

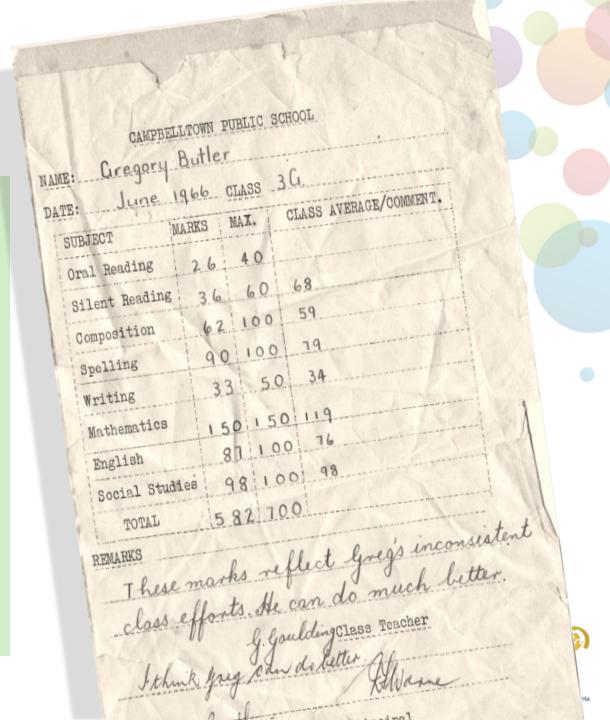
# Collaborative Assessment





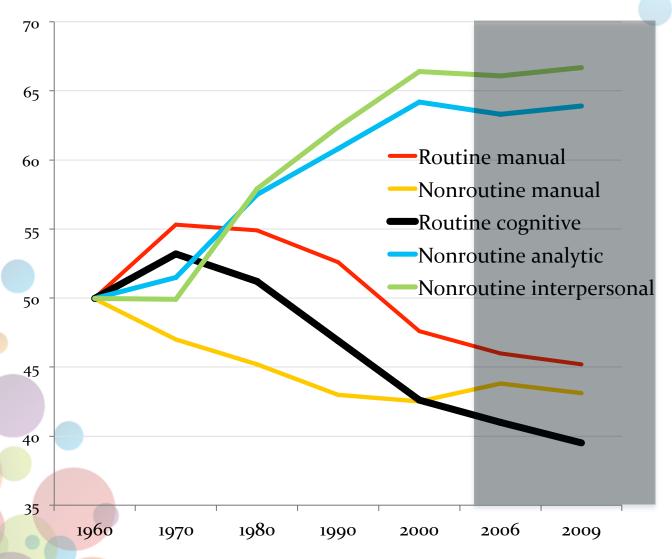


Assessing and **Teaching** the Right Skills is **Critical** 



# Economy-wide measures of routine and non-routine task input (US)

Schools develor task input in percentiles of 1960 task distribution





Source: Autor, David H. and Brendan M. Price. 2013. "The Changing Task Composition of the US Labor Market: An Update of Autor, Levy, and Murnane (2003)." MIT Mimeograph, June.



Assessing and Teaching the right skills is still critical



Global Citizenship



Collaboration



Communication



Character



Critical Thinking & Knowledge

Construction



Creativity



# Collaborative Problem Solving



#### Ways of thinking

Creativity and innovation, Critical thinking, problem solving, decision making, Learning to learn, metacognition



#### **Tools for working**

Information literacy (includes research) and ICT literacy



#### Ways of working

Communication and Collaboration (teamwork)



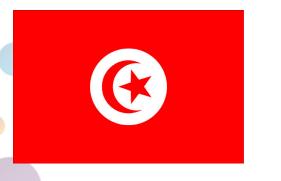
#### Ways of living in the world

Citizenship—local and global, Life and career,
Personal & social responsibility—including cultural
awareness and competence





#### What might these three countries have in common?



Tunisia



Sweden



Indonesia





# What is collaboration? Why Collaborate?









## CPS: So far

- Combination of complex set of skills including cognitive and social components
- Combines critical thinking, decision making, problem solving and shared responsibility (collaborating)
- Collaborative problem solving is a set of skills that we
   can rely on when the capacity and resources of one
   person are not enough to solve a problem.
- PISA 2015 will be including CPS, so further interest in this area.





