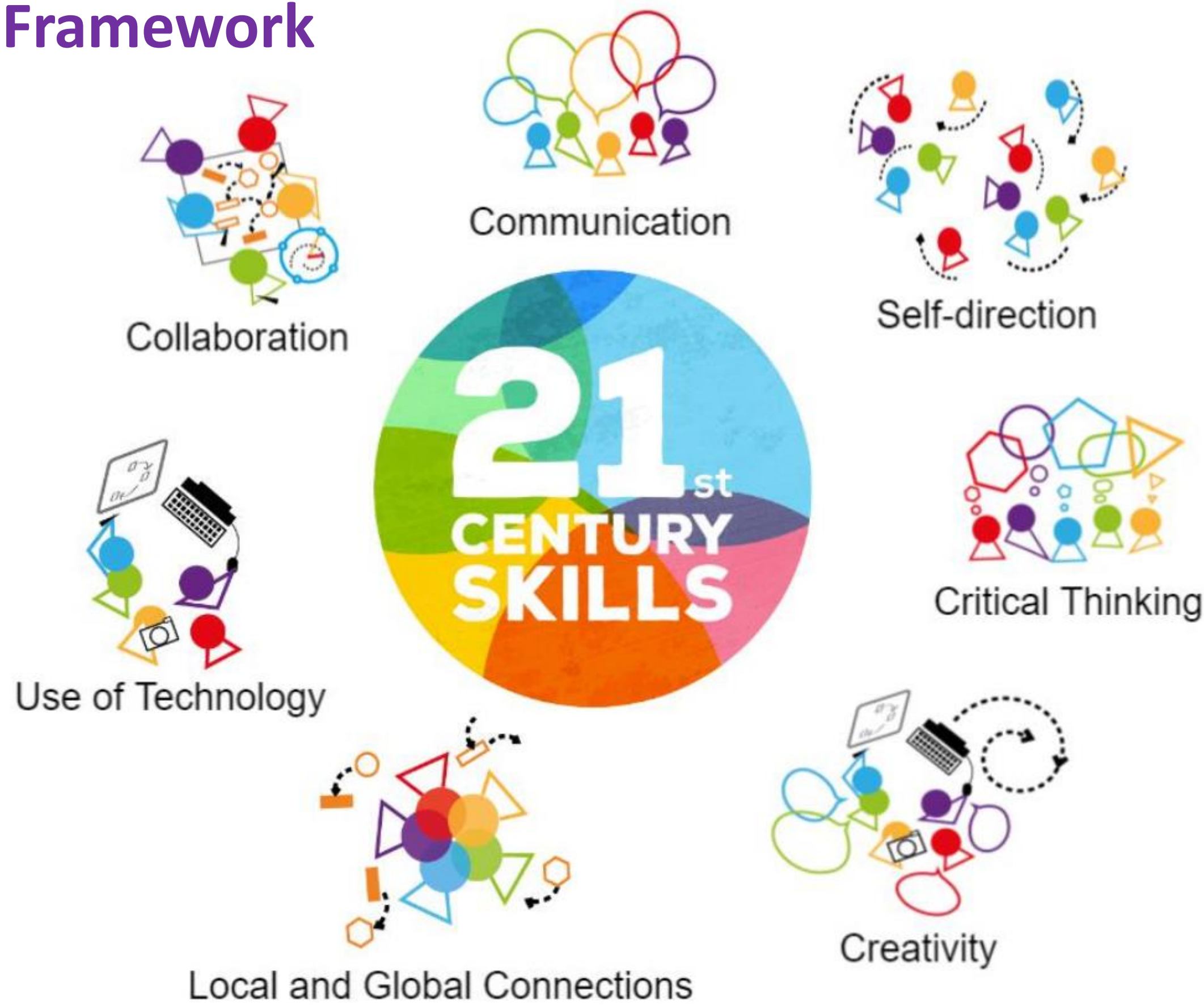


Teaching for Tomorrow

A Study of Readiness for the Integration of 21st Century Practices in the Mathematics Classrooms

