

Albert-Ludwig-University Freiburg  
Faculty of Environment and Natural Resources

**The influence of participatory Education for sustainability projects on high school students using long term empirical data**

Master-thesis submitted in partial fulfillment of the requirements for the degree of Master of Science Environmental Governance

by

**Daniela Naveena Gargya**

5107568



First supervisor: Prof. Dr. Astrid Carrapatoso, Pädagogische Hochschule Freiburg  
Second supervisor: Prof. Dr. Uwe Schmidt, Albert-Ludwigs-Universität Freiburg

Freiburg i.Br. / Germany

Date of submission:  
15. September 2024

**Summary**

Contents

[Introduction 6](#_Toc169769771)

[Background 6](#_Toc169769772)

[Objectives and research questions 6](#_Toc169769773)

[Research hypotheses and predictions 6](#_Toc169769774)

[Theoretical frameworks 6](#_Toc169769775)

[Methods 6](#_Toc169769776)

[Existing data 6](#_Toc169769777)

[Data processing 6](#_Toc169769778)

[Data analysis 6](#_Toc169769779)

[Results 6](#_Toc169769780)

[Sustainability competences over time (Research Question 1) 6](#_Toc169769781)

[Sustainability competences over time and level of involvement (Research Question 2) 6](#_Toc169769782)

[Sustainability competences and self-efficacy beliefs (Research Question 3) 6](#_Toc169769783)

[Discussion 6](#_Toc169769784)

[Overview 6](#_Toc169769785)

[Sustainability competences over time (Research Question 1) 6](#_Toc169769786)

[Sustainability competences over time and level of involvement (Research Question 2) 6](#_Toc169769787)

[Sustainability competences and self-efficacy beliefs (Research Question 3) 6](#_Toc169769788)

[Study limitations 6](#_Toc169769789)

[Future directions 6](#_Toc169769790)

[Conclusions 6](#_Toc169769791)

[References 6](#_Toc169769792)

[Appendices 6](#_Toc169769793)

[Declaration of consent by parents/ info etc 6](#_Toc169769794)

**Acknowledgements**

I would like to thank my formal and informal supervisors, Prof Dr Astrid Carrapatoso, Dr Eva-Maria Waltner, Fabia Spörckmann and Prof Dr Uwe Schmidt for their constant support, shared knowledge and encouragement throughout the process of this thesis and beyond. From finding a research question, to help with statistical analysis, coding, and writing tips, I always found open ears and patient explanations.

I also want to acknowledge and thank my great support network. Starting with my wonderful flatmates, Anna, Larisa and Giada, for always keeping the spirits high, but also giving valuable feedback and proofreading drafts. Also, I want to thank my parents, for constant support and proofreading the draft.

**List of abbreviations**

**Overview of figures, tables and annexes?**

# Introduction

## Background

## Objectives and research questions

## Research hypotheses and predictions

## Theoretical frameworks

### Education for sustainability (ESD)

### Goal dimension ESD (include TPB here?)

### Outcome-oriented application

### Self-efficacy beliefs

# Methods

## Project description KlimaRatSchule

## Existing data

## Data processing

## Data analysis

# Results

## Sustainability competences over time (Research Question 1)

## Sustainability competences over time and level of involvement (Research Question 2)

## Sustainability competences and self-efficacy beliefs (Research Question 3)

# Discussion

## Overview

## Sustainability competences over time (Research Question 1)

## Sustainability competences over time and level of involvement (Research Question 2)

## Sustainability competences and self-efficacy beliefs (Research Question 3)

## Study limitations

## Future directions

# Conclusions

# References

# Appendices

## Declaration of consent by parents/ info etc