

Title masterproject:	Self-selection learning
Theoretical context:	<p>Self-selection learning is a learning process during which the student chooses the specific example which he/she want to learn about. Recent studies have shown that self-selection learning can have distinct benefits, such as enhancing category learning (Markant & Guerckis, 2014). Two mechanisms are often advocated to be underlying the benefits of self-selection learning: <i>informational choice and self-pacing</i> and <i>level of engagement</i>. Currently, research investigating the effect of the self-selection process on the level of engagement is, however, limited, especially because objective measures of engagement are lacking. In the study of this project, we will employ two measures from different fields to assess emotional and cognitive engagement. We will use FaceReader to measure facial emotional reactions and an electrocardiogram to measure learners' heart rate changes when receiving feedback. Ultimately, we will investigate if a self-selection learning environment has a positive influence on young learners' emotional and cognitive engagement in a category-learning paradigm. As self-selection learning is at the heart of science education and engagement is an important determinant of outcomes such as science interest, we will test 10- to 11-year-olds.</p> <p>The study will (partially) take place in Science Center NEMO, Amsterdam and (maybe) primary schools. NB: speaking some Dutch for a least one of the two students is a requirement!</p> <p>Markant, D. B., & Gureckis, T. M. (2014). Is it better to select or to receive? Learning via active and passive hypothesis testing. <i>Journal of Experimental Psychology</i>, 143(1), 94.</p>
Research Question(s):	How to facilitate inquiry-based learning in a museum context.
Study population:	Children and parents visiting science center NEMO
Type of measures:	Observations, knowledge tests and questionnaires
Activities for students:	Literature study, improving an existing experiment, learning about heart-rate collection, piloting with data collection, testing in NEMO, scoring and analyzing data, reporting.
Supervisor:	Maartje Raijmakers
Max. number of students:	2
# ECTS	20 (thesis)
Schedule:	October 2016 - July 2017