# RESEARCH ON FUNCTION TEACHING DESIGN OF HIGH SCHOOL BASED ON STEAM EDUCATION CONCEPT

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Based on the STEAM education concept, this article establishes curriculum design concepts such as interdisciplinary, experiential, design, collaborative, artistic, and technologically enhanced. It designs a variety of teaching goals and uses the teaching design content of Professor Jin Meiyue. STEAM course design, and based on this, carry out exploration of teaching practice. Because the content of the high school function module is relatively comprehensive, this article uses the high school function as the research object for project design. The main line of the course is to solve project problems, and integrate technical design, mathematics, physics, chemistry, and astronomy science knowledge based on the STEAM education concept to achieve the goal of cultivating students' STAEM literacy and teaching.

To this end, the following three research questions are set: (1) What is the teaching design based on the STEAM education concept? (2) How effective is the implementation of instructional design based on the STEAM educational philosophy? (3) What about teaching reflection and its revised teaching design? The research takes "exponential function, logarithmic function and power function", "trigonometric function" as the research objects, and uses case study method, education observation method, questionnaire survey method and interview method to conduct research. First, design specific lesson plans based on the STEAM education concept; then, implement the developed lesson plans and analyze the effect of the lesson plan design through education observation and student questionnaire surveys; finally, based on the implementation and analysis of teaching and the results of interview Reflect on teaching and improve and perfect the lesson plans developed.

Three conclusions are obtained through research: First, the diversified teaching objectives are an important guarantee for the teaching design of the STEAM curriculum; second, the mathematics teaching activities based on the STEAM educational philosophy are conducive to the cultivation of students' core literacy in mathematics; third, to students The academic conditions and the grasp of the learning process of various disciplines are the primary prerequisites for the selection of STEAM project topics.

## References

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