

Collaborative Problem Solving in Multi-Level Classes

Preparing Our Students for the 21st Century Workforce

Resources for the Adult Education Practitioner



Webinar Handbook, April 10, 2019

Institute for the Professional Development of Adult Educators

RESOURCES FOR THE ADULT EDUCATION PRACTITIONER

Preparing Our Students for the 21st Century Workforce

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This training event is supported with federal funds as appropriated to the Florida Department of Education, Division of Career and Adult Education for the provision of state leadership professional development activities.

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Guiding Questions

Think about the following guiding questions as you participate in today's session. Write down your thoughts and be prepared to share your ideas.

Slide(s)	Guiding Questions	My Thoughts
4	What are 21 st Century Skills?	
6	What does research say are the skills are the most important to job success?	
7-11	What skills are considered soft skills? What skills are considered hard skills?	
13	What are some of the top skills that employees seek in the 21 st Century?	
19-21	Explain the 4 C's in your own words.	
N/A	What are your thoughts about problem-based learning before today?	
23-25	What are your thoughts about problem-based learning after the webinar?	
26-30	What are some of the interdisciplinary standards/objectives met in the lessons shared?	
N/A	What are additional standards/objectives that you can see integrating into a similar PBL lesson?	

Problem-based Learning Planning Sheet

<i>CCR Science Standards</i>	
SP.2b – Identify and refine Hypothesis for scientific investigations SP.2e – Identify and interpret Independent and Dependent Variables SP.4a – Evaluate whether a Conclusion is supported or challenged by a particular Data or Evidence SP.6a – Express Scientific information on findings visually	
Problem Title	“We don’t care enough about Pollution but we should.”
Driving question	How does air and water pollution affect the health of living things and what, if anything, can we as a society do to improve this condition.
Real World Context	The impact of human behavior on air and water pollution and the adverse effects this is having on both the economy and the health of all living things worldwide.
Culmination Project	Based on their research on the global impact of air and water pollution, which will also include an experimental investigation component, the students will present their findings. The presentations will be in the form of oral presentations expressed through a science board display of the data collected over a 2 week period, power point presentation, posters and hip-hop music.

College and Career Readiness 21st Century Skills

<i>Skill</i>	<i>How will students apply</i>
Collaboration	One group of students will work collaboratively on a written report about air and water pollution. Each student will be assigned a section of the report. All information will be entered into a google docs document. All other students will work collaboratively in pairs or trios to complete a visual project of their choice, an experimental investigation, and power point.

Communication	Students will communicate their work to an audience of their peers outside of science class.
Creativity	Students will use information gathered from their research to create a product based on their individual vision and learning style. These creations will include but not limited to brochures, paintings, hip-hop music, etc.
Critical Thinking	Incorporating the experimental steps of the Scientific Method, a high impact CCR science standard , students will use the information gathered from their research to plan, design and investigate the effect of their class manufactured polluted water on the health of plants; a living thing. Students were required to connect the scientific method steps with the experimental variables, i.e., the independent, dependent, control and constants.
Technology	Interactive web tools: Wikipedia, google docs, power point, YouTube, Pinterest

CCR Cross-Curricular Standards

Reading	R.8.3 – Evaluate the relevance and sufficiency of evidence offered in support of a claim.
Math	Q.6.a – Represent, display, and interpret categorical data in bar graphs or circle graphs.
Social Studies	SSP.2.a- Determine the central ideas or information of a primary or secondary source, corroborating or challenging conclusions with evidence. SSP.3.c – Analyze cause and effect relationships and multiple causation, including action by individuals, natural and societal processes, and the influence of ideas.

Multiple Intelligences



THE MULTIPLE INTELLIGENCE QUIZ

Estimated time required: 20 minutes

For each of the statements below, choose a number between 1 and 5 to rate how the statement describes you.

- 1 – No, the statement is not at all like me 4 – The statement is a lot like me
 2 – The statement is a little like me 5 – Yes, the statement is definitely me
 3 – The statement is somewhat like me

Verbal/Linguistic

- I can use lots of different words to express myself.
 - I feel comfortable working with language and words.
 - I enjoy crosswords and other word games like Scrabble.
 - I tend to remember things exactly as they are said to me.
 - I enjoy participating in debates and/or discussions.
 - I find it easy to explain things to others.
 - I enjoy keeping a written journal and/or writing stories and articles.
 - I like to read a lot.
- TOTAL

Logical/Mathematical

- I work best in an organised work area.
 - I enjoy maths and using numbers.
 - I keep a 'things to do' list.
 - I enjoy playing brainteasers and logic puzzles.
 - I like to ask 'why' questions.
 - I work best when I have a day planner or timetable.
 - I quickly grasp cause and effect relationships.
 - I always do things one step at a time.
- TOTAL

