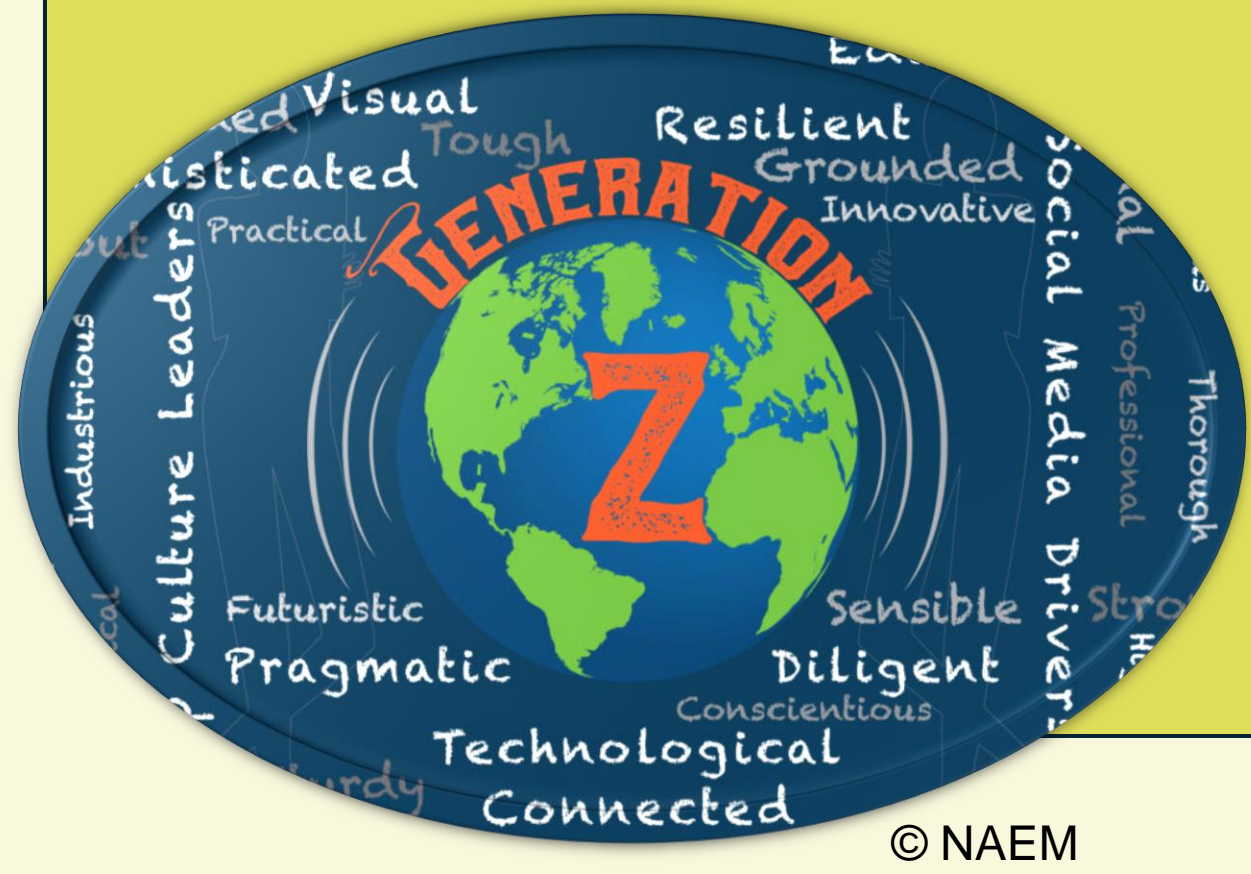


Together Against Climate Change:

Factors Influencing the Knowledge, Attitudes and Behavior of Generation Z in Formal and Informal Education

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Introduction

International studies on the so called Generation Z (individuals born between 1995 and 2012) show a high interest among this group in environmental awareness, green consumer values and climate change (e.g., Deloitte, 2021, Divinagracia et al., 2024). Forbes Magazine refers to Generation Z as the “Generation Sustainability” and emphasizes their influence on consumer habits (Petro, 2021); it is this generation, in particular, that is involved in the ecological movement “Fridays for Future”. The question arises, to what extent socialization factors like education and formal educational settings, family environments and individual resources promote this environmentally friendly behavior and/or corresponding attitude.



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Results

- On average, students (n = 1802) show **mediocre knowledge** about sustainability (37% success rate on average) with a broad distribution (SD = .26).
- **Older** students ($\beta = .324$; $p < .001$), students with **Waldorf education** ($\beta = -.279$; $p < .001$) and students from a **specific family system** (e.g. regarding language, religion) ($\beta = -.176$; $p < .001$) know more than other students about sustainability.
- Students with a higher knowledge in sustainable matters, girls or students with a high score in **empathy** or a high score in **family role models** show a significant higher awareness of green values and declare themselves more as green actors than other students.
- Students with **Waldorf education**, those who **feel well integrated in school and peer groups** and those with a higher score in **self-control**, report more green behavior than other students.

Objective

The study focuses on the individual motives of those belonging to Generation Z: Which factors can be identified in young people that potentially influence their knowledge, attitudes and behavior regarding sustainability?

Method and Sample

This explorative study, started in summer 2019, is based on a sample of 2219 German students (m = 45,1%, f = 49,2%, div = 0,4%, missing = 5,4%) aged between 12 to 18 years (M = 14.66, SD = 1.65). They were asked in a written survey, using elements from standardized tests and questionnaires (mostly using Likert scales) about

- **personal, systemic and individual resources / self-concept** (FRKJ (2016): reliability: $.73 < \alpha < .92$; item-total-correlation: $r(i,t-i) > .3$)
- **environmental knowledge** (UBA (2020): reliability: $.81 < \alpha < .90$; item-total-correlation: $r(i,t-i) > .3$)
- **attitudes towards sustainability and environmental behavior** (SEEd (2018), UBA (2020) + self constructed items: reliability: $.69 < \alpha < .92$; item-total-correlation: $r(i,t-i) > .3$)

Also, data was collected about sociodemographic variables, variables regarding socialization at school as well as cultural and social contexts. Multivariate analysis were conducted.

Which factors influence sustainable attitude and behavior?

	Attitude <small>(e.g. if we continue like this, we are heading towards an environmental disaster)</small> shown significant β coefficient $p < .01$	Behavior <small>(e.g. for my daily trips, I use a bicycle, public transportation, or walk)</small> shown significant β coefficient $p < .01$
sex (1: female, 2: male)	-.144	-.184
age	.065	
Waldorf education		.078
resources: empathy	.133	.093
resources: self-control		.069
peer integration		.075
school integration		.070
family role model	.431	.585
knowledge	.234	.086
R ²	.380	.518

Conclusion: Educate students AND cooperate with their families

Although students show only mediocre knowledge about sustainability on average, it is meaningful with respect to their attitude and behavior. Data reveals that students with highly engaged families in this field show a high level of awareness regarding the challenges related to climate change. Furthermore, they act in a more environmentally conscious manner than other students. From this, it can be concluded that schools should use the learning and development opportunities that take place in families as systems of informal education by means of systematized cooperation. Consistent interlinking of parental work, teaching and school development is expected to yield promising results for the sustainability education of Generation Z students. Waldorf education as a holistic educational program seems to be a successful program to engage students in environmental reflections and green wise actions.

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