Background to the Study

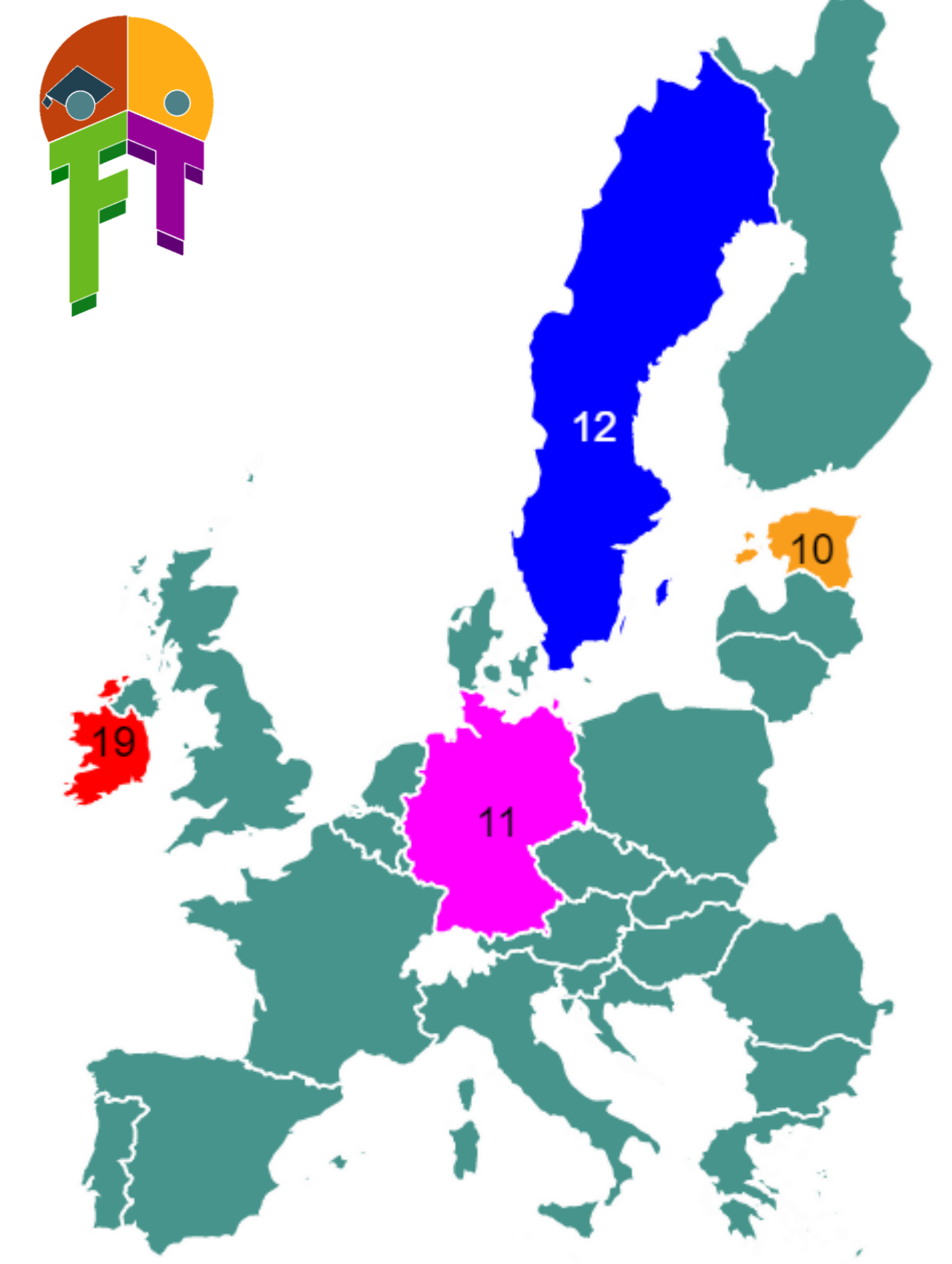
Framework



Definition of 21st Century Skills from Ravitz et al. (2012)

