



Purpose of the study	Hypothesis	Participants	Instruments and Data Analysis	Design and Procedures	Findings
<p>The general goal of the two studies was to gain deeper insight into what constitutes exploratory learning and to assess the effects of a number of instructional support measures.</p>	<p>The aim is to gain a deeper understanding of the learning processes that constitute exploratory learning.</p>	<p>17 university-level students working in pairs.</p>	<p>Observations and think-aloud protocols.</p>	<p>Half of the students received a structured assignment with hints as an instructional support measure. The other half received an open-ended assignment with instructional support that consisted of an information sheet and a set of fill-in forms. The study was an experimental design in which half of the subjects received the original-unguided assignment and the other half received the altered-guided assignment.</p>	<p>The authors identified an inventory of 22 exploratory learning processes classified in four main categories: transformative, regulative, operating the simulation, and general.</p>
	<p>To examine the effects of different forms of (off-line) instructional support on quantity and quality of these learning processes. This support consisted on hints in a guided assignment.</p>	<p>91 working in pairs</p>	<p>A set of fill-in forms was used as the instrument. The statements of the students in the fill-in forms were analyzed in a stepwise order within different levels of analysis (global activity level, learning process validity level, domain correctness, consistency, overall strategy). The posttest consisted of seven multiple-choice questions that tested qualitative insight in the domain.</p>	<p>The study consisted of an experimental design where the assignment required more initiative and free activity. There were four experimental groups (n = 7 to 10 pairs of participants) and a control group of 10 pairs of participants. All groups made a posttest.</p>	<p>Both studies showed that students were reluctant to apply learning processes that are characteristic of exploratory learning. Students had problems with the exploratory learning processes such as generating hypotheses, interpreting data, and drawing conclusions. The hints provided did not result in significant improvements. However, students provided with the hypothesis showed a higher global activity level and higher scores in domain correctness of their learning processes.</p>