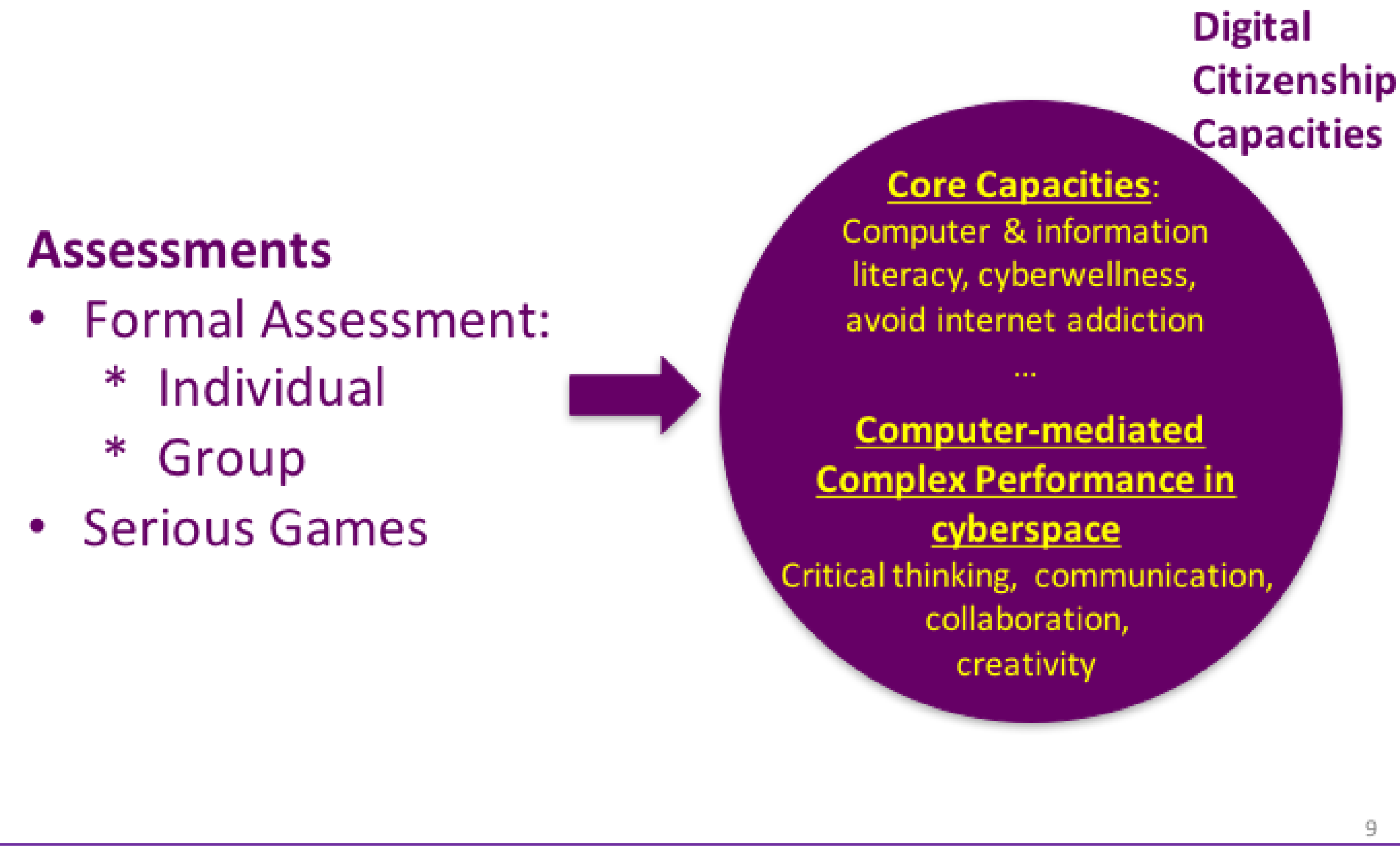


Qn 1: What is the normative developmental trajectory for digital citizenship?



Qn 2. Developing a game pedagogical theory for digital citizenship



Qn 3. How do personal, family and school factors contribute to the development of digital citizenship?

Using technology to study digital learning lives in addition to background surveys to students, teachers and principals...