"Readiness for integration" of 21st Century Practices is taken as involving confidence in using and encouraging, and frequency of using, 21st Century Skills

Tft is a European project involving administrators, teachers and researchers from Ireland, Sweden, Estonia and Germany. Our goal is to establish a pragmatic approach to the development of 21st Century Skills



No. of math teachers responding per country

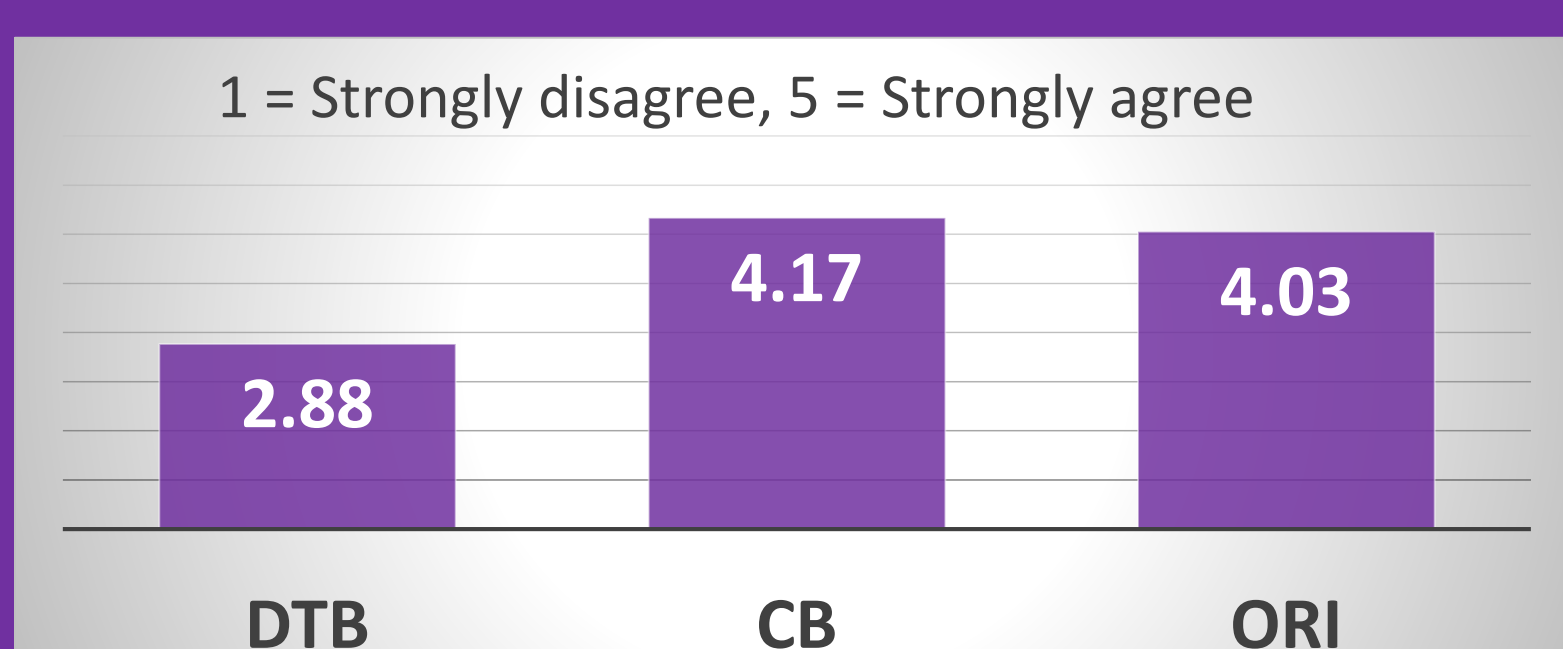
Sample and Data Collection

An online survey of participating teachers was conducted, addressing: Background information; Teachers' beliefs about the nature of teaching and learning; Orientation towards, usage of, and barriers to 21C teaching and learning; and Confidence with and frequency of integration of 21st skills in practice. Respondents (145 in all) included 52 mathematics teachers, whose responses are summarised below.

