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'The doctoral project "Digital Writing Support - Conception and Evaluation of a Web Application to Promote Narrative Writing Competencies of Heterogeneous Learning Groups in the 5th Grade" is funded by the Ministry of Education and Research within the framework of the joint "Quality Offensive Teacher Education" of the Government and the Countries.'

Digital Writing Support for 5th Grade Students - Evaluation of a Web Application for the Promotion of Narrative Writing Skills

1. Theoretical background

The ability to write texts successfully is one of the key competences for learning in language lessons and across subjects, as well as for coping with most tasks in everyday life (Philipp, 2020).

For ideal participation, it is especially relevant to support all students in their writing development and thus to completely understand the didactic process of writing (Nobel & Grünke, 2017).

In previous research on digital writing intervention, an improvement in writing competences has been demonstrated (e.g. Nobel & Grünke, 2017; Asaro-Saddler et al., 2015; Kenney, 2013; Pennington et al., 2018; Lee et al., 2019; Mirenda et al., 2006; Straub & Vasquez, 2015; Englert et al., 2005; Curcic & Johnstone, 2016; Berninger et al., 2015).

→ digital media are seen as an opportunity to support (narrative) writing skills

2. Objective and main question



Does this web application support students in their narrative writing skills?

3. Insights into the web application

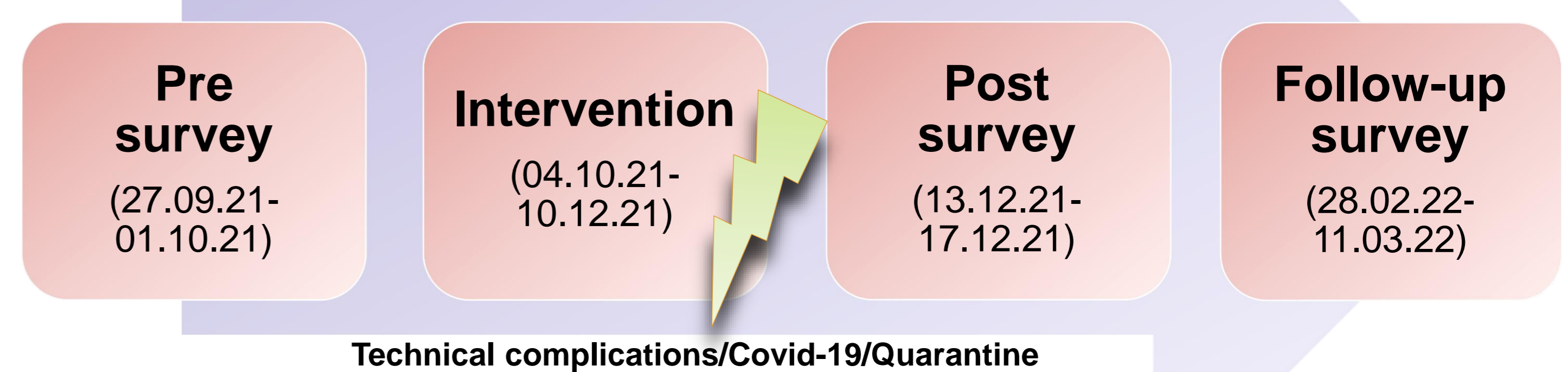
World 'Narrativa'

Check it out:
<https://lernapp.uni-vechta.de/>

Title of the web application:
'Journey to Narrativa digital – a world full of stories'

4. Method

- longitudinal study with an experimental/control group design (N=243)
- a total of seven participating schools from Germany