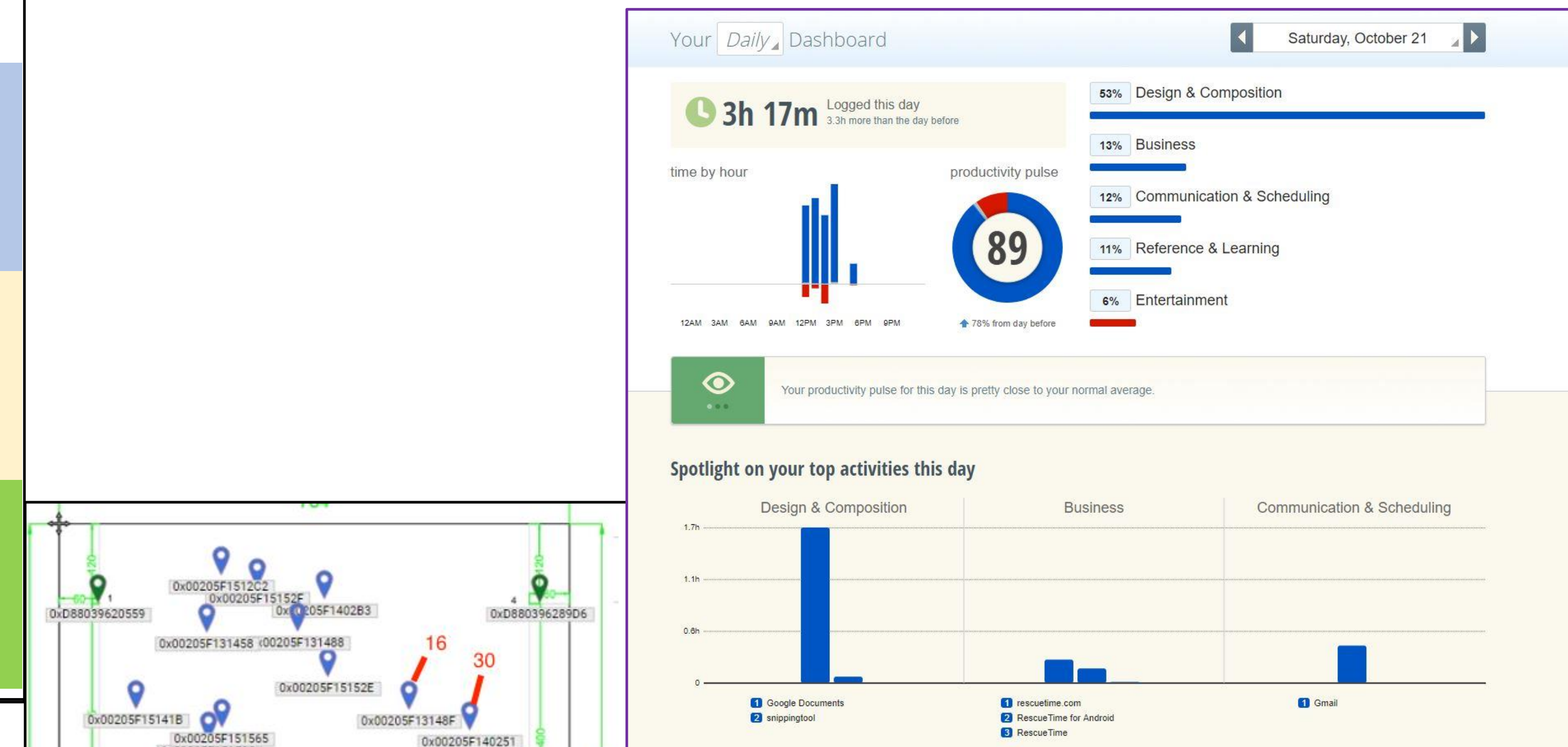
- Affective/emotional state during different activities
- Social interactions—proximity, location & types of activity (inferred)

