

# The Effectiveness of the AOSpine Project of Education in Research: Changing Paradigms, Provoking Ideas, and Innovating the Mindful Practice

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## Introduction

The way to increase innovation in mindful practice in a region without a culture in scientific investigation is through implementation of the Research Curriculum that is based on the competencies and learning outcome. No institutions have a Research Curriculum based on competence and learning outcome as guide to improve knowledge in research. The objective of this study is to describe the effectiveness of the project of education in research and the way to deliver this information effectively to those who aim to further improve their knowledge and participation in research.

## Materials and Methods

the AO Research Curriculum uses the competency-based approach that aligns the following four components: (1) knowledge in research, (2) performing research, (3) specialized technical professional support, and (4) assessment to identify needs and track progress. The content of the curriculum was delivered using the most appropriate learning methods and techniques from the following four perspectives: (1) e-learning methods, (2) specific research symposiums, (3) precourses before AO activities, or as (4) specific lectures and structural presentations within the course, symposiums, or seminars. Research mentoring projects and joint publications are an objective way to measure the effectiveness of the project, as it represents the capacity to perform research. This protocol was applied in spine surgeons and university students.

## Results

The survey of AOSpine Latin America members showed a low level of knowledge regarding research combined with a high motivation to learn. The organized competences, learning outcomes, and syllabus of the knowledge in Research promoted active learning and engagement of the members during AOSpine activities. These activities resulted in an increased membership, the participants were grateful when they understood the usefulness of research, and it was the best way to expand the AO product at the University, not only in the undergraduate courses, but also at the postgraduate levels as learning about tools in research and needs are the same for several areas (medicine, nursing, engineering, biology, and law).

## Conclusion

The education in research project showed to be effective. The learning outcomes gained by the participants following completion of this project were recognized concerning where and how they can best obtain reliable information, perform a critical literature review, choose validated instruments to measure the patient's disease, obtain reliable feedback regarding the effectiveness of our surgical activity, and achieve a better understanding of the positive influence of the research on the medical routine. The "publication of results" is only a consequence of an attitude toward scientific investigation.