Background: Digital competencies are regarded as an important aspect of student learning and are positively associated with learning outcomes (Loh et al. 2023). Not having adequate digital skills potentially reduces learning opportunities and might have negative consequences on educational success. In particular, children from privileged backgrounds show higher digital performance than their peers from less privileged backgrounds (Passaretta & Gil-Hernandez 2022). Hence, social disparities in digital skills can amplify social inequalities (Hargittai & Hsieh, 2014). Yet little is known about the development of social disparities of digital competencies among the youth and its underlying mechanisms.

Theory: Nonetheless, previous research has stressed the importance of the educational context (Fraillon et al. 2019) and differences in the home environment (Senkbeil 2024) as major sources of SES disparities in digital competence. The educational context matters for competence development above individual learning prerequisites (Baumert et al. 2006). This appears to be particularly important in Germany, where the grouping of students into different school tracks at an early stage is highly socially selective (Maaz et al. 2008). Moreover, the different tracks are sought to constitute differential learning environments exerting different influences on students' competence development contributing to the comparatively high social inequality in achievement in Germany. From the perspective of digital divide research (van Djik, 2000), the dimension of digital competencies is increasingly seen by groups with high social status as an important source of status reproduction. For example, better-off parents are more aware of the benefits of digital competencies for learning (Livingston & Helsper 2007) and thus might invest in their children's digital literacy accordingly. This differential investment of parents into their children's digital competencies potentially leads to different development trajectories both between and with the different school tracks in Germany.

We seek to bring both perspectives together, by asking:

R1: How do digital competencies of secondary schoolchildren develop with regard to their socioeconomic background?

R2: How does this development depend on the educational context?

Thereby we seek to apply both a between and within-track perspective and analyze, how social disparities in the development of digital competencies can be accounted for by initial track placement and how such differences develop within the different tracks to achieve a comprehensive picture of the development of SES Gaps in digital competencies throughout secondary education in Germany.

Data & methods: To answer these questions, we utilize Data of the German National Educational Panel Study (NEPS). This large-scale panel study sampled 5,778 students in 2009 in grade 5 at the beginning of secondary education and surveyed them throughout their educational career. The NEPS contains information about students' social backgrounds, educational pathways, and most importantly, students' digital competencies were tested repeatedly in grades 6, 9, and 12. We employ multilevel models to investigate the effect of social origin on achievement growth during secondary education with regard to the educational context, by (1) controlling for track placement (between-perspective) and (2) investigating these developments for the different tracks separately (within-perspective).