Visual/Spatial

- I understand colour combinations and what colours work well together.
 - I enjoy solving jigsaw, maze and/or other visual puzzles.
 - I read charts and maps easily.
 - I have a good sense of direction.
 - I like to watch the scenes and activities in movies.
 - I am observant. I often see things that others miss.
 - I can anticipate the moves and consequences in a game plan (i.e., hockey sense, chess sense).
 - I can picture scenes in my head when I remember things.
- TOTAL

Interpersonal

- I can sense the moods and feelings of others.
 - I work best when interacting with people.
 - I enjoy team sports rather than individual sports.
 - I can sort out arguments between friends.
 - I prefer group activities rather than ones I do alone.
 - I enjoy learning about different cultures.
 - I enjoy social events like parties.
 - I enjoy sharing my ideas and feelings with others.
- TOTAL

Musical

- I often play music in my mind.
 - My mood changes when I listen to music.
 - It is easy for me to follow the beat of music.
 - I can pick out different instruments when I listen to a piece of music.
 - I keep time when music is playing.
 - I can hear an off-key note.
 - I find it easy to engage in musical activities.
 - I can remember pieces of music easily.
- TOTAL

Naturalistic

- Pollution makes me angry.
 - I notice similarities and differences in trees, flowers and other things in nature.
 - I feel very strongly about protecting the environment.
 - I enjoy watching nature programs on television.
 - I engage in 'clean-up days'.
 - I like planting and caring for a garden.
 - I enjoy fishing, bushwalking and bird-watching.
 - When I leave school, I hope to work with plants and animals.
- TOTAL

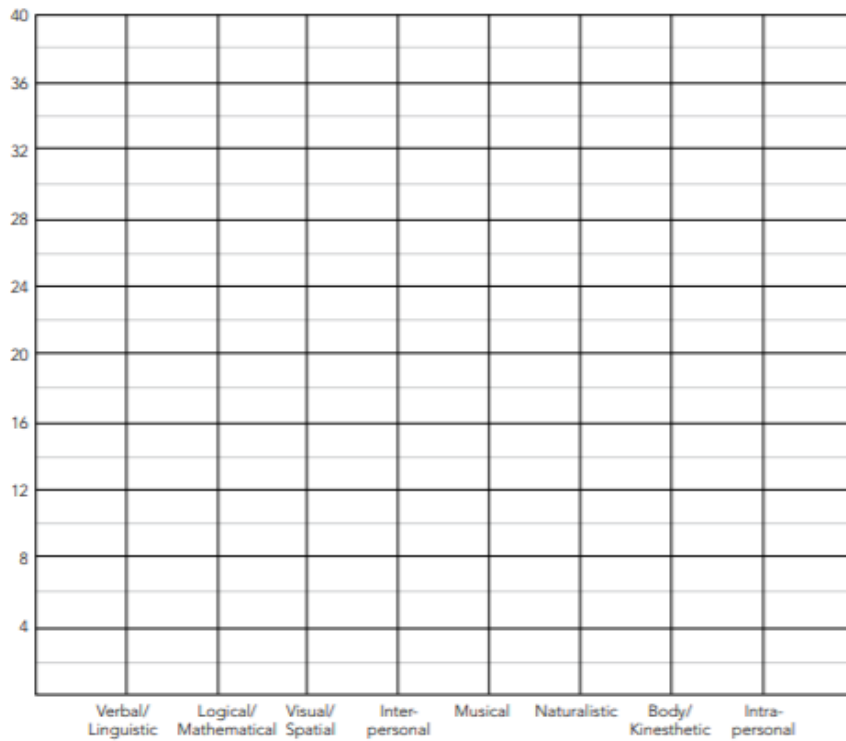
Multiple Intelligences (cont.)

Body/Kinesthetic		Intrapersonal	
I like to move, tap or fidget when sitting.	<input type="checkbox"/>	I know myself well.	<input type="checkbox"/>
I enjoy participating in active sports.	<input type="checkbox"/>	I have a few close friends.	<input type="checkbox"/>
I am curious as to how things feel and I tend to touch objects and examine their texture.	<input type="checkbox"/>	I have strong opinions about controversial issues.	<input type="checkbox"/>
I am well co-ordinated.	<input type="checkbox"/>	I work best when the activity is self-paced.	<input type="checkbox"/>
I like working with my hands.	<input type="checkbox"/>	I am not easily influenced by other people.	<input type="checkbox"/>
I prefer to be physically involved rather than sitting and watching.	<input type="checkbox"/>	I have a good understanding of my feelings and how I will react to situations.	<input type="checkbox"/>
I understand best by doing (i.e. touching, moving and interacting).	<input type="checkbox"/>	I often raise questions concerning values and beliefs.	<input type="checkbox"/>
I like to think through problems while I walk or run.	<input type="checkbox"/>	I enjoy working on my own.	<input type="checkbox"/>
TOTAL	<input type="checkbox"/>	TOTAL	<input type="checkbox"/>