Results

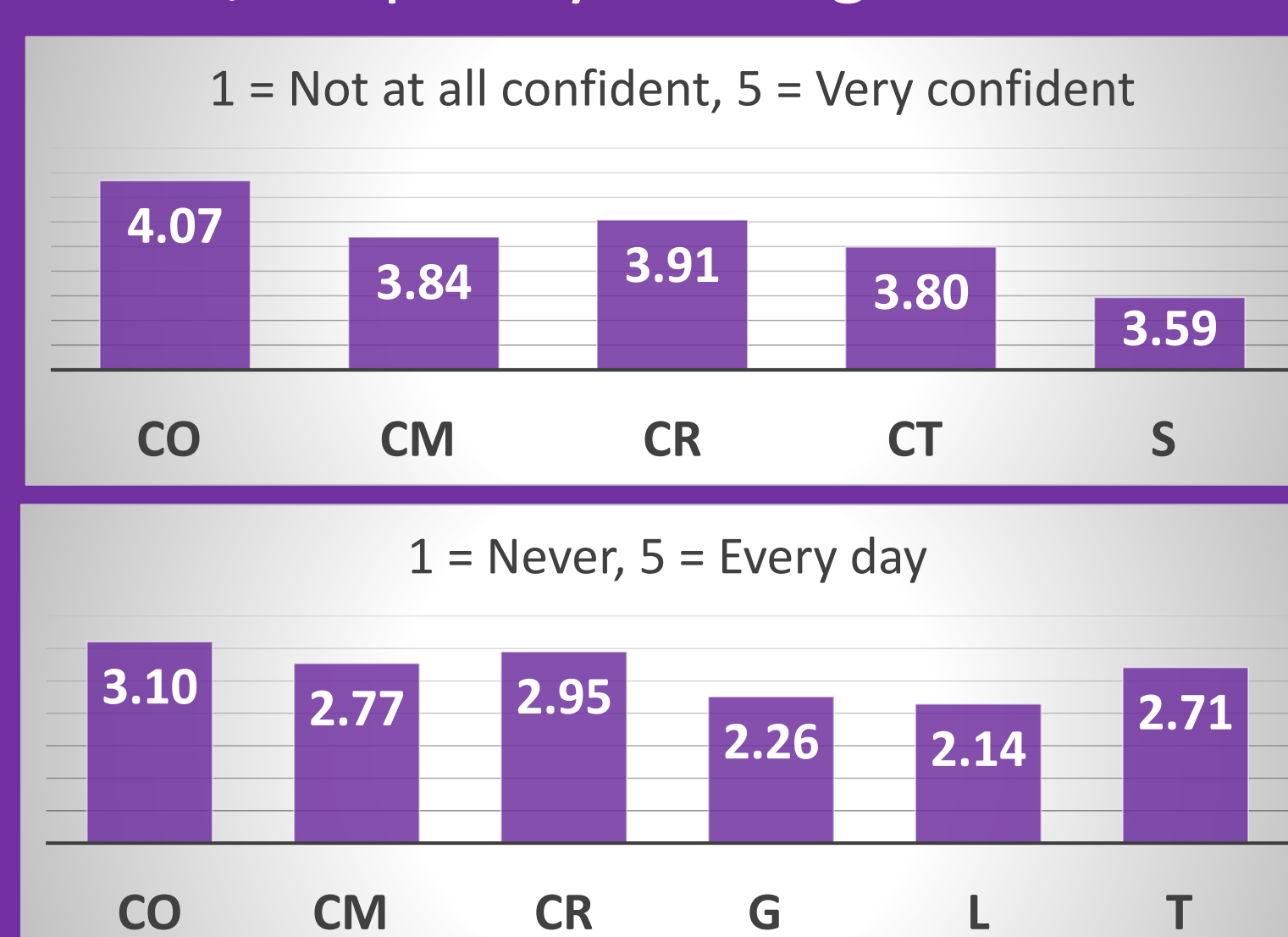
Beliefs and Orientation

Results indicate high levels of Constructivist Beliefs (CB), lower levels of Direct Transmission Beliefs (DTB), and a positive orientation (ORI) towards the use of 21st Century Teaching and Learning in the Classroom.



