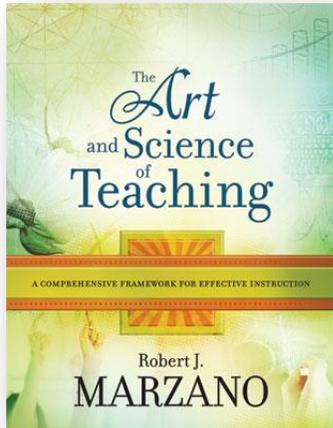


## The art and science of teaching. A comprehensive framework for an efficient training. Book review



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**Robert J. Marzano** is a speaker, trainer, a well-known researcher in the United States. He did many educational research and theory on the topics of standards-based assessment, cognition, high-yield teaching strategies, and driving schools, including developing programs and practical tools for teachers and schools administrators.

Marzano created Regional Laboratory of Education and Research, one of ten similar laboratories in the United States. He is also executive director of „Learning Sciences Marzano Center”, in recognition of valuable contributions and expertise we bring to the educational plan is a leabyder in research on evidence-based education.

Robert J. Marzano's book, 'Art and science teaching ' - a comprehensive framework for effective instruction by reading it becomes a very useful scientific base, including practical suggestions, which can benefit both younger teachers and the most experienced, managed to provide the necessary tools to make teaching a true art and true science, so the scientific part of an educational approach to blend with the teaching related to art and craft educational yielding a whole that lead to effective teaching.

The problem of creativity education arises for the purposes of educating creativity to the potential of existing drive interest, curiosity, motivation support, release of inhibitions, phobias, increase immunity to the phrenic factors. The main methods and tehniques of practice and creativity can be used by parents, teachers, managers of institutions and enterprises. Analog methods are based on the type of analogical reasoning, the derivation of a proposition from another and interference is from the partial similarities between two or more phenomena. So, disregarding the differences, searching for analogies, highlighting those transferable traits that can lead to innovations or inventions.

Author Robert Marzano in carrying the book, divided into ten chapters make an authentic journey of the direct interventions of those who educates, offers us practically a walk in ten areas of great interest in the field of education to guide teachers to organize and streamline work in a constant spiral of reflection.

It goes from,, Introduction - A question and answer, and concludes with daily questions that should be made by them based on three crucial points:

- Lesson sequences focused on routine activities and behaviors, where to follow rules, procedures, presentation of objectives including their monitoring.

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- lesson sequences based on content, where we aim inputs, are exercises and deepens your knowledge and runs hypothesis testing.
- Lesson sequences focused on immediate activities involving students, measures taken for non-compliance and procedures, teacher-student relationship.

This theoretical framework Marzano says any actor can serve as a model of educational field. The author recommends teachers to take as a framework for reflection when you want to produce "change" their models, ie based on professional judgment, expertise of staff to take responsibility, advocating for the idea that teacher job builds strength much passion and faith of a divine thing.

The author warns us in an even vehemently that:, I doubt that two decades of research ... will help us to draw a model (education) that apply to all schools in all communities in all conditions.

He articulates his framework in the form of 10 questions that represent a logical planning sequence for successful instructional design:

- What will I do to establish and communicate learning goals, track student progress, and celebrate success?
- What will I do to help students effectively interact with new knowledge?
- What will I do to help students practice and deepen their understanding of new knowledge?
- What will I do to help students generate and test hypotheses about new knowledge?
- What will I do to engage students?
  - What will I do to establish or maintain classroom rules and procedures?
- What will I do to recognize and acknowledge adherence and lack of adherence to classroom rules and procedures?
- What will I do to establish and maintain effective relationships with students?
- What will I do to communicate high expectations for all students?
- What will I do to develop effective lessons organized into a cohesive unit?

The questions below are a logical succession planning for effective instructional design and are amply discussed in the ten chapters of the book.

The book has drawings, diagrams, tables, grids, and graphic organizers for being so easy to read, reflected on current research and thinking deeply about different aspects of teaching in the classroom, such as expectations of teachers design lesson, and reflection carried out after each act of teaching. It is not necessarily designed to inspire passion to teach but can be used as a checklist to evaluate teaching job.

Simple and applicable strategies for effective teaching are rooted in meta-analyzes that validate each strategy. The best way to measure the students' understanding of the lesson is over, not after. This work gives us a great way to perform a quick check for understanding what students have and how we can make them responsible for their own learning.

Modern teaching strategies involved here, built on scientific grounds but did not indicate the necessary staff to know when and to whom to apply, it is more of an art that inure following close examination of each component of the training process

Using a series of charts and diagrams to organize and turning to cutting-edge research, Marzano sets these 10 benchmarks of effective learning, based on educational goals and structuring knowledge and techniques ending with a good classroom management. Any teacher would certainly like an answer - or more - to the question: How to teach to generate learning?

R.J.Marzano removes the emphasis on modern teaching strategies that "prescribing how the student is contacted with new content, indicating the path to walk in order to customize, integrate it." Interactive methods are presented as modern ways of stimulating learning and personal development as a teaching tool that fosters inter-exchange of ideas, experiences, knowledge. Interactivity is, learning through communication, collaboration, produce a confrontation of ideas, opinions and arguments, it creates situations centered learning readiness and willingness to cooperate children on their direct involvement and active on the mutual influence inside micro-groups and social interaction members of the group.

The implementation of these instruments modern teaching involves an accumulation of quality and availability of the teacher: receptivity to new, adapting style teaching, outreach, desire for self-improvement, reflective thinking and modern creativity, intelligence accept the new and great flexibility in views.

A modern education, well-designed allowing initiative, the spontaneity and creativity of children, and directing, guiding them, the teacher's role acquiring new meanings, beyond which was a traditional optical information provider.

Organize a child-centered education, the teacher becomes a co-participant together with student activities. He accompanies and child falls on the road to knowledge "offers solutions to structural and procedural, on the programming and combining different methods, procedures, means and forms of organization, but also on a whole set of programming operations învăţare.În depending on the chosen strategy, the teacher identifies tasks that students will perform to reach desired purchases "

Use interactive teaching methods in teaching to improve the quality educational process, with a character and a real asset -participativ asset value -formativă the student's personality. Teachers often resort to explanations and demonstrations like "so we will proceed." For the moment the student understand, retain, but only ... for now. If students do not get the opportunity of discussion, investigation, action and possibly teaching, learning does not take place.

By going through this paper carefully Marzano's I found that it only focuses on factors related to the teacher and students. They rely only on certain subsets of experiments to Hattie using all available sizes effect.

Studies also use Marzano's research-based assessments specific to certain types of curriculum while those of Hattie is based on research using standardized assessments. For this reason readings of Hattie certain effect sizes may be smaller than those in studies of Marzano.

Beyond these differences in vision between the two I think it's important that we take in our work everything can streamline teaching approach, whether we consider the factor purely internal (teacher-student) or as broadening interest in the society live at school means more today or what information must also teach that those whom we care. Sometimes we consider education as an activity in which continuity is more important than the change is obvious that we live in an environment whose movement is not only fast but also unpredictable, even ambiguous. We do not know if what happens to us is "good" or "bad". The environment is more unstable and more complex, the more uncertainty. Technological progress and increased access to knowledge and resources we can propose and implement changes that, some time ago we could not even think. We must therefore change the way we think about the present and future of education we give to the next generation in view of these issues. We can not allow a school unit "museum", oriented towards the past, with its emphasis on knowledge, but we need a school that prepares them for future children, focusing on social and communication skills.