by three key elements (teacher, content and students). It will facilitate the teacher to reflect on his/her own practice and its consequences, and will permit the appropriate modifications to be made in order to improve the quality of learning and instruction. The provided tools will also help evaluate and diagnose the "predictor factors", and will determine the role they can play in a specific educational setting.

The input and positioning components are the "predictor factors" of students' and the teacher's behavior. Therefore, these variables can help us to predict student outcomes or product. By further specifying and by using medical terminology, we can state that that a low

score in the Motivational Positioning Variables may be considered the symptoms of a disease called "amotivation" (see the Self-Determination Theory of Deci and Ryan, 1985), and the causes explaining such lack of motivation may come from the input variables. Previous research (Domenech, 2006, Domenech, 2011b) suggests that Motivational Positioning Variables are capable of predicting student involvement and outcome. Therefore, we wish to emphasize the importance of assessing these variables in students at the beginning of the course since they provide valuable information about how students will face the T/L process with a particular subject matter. Figure 3 shows the different ways that the Motivational Positioning Variables can progress throughout the T/L process.



**Figure 3. Different ways that Motivational Positioning Variables (VMP) can progress throughout the T/L process.**

In accordance with the above rationale, we go on to outline some interesting research questions that any teacher can address in his/her classroom in order to collect scientific data that can be used as a basis for reflection, and to improve pedagogical practice and student learning.

- How has students' initial motivation or intention to learn (VMP) evolved from the beginning to the end of an educational process (unit or subject)?
- How has the developed T/L contributed to students' motivational level? What are the most and least influenced variables?
- What is the predictive capacity of students' initial motivation (intention to learn) on achievement and student satisfaction?

- Why are some students more motivated than others to study a particular topic or subject matter? What was the explanatory capacity of the personal student variables on initial motivation or intention to learn?
- What is the explanatory power of students' initial perception of the educational setting (teacher, content, and peers) on initial motivation (intention to learn)?

The product evaluation (results and satisfaction experienced by the teacher and students) will allow us to check the quality of learning achieved (operationalized through the learning objectives) and to simultaneously provide feedback as to how we performed the previous components that are directly or indirectly involved in the final product. Bad results and low satisfaction with the process followed by the teacher and/or students mean that one or more model components do not work well and should be revised.

To conclude, we wish to emphasize that the instruments developed to date to evaluate all the components in the MCSE model can be found and downloaded on the following web: <http://www3.uji.es/~betoret/>

-The “*MCSE student personal variables*” *Questionnaire*. It assesses some of the students' personal characteristics, which have been demonstrated to have a significant influence on their initial motivation or intention to learn. This instrument should be applied at the beginning of the course.

-The “*MCSE students 'initial perception*” *Questionnaire*. It assesses the initial perception or the idea formed by the students about how the T/L process will be conducted with a specific content and teacher. This instrument should be administered at the beginning of the course, after several days of class, to allow students to form their own idea of the instructional process to be undertaken.

-The “*MCSE student motivational positioning*” *Questionnaire*. It assesses learners' Motivational Positioning Variables which determine their intention to learn. These variables are activated at the beginning of T/L process (as a result of their initial perceptions and personal variables). This questionnaire should be applied at the beginning of the course, after several days of class, to allow students to form their own idea of the instructional process to be developed.

-The “*MISE-R for the teacher*” and the “*MISE-R for students*” *Questionnaires*. Both questionnaires assess the T/L undertaken with a specific subject matter from the teacher's and the students' point of view. It allows to compare the information provided by the teacher and



students in relation to the same references; that is, the five MISE dimensions. Both questionnaires should be administered at the end of the course, after evaluation, but before students know the grade they have obtained, otherwise it could influence their answers.

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