Abstract
The purpose of this thesis is to study Swedish and South African students’ beliefs about the body and its functions, and how these ideas correlated with answers to associated questions. Data was obtained from several different types of surveys and interviews. All the students who participated in the studies were in grade nine. There were 88 students in the Swedish data collection and 166 in the South African data collection.

The results show that students have the ability to describe the digestive system when they describe the pathway of a sandwich through the body, and also the ability to link the circulatory system to the digestive system. However, students have difficulties to transfer this knowledge to a new context when they were asked to describe a painkiller’s pathway through the body. The painkiller pathway through the body had not been taught in school. But it was even more difficult for students to connect three organ systems, namely the excretory system, as was the case when they were asked to describe the pathway of water through the body. Although the excretory system is described in the textbook and the students had been taught about the same. There were also students using non-scientific ideas and drew a pipe directly from the throat to the kidney. These students found it more difficult to understand the function of the kidneys. A similar study was conducted in five South African schools where it was found, contrary to in Sweden and in other European studies, students describing that water is passing through the lungs on its way to the stomach, some students also said that the food would pass through the lungs before the stomach. Some of the students clarified that water and, for that matter, the food passes the lungs to purify it. A deeper analysis has been done regarding the water on five Swedish students’ questionnaire and interview responses. It turned out that students’ ideas were either the same or changed to a less sophisticated explanation in the interview responses compared to the answer in the questionnaires when it came to the pathway of water through the body, this is different from the question of the sandwich where the interview showed similar or more sophisticated results.