Presently in VMBO, teams of teachers are trying to find the right balance between theory and practice. One of the proposed reforms envisions the teaching-learning process as an activity embedded in a simulation of real-world practices, whereby students, guided by teachers, work on products for ‘real’ customers, in the meantime acquiring new knowledge and skills. How teachers best guide this learning process is still unclear. This design-based project addressed the following general research question: do students, who participate as model designers in a process of guided co-construction with an expert (teacher) and peers, show better learning outcomes than students who learn to work with ready-made models provided by the teacher?

The findings led us to believe that guided-co-construction might improve the students’ understanding of modelling and codified knowledge. Leading to the overall conclusion that the use of models as tools for communication and orientation in product-oriented vocational practice resembling that of professional designers, help students develop better understanding, while codified knowledge of both academic and vocational disciplines is enhanced.