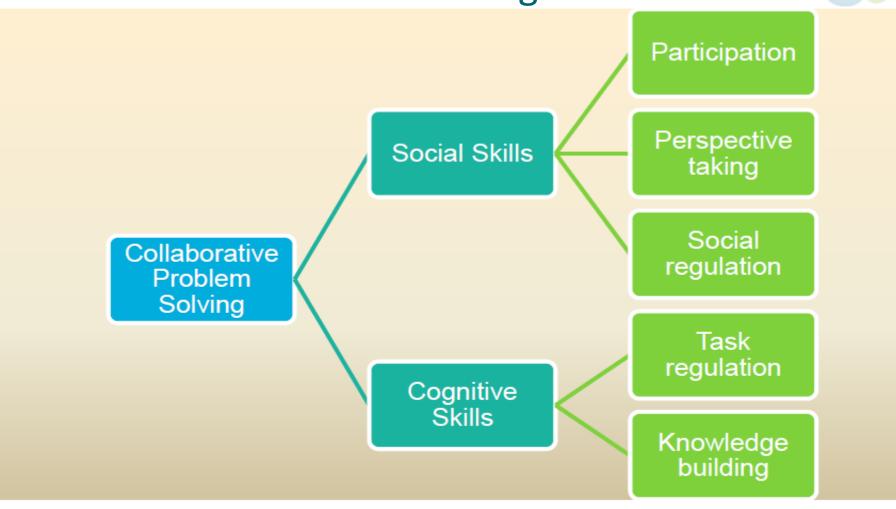
## **CPS**

- What would you look for if assessing collaboration on a social level
- List of criteria for success in a task that is collaborative
- What would you be looking to assess on a cognitive level?
- List of criteria for success in a task that is collaborative





### Collaborative Problem Solving



1 Dimension 2 Dimensions 5 Strands



## 1 dimension

3	Awareness of partner & directed effort	The student recognises their partner's role and the importance of working together to solve the problem. They realise they do not have all the necessary information and begin to share resources and information with their partner. They report their own activities and help their partner to understand the task.	
2	Investigating the problem	The student actively participates in familiar tasks but largely independently. Interaction with their partner is limited only to when it is necessary for completing a task. The student tests out theories to solve the problem, using only available information and setting very broad goals.	
1	Independent inefficient exploration	The student explores the problem independently only communicating with their partner at the beginning of a task. Their approach is unsystematic and focusing only on isolated pieces of information resulting in a lack of progress through the task.	

Level	Level Title	Level Description		
to problem via a process and assur collaborative tasks. The student systematically usin		The student works collaboratively through the problem solving process and assumes group responsibility for the success of CPS tasks. The student works through the problem efficiently and systematically using only relevant resources. They tailor communication, incorporate feedback from their partner and resolve conflicts.		
5	Efficient working partnership	The student's actions appear to be well thought out, planned and purposeful. They identify the consequences of their actions and use prior knowledge to plan their strategies and set goals. Students can adapt their original thought processes in light of new information. The student initiates interactions and responds to their partner's contributions but may not resolve differences.		
4	Cooperative planning	At this level, the student perseveres in attempting to complete the task and they appear committed to solving the problem together. They share resources and the student recognises patterns across pieces of information. They explore the task systematically, make plans and set focused goals. Students have an awareness of their partner's performance on the task and can comment on their own performance. Students at this level can complete simpler CPS tasks successfully.		