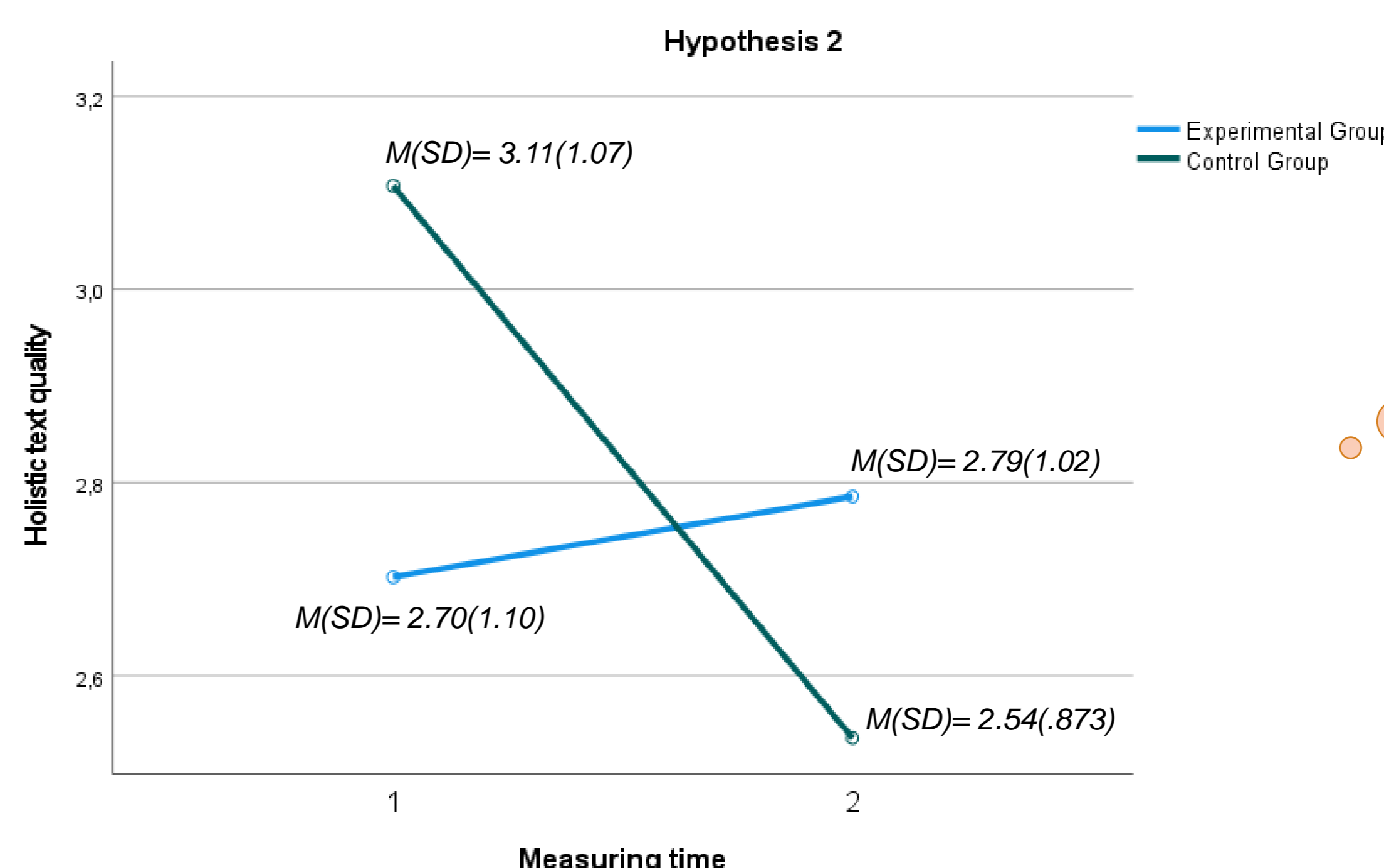
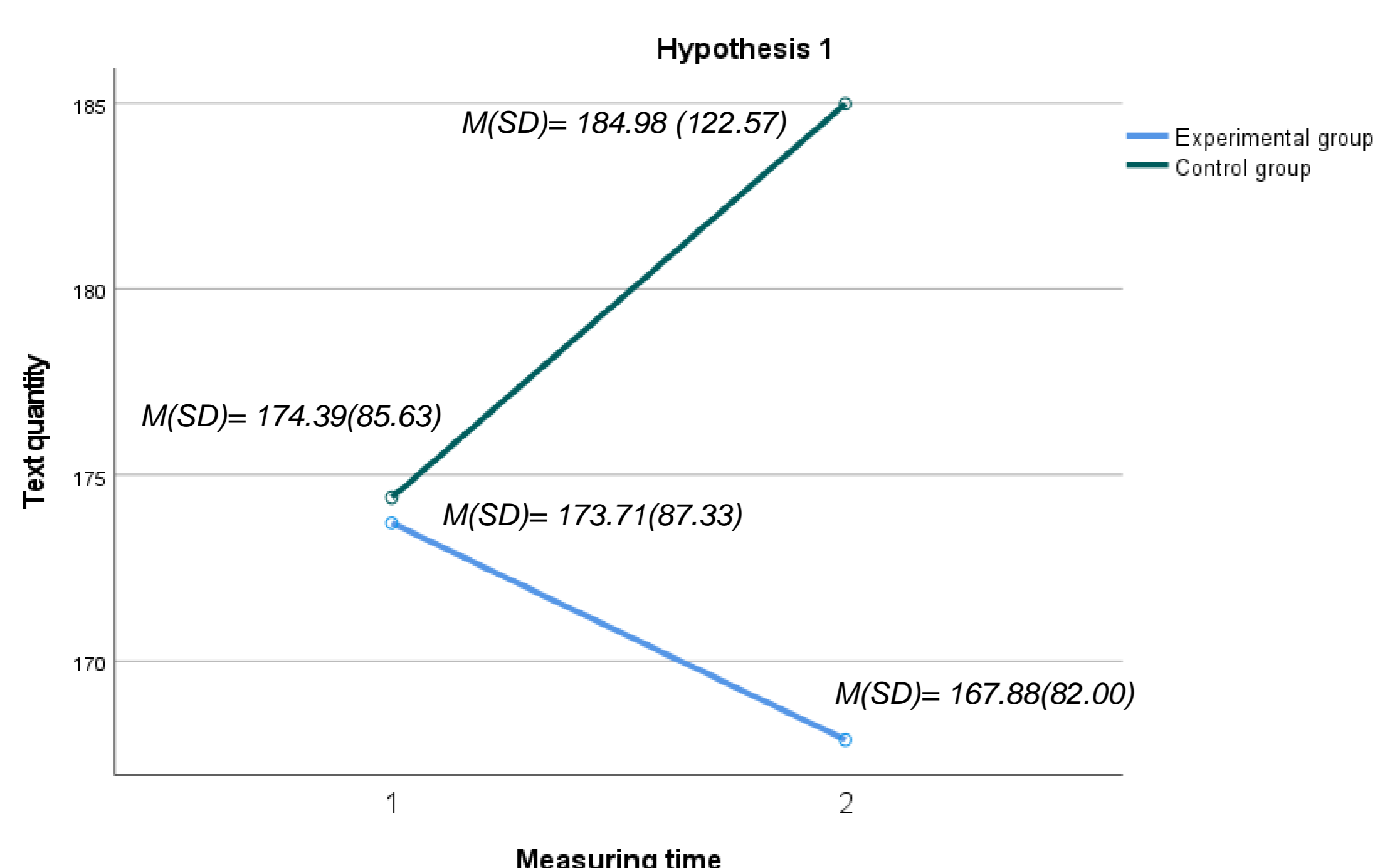


Elements of the survey:

- 45-minutes writing test to assess the quantity and quality of narrative writing competence (NAEP, 2011; Schulden & Hillenbrand, 2018)
- questionnaire to assess writing socialisation, writing-related self-concept, writing habits, writing motivation (from the DESI study, Wagner, Helmke & Rösner, 2009), writing-related self-efficacy (Glaser, 2004), digital writing attitude (self-created items) and evaluation of the application (self-created items on the key implementation variables acceptability, appropriateness and feasibility, Petermann, 2014)

5. First results

Hypothesis	Statistical analysis procedure	Results
1 The students in the experimental group (n=181) who participated in the intervention with the web application show an improved quantity of their written texts (measured with TWV) over the period of the survey (pre-post) than the students in the control group (n=62) who did not participate in the digital writing training.	Anova	$p_{IA}=.116$
2 The students in the experimental group (n=181) who participated in the intervention with the web application showed an improved holistic quality of their written texts (measured with the Global Scale for narrative texts) over the period of the survey (pre-post) than the students in the control group (n=62) who did not participate in the digital writing training.	Anova; Effect size calculation	$p_{IA}<.001$, $d_{KORR}=.63$



Next steps:
 Interpretation
 Discussion

Literature