Assignment 1 Resource Pack
ATC21S MOOC (due Mon July 14, 2014, 8am UTC)

Assignment 1 Table 1: Features of Collaborative Problem Solving

Use this table to make sure you demonstrate that you understand the features of Collaborative Problem Solving when you describe your example.

It requires collaboration rather than solo effort because different people bring different resources to the task, all of which are required to solve the problem

It is required more often these days as technology, knowledge and environment are changing rapidly, and knowledge is usually distributed

Problems are often ill-defined and/or ambiguous

There are usually more ways than one to solve the problem

The solution to the problem needs to be negotiated and agreed between collaborators

The process usually involves:
- Collecting and sharing information about the collaborator and the task
- Checking links and relationships, organising and categorising information
- Setting up procedures and strategies to solve the problem (if, then…)
- Testing the processes and solutions (what if)

Collaborators require both social and cognitive skills

These skills can be defined, assessed and developed

Assignment 1 Table 2: Conceptual Framework for Collaborative Problem Solving

Use this Framework as a reference in Assignment 1 to demonstrate your capacity to identify behaviours of participants which help pinpoint their level of CPS skills.

Social Dimension

Element	Behaviour	*Low skill level*	*Middle skill level*	*High skill level*
Strand: Participation				
Action	Activity within environment	*No or very little activity*	*Active in scaffolded environments*	*Active in unscaffolded environments*
Interaction	Interacts with partners	*Acknowledges communication (i.e. acknowledges cues from partner/s but does not provide information or resources*	*Responds to cues in interaction (i.e. provides information or resources to partner/s)*	*Prompts interaction (i.e. Initiates and promotes interaction with partner/s*
Task completion / perseverance	Undertakes tasks	*Commences task*	*Attempts to solve the task (i.e. works towards solving the problem)*	*Perseveres in task as indicated by multiple activities*
Strand: Perspective Taking				
Responsiveness	Responds to contributions of partners	*Ignores contributions of partner/s*	*Responds to contributions of partner/s (i.e. considers contribution but does not make changes).*	*Incorporates contributions of partner/s to suggest possible solution paths (i.e. makes changes based on contributions of partner/s)*
Audience awareness	Adapts contributions to increase understanding for partner/s	*Makes contributions*	*Modifies contributions for partner/s based on explicit feedback*	*Tailors contributions to partner/s based on interpretation of their understanding (i.e. communication is easily understood by partner from the start)*
Strand: Social Regulation				
Negotiation	Discusses with a view to reaching understanding for partner/s	*Reaches a common understanding*	*Comments on differences but does not achieve resolution*	*Achieves resolution of differences*
Self-evaluation	Recognises own strengths and weaknesses	*Is aware of own performance*	*Comments on own performance*	*Evaluates own performance*
Transactive memory	Recognises strengths and weaknesses of others	*Is aware of performance of partner/s*	*Comments on performance partner/s*	*Evaluates strengths and weaknesses of partner/s based on their performance*
Responsibility initiative	Takes responsibility for progress of the group task	*Undertakes activities largely independently of others*	*Reports to others on progress of activities*	*Assumes group responsibility as indicated by use of 'we' rather than 'you'.*

This framework has been adapted for use in this MOOC from:
Hesse, F., Care, E., Buder, J., Sassenberg, K., & Griffin, P., (in press). A Framework for Teachable Collaborative Problem Solving Skills. In P. Griffin and E. Care (Eds.) *Assessment and Teaching of 21st Century Skills: Methods and Approach*. Educational Assessment in an Information Age. Dordrecht, Springer Science and Business Media.

Cognitive Dimension

Element	Behaviour	Low skill level	Middle skill level	High skill level
Strand: Task Regulation				
Problem analysis	Analyses a problem	*Takes problems at face value*	*Divides problems into subtasks*	*Identifies necessary sequence of subtasks*
Set goals	Sets goals for a task	*Sets general goal such as task completion*	*Sets goals for subtasks*	*Sets goals that recognise relationships between subtasks*
Resource management	Manages resources	*Uses own resources*	*Allocates own resources to partner/s*	*Decides on use of joint resources to complete a task*
Flexibility and ambiguity	Responds to ambiguous situations	*Inaction in ambiguous situations*	*Explores ambiguous situations (i.e. clicks around the problems space to find a way forward)*	*Uses ambiguity to inform decision making (i.e. It's not clear what we need to do, what haven't we tried? what if I pass this to you?*
Collects information	Collects information	*Recognises the need for information*	*Searches and interrogates information*	*Identifies need for information related to current, alternative, and future activity*
Systematicity	Implements possible solutions to a problem	*Random trial and error*	*Strategic sequence of actions*	*Systematically exhausts possible solutions*
Strand: Learning and Knowledge Building				
Relationships (represents and formulates)	Identifies connections and patterns between and among elements of knowledge	*Focused on isolated pieces of information*	*Links elements of information*	*identifies patterns among multiple pieces of information*
Cause and effect (rules "If …then")	Uses understanding of cause and effect to develop a plan	*Activity is undertaken with little or no understanding of consequence of action*	*Identifies sequences of cause and effect*	*Plans a strategy based on a generalised understanding of cause and effect*
Reflects and monitors (testing hypothesis)	Adapts reasoning or course of action as information or circumstances change	*Tests hypothesis*	*Modifies hypothesis*	*Reconstructs and reorganizes understanding of the problem*