# Results

## Sustainability competencies as sustainability attitude and sustainability behaviour (TPB-based) (Research Question 1)

Contrary to my predictions, I found that sustainability competencies remained the same or decreased one year after the end of an ESD intervention across 206 survey (see Figure X). I found no statistical differences between the time points within a group (see Appendix XX for statistical outputs).

In line with my predictions, I found that sustainability competencies differed depending on the involvement of the students, with partly statistically significantly reported higher mean scores for the involved group than the control group (see Figure X and Table X for statistical outputs). For the control group, reported sustainability competences remained the same or decreased, directly after the ESD intervention (time point 2), as well as one year after the intervention (time point 3). The involved group reported higher mean scores for all sustainability competencies at all time points, than the control group. Before the start of the intervention, and one year after the intervention, the reported behaviour, intention and cumulated TPB scores differed significantly between the groups. Straight after the intervention (time point 2), all reported sustainability competences differed significantly between the groups. Surprisingly, for the involved group, all reported sustainability competences peaked straight after the ESD intervention (time point 2) but decreased again one year after the intervention (time point 3).

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Figure XX: Components of sustainability competences differed between groups across the XX (nt1= XX, nt2= XX, nt3= XX) students surveyed using Wilcoxon test for significance (see Table XX for full testing outputs). Points represent calculated mean values from the self-reported survey. Error bars represent 95% confidence intervals. Stars indicate significance level resulting form the Wilcoxon test comparing the groups. See Table XX for meanings of number of stars. No significant differences were found between the time points using the Kruskal Wallis test.

## Theory of planned behaviour and self-efficacy beliefs (Research Question 2)

Looking at the relationship between the scales used to capture sustainability competences with the underlying construct of the theory of planned behaviour and the underlying construct of (individual) self-efficacy beliefs, I found that there is a strong positive relationship (*r* (47) = .79, p < .001, Figure X, see Table X for statistical outputs).

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Figure XX: The scale based on the theory of planned behaviour and the scale based on the self-efficacy beliefs capture the same underlying construct, showing a strong positive relationship across the XX students surveyed, tested with the Spearman’s rank correlation (see Table X for full statistical outputs). Points represent raw data. Line represents calculated Spearman’s rank correlation.

### Sustainability competencies as efficacy beliefs (Research Question 3)

### Personal and collective efficacy beliefs

Contrary to my predictions, I found no statistical differences between and within the groups for individual and collective self-efficacy (p > .05, see Table X,….) across the XX students surveyed at time point 3. The reported mean scores of the involved group were higher for both collective and individual self-efficacy beliefs than those of the control group. Interestingly, the control group scored higher in collective self-efficacy beliefs than individual ones, whereas for the involved group it was the other way around. Overall, I did not detect any statistical differences and the mean scores were all very close to each other. There were some differences between each question pair within the groups (see Figure XX in appendix X).

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Figure XX: Reported individual and collective self-efficacy beliefs did not differ significantly within and between the involved and the control group (see Table XX for full statistical test outputs) using the Wilcoxon sign ranked test. Bars represent calculated mean values from the self-reported survey. Error bars represent 95% confidence intervals.

### Aim and action focussed self-efficacy beliefs between and within groups

Looking at the relationship between aim and action focussed self-efficacy beliefs and group membership, I found that the involved group reported significantly higher scores regarding the aim focus, than the control group (W = 8, p < .05, Figure X, see Table X for statistical outputs). Although also for the action focus, the involved group scored higher, there were no statistical differences (W = 1, p > .05). I found no differences between the action and aim scores for the involved group (W = 1, p > .05) and the control group (W = 1, p > .05).

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Figure XX: The aim focussed aspect of self-efficacy beliefs were significantly higher for the involved group than the control group across the XX students surveyed using the Wilcoxon sign ranked test. The action focussed aspect and the comparison within the groups did not differ significantly. Bars represent calculated mean values from the self-reported survey. Error bars represent 95% confidence intervals.