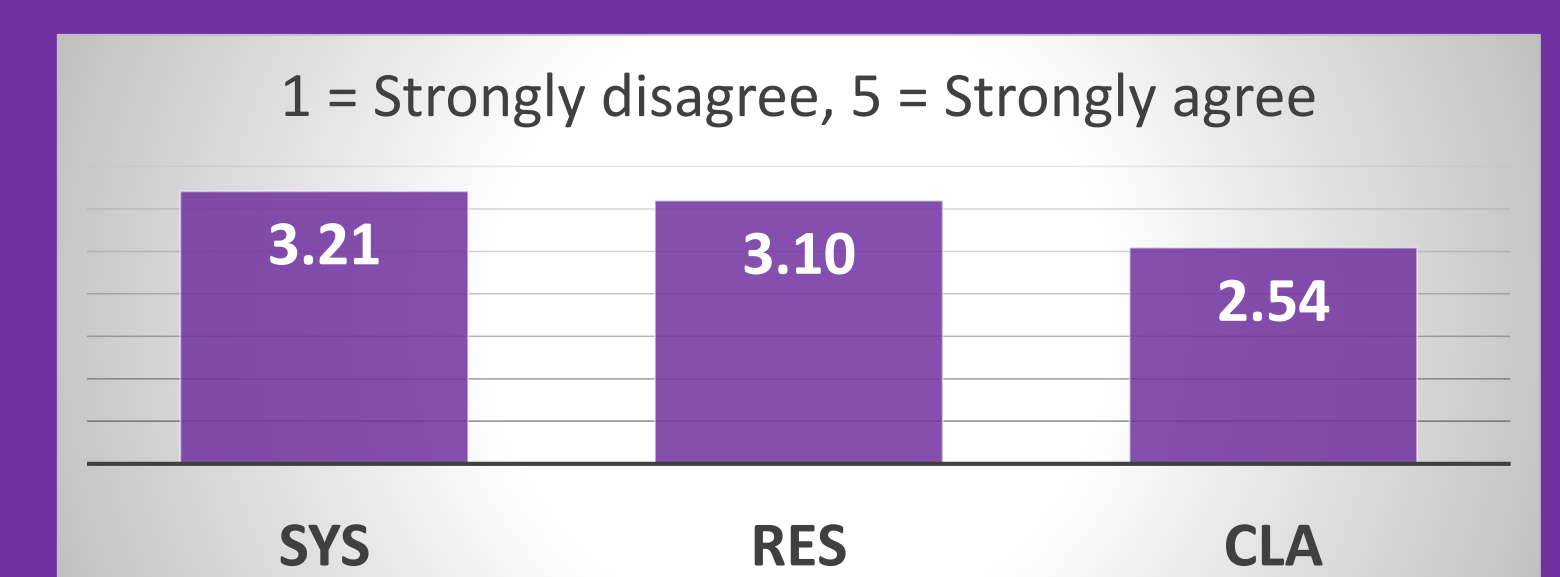
Confidence and Frequency

Teachers' self-reported confidence levels with 21C practices were relatively high; however, frequency of integration was not.



Barriers

Quantitative analysis suggest that classroom management (CLA) barriers have less impact than system restrictions (SYS) and inadequate resources (RES). Qualitative analysis provides a similar picture to quantitative, breaking down system restrictions into time constraints, curriculum, assessment and class size. Classroom management is also identified as a considerable issue.



Ongoing Developments

The Teaching for Tomorrow Erasmus+ project builds on the work of Bridge21 (www.bridge21.ie), an education programme offering a new pedagogic model designed to support an innovative, 21st Century learning environment within schools. This approach incorporates the following elements:

Classroom Partnership



Teamwork



Inquiry-based Learning



Technology Mediated



Bridge21 Learning activities have a clear **structure**, which provides teams with milestones and deadlines to work towards.

Creativity is promoted by encouraging teams to devise different solutions and means of presentations

Activities allow teams the freedom and **flexibility** to manage their own learning and shape their final work output.