4 longitudinal study cohorts

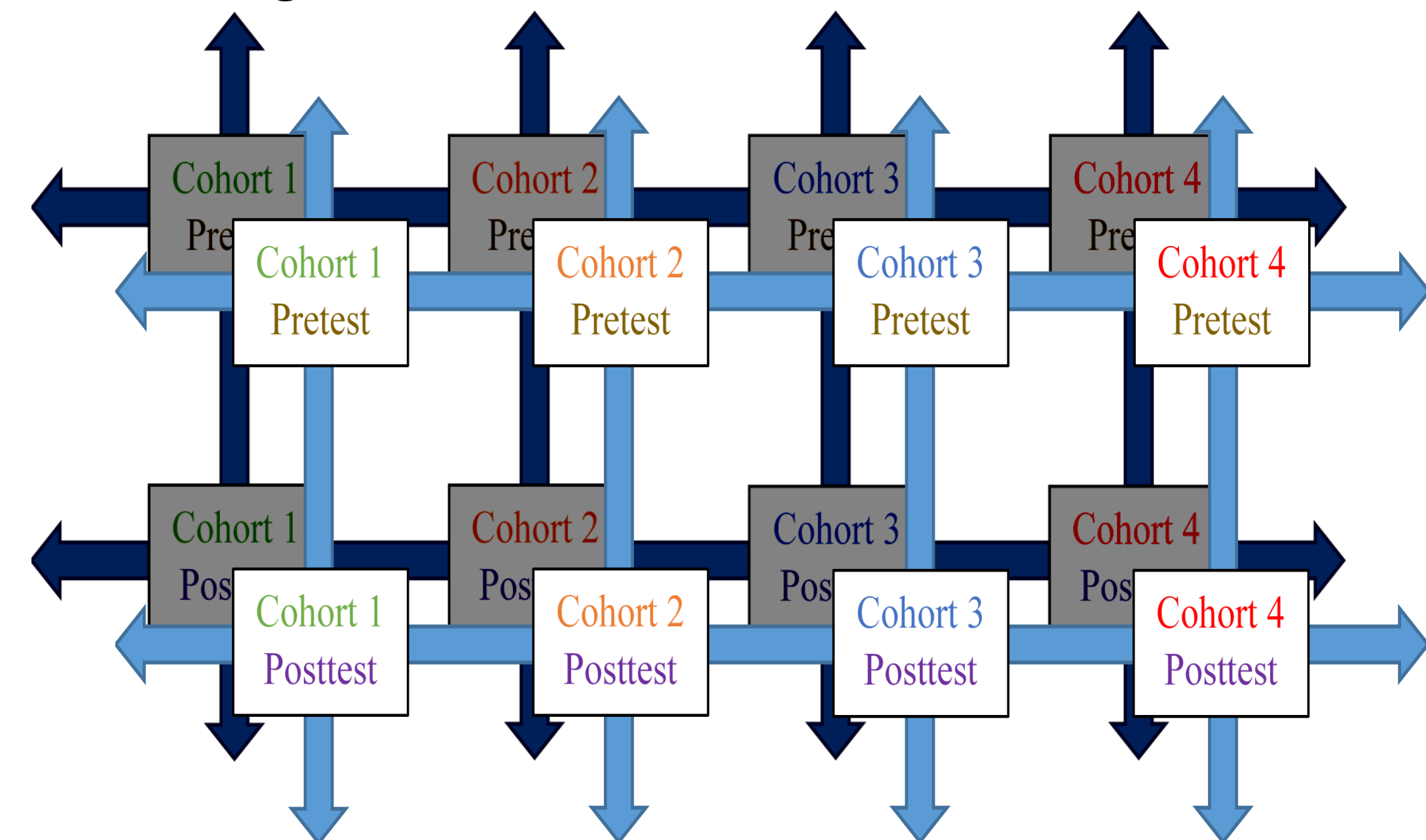
Stages in human development	Age Cohort 1 6-9 years	Age Cohort 2 10-13 years	Age Cohort 3 14-17 years	Age Cohort 4 18-22 years
Box E				
Digital citizenship assessments	Individual Assessment Group-based Assessment	Box D1 Box D2 Box D3	Computer & Information Literacy, self-regulation, ... Collaborative Problem Solving (conventional: closed group, close-ended task) Collaborative Problem Solving (open collaboration, open-ended authentic tasks)	
Digital citizenship dimensions	Box C	Box B	Box A	
Impact of technological advancement				

18 competences for DL assessment (based on DigComp 2.1)

- Competence area 1: Information and data literacy**
 - Browsing, searching, filtering data, information ...
 - Evaluating data, information and digital content
 - Managing data, information and digital content
- Competence area 2: Communication and collaboration**
 - Interacting through digital technologies
 - Sharing through digital technologies
 - Engaging in citizenship through digital tech.
 - Collaborating through digital technologies
 - Netiquette
 - Managing digital identity
- Competence area 3: Digital content creation**
 - Developing digital content
 - Integrating and re-elaborating digital content
 - Copyright and licenses
 - Programming
- Competence area 4: Safety**
 - Protecting devices
 - Protecting personal data and privacy
 - Protecting health and well-being
 - Protecting the environment
- Competence area 5: Problem solving**
 - Solving technical problems
 - Identifying needs and technological responses
 - Creatively using digital technologies
 - Identifying digital competence gaps



Assessing DL and CPS Across Cohorts and Over Time



Assessment framework for Collaborative Problem Solving