#### **Two Dimensions**

Social and cognitive skills - presented separately

Level	Level Title	Social	Level Title	Cognitive
6	Cooperation & Shared Goals	At this level, the student works collaboratively through the problem solving process and assumes group responsibility for the success of the task. Feedback from their partner is incorporated to identify or adapt solution paths. They are efficient at adapting communication to suit their partner's needs and resolving conflicts of opinion. The student can evaluate their own and their partners performance and understanding of the task.	Refined Strategic Application & Problem Solving	At this level, the student works very efficiently completing complex tasks in an optimal amount of time. They systematically explore the problem leading to sufficient understanding of the problem from the start and use only relevant resources.
5	Appreciated & Valued Partnership	At this level, the student can participate in tasks they are unfamiliar with. The student initiates interaction with their partner and responds to contributions from their partner. Despite efforts, differences in opinion may not be fully resolved. The student is able to comment on their partner's performance during the task.	Efficient Working	At this level, the student's engagement appears to be well thought out, planned and purposeful identifying the necessary sequence of steps in the problem. They identify the consequences of their actions and use prior knowledge to plan their strategies and set goals. Students can adapt their original thought processes in light of new information.
4	Mutual Commitment	At this level, the student perseveres in attempting to complete the task and they appear committed to solving the problem together. They share resources and information with their partner and modify communication where necessary to ensure common understanding. Students have an awareness of their partner's performance on the task and can comment on their own performance.	Strategic Planning & Executing	At this level, the student recognises patterns across pieces of information and they explore the task systematically. They work with their partner to strategise, making plans and setting focused goals. Students at this level can complete simpler CPS tasks successfully.
3	Awareness of Partnership	At this level, the student demonstrates effort towards solving the problem. The student recognises their partner's role and the importance of working together. They help their partner to understand the task and share information. The student is responsive to their partner and reports their own activities on the task.	Sharing & Connecting Information	At this level, the students realise they require more information than they have. They gather more and connect pieces of information together. They begin to strategise by sharing resources with their partner.
2	Supported Working	The student actively participates in the task when it is familiar to them but works largely independently. Interaction with their partner occurs more often but is limited to only when it is necessary for completing the task and students do not tend to incorporate suggestions from their partner.	Establishing Information	At this level, the student understands the task and tests out theories in order to solve the problem. They can identify the consequences of their actions. The student only uses the resources that are immediately available and doesn't seek additional information beyond this. The student focuses only on making very general goals.
1	Independent Working	At this level, the student commences the task independently focusing only on the instructions provided. Interaction with their partner is limited to the beginning of a task and only in those situations where the instructions are clear. They have not started to work collaboratively.	Exploration	At this level, the student explores the problem but this is limited to following instructions and focusing on single pieces of information. Their strategy is lacking systematicity and there is little evidence of understanding the consequences of actions resulting in a lack of successful progress through the task.



#### Social skills

Action

Interaction

Task completion

Responsiveness

Audience awareness

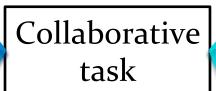
Self-evaluation

**Transactive** memory

Negotiation

Responsibility **Initiative** 

framework



Cognitive skills

Resource management

Collects information

Systematicity

Flexibility and ambiguity

Problem analysis

Set goals

Relationships

Cause and effect

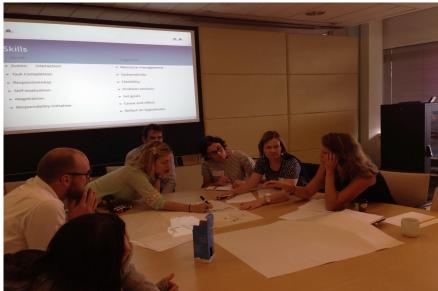
Reflects on and monitors hypotheses



## Irish research and context

- We are part of the CAA
- 16 teachers working on designing tasks
- ACARA, Sweden and NSW working on tasks
- PISA assessing collaborative tasks

Every school in the country can avail of the tasks





## Links

- http://www.caa21.org/
- http://www.juniorcycle.ie/Assessment/Collaborative-Assessment-Alliance
- http://www.oecd.org/callsfortenders/Annex
   %20ID\_PISA%202015%20Collaborative%20Problem
   %20Solving%20Framework%20.pdf