Multiple Intelligence Graph

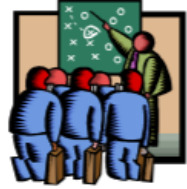
for _____



Employability Skills

Employability Skills Quiz

Part I – Personal Management Skills



1. I take on projects with confidence and know that I can do a good job.
 - a. Always
 - b. Sometimes
 - c. Never
2. I tell the truth at work no matter what the consequences are.
 - a. Sometimes
 - b. Most of the time
 - c. Never
3. I volunteer for training and look for opportunities to learn new things.
 - a. Always
 - b. Only if it interests me
 - c. Never
4. I find it difficult to continue with tasks, at home and at work, when problems arise.
 - a. Most of the time
 - b. Sometimes
 - c. Never
5. I look for new challenges at work and in my spare time.
 - a. Most of the time
 - b. Mainly at work
 - c. Mainly in my spare time
6. I like to set goals and objectives for myself.
 - a. Never, it scares me
 - b. Always, it helps me to measure my success
 - c. I only do it at work
7. People tell me I am well organized.
 - a. Most of the time
 - b. Sometimes
 - c. Never
8. I get upset when things change.
 - a. Always
 - b. Sometimes
 - c. Never
9. I like it when people do things differently than I do.
 - a. Usually, I learn from them
 - b. Never, they don't do it properly
 - c. It depends
10. Do you like to think up new and better ways to get your work done?
 - a. I don't get paid for that
 - b. Sometimes
 - c. Always, it keeps life interesting and improves my productivity

Employability Skills (Cont.)

What's Your Score? – Personal Management Skills

1.	a-5	b-3	c-0
2.	a-3	b-5	c-0
3.	a-5	b-3	c-0
4.	a-0	b-3	c-5
5.	a-5	b-3	c-2
6.	a-0	b-5	c-3
7.	a-5	b-3	c-0
8.	a-0	b-3	c-5
9.	a-5	b-0	c-3
10.	a-0	b-3	c-5

If you have a score of 40 or more:

- You have good personal management skills
- On your resume, add that you are an excellent organizer or that you are good at coming up with new and creative ideas
- At your interview, impress the employer with a your positive attitude, your determination to get the job done and your willingness to learn

If you have scored between 25 and 40:

- You have some personal management skills
- To improve, be open to new challenges
- Believe in yourself and know that you can do the job

If you have scored less than 25:

- Become organized! Take a course on organizational skills
- Sit down and decide where you want to be five years from now
- Establish these goals and begin working toward them
- Be open to new challenges and expect to take on new tasks

Employability Skills (Cont.)

Employability Skills Quiz

Part II – Teamwork Skills



1. On the job (or at school within a group), I make an effort to understand and contribute to the goals of the organization (group).
 - a. Always
 - b. Sometimes
 - c. Never
2. Working in a group...
 - a. Makes me nervous
 - b. Takes too much time
 - c. Helps me to get the job done
3. When you work in a group, do you find it hard when you can't do things your own way?
 - a. Always
 - b. Sometimes
 - c. Never
4. Can you plan and make decisions with others?
 - a. Most of the time
 - b. Sometimes
 - c. Not usually
5. Do you respect the thoughts and opinions of others?
 - a. It depends
 - b. Always
 - c. Usually
6. Do you mind when other people offer you their ideas of how to solve a problem or take on a task?
 - a. No, I like it
 - b. It depends
 - c. I would rather figure it out myself
7. Are you comfortable asking others for help and advice?
 - a. Most of the time
 - b. If I know them
 - c. Never
8. Would you like to take charge of a group of people, if they are working on something you know a lot about?
 - a. I'd rather not, but I will
 - b. I couldn't
 - c. Absolutely
9. Do you think others see you as someone they can turn to for help or advice?
 - a. I don't know
 - b. Never
 - c. Sometimes
10. If I had a problem on the job and I knew a co-worker had the answer, I would ask him or her for help.
 - a. Always
 - b. Never
 - c. Sometimes

Employability Skills (Cont.)

What's Your Score? – Teamwork Skills

1.	a-5	b-3	c-0
2.	a-0	b-3	c-5
3.	a-0	b-3	c-5
4.	a-5	b-3	c-0
5.	a-0	b-5	c-3
6.	a-5	b-3	c-0
7.	a-5	b-3	c-0
8.	a-3	b-0	c-5
9.	a-3	b-0	c-5
10.	a-5	b-0	c-3

If you have a score of 40 or more:

- You are a good team player!
- You understand and appreciate the differences in others, and use those differences to the best advantage
- Once in a while you may need to lead a team project
- On your resume, include team activities in which you worked successfully
- At your interview, make sure to let potential employers know that you are a team player

If you have scored between 25 and 40:

- You are a team player some of the time
- Sometimes, you work well in a group
- To improve, consider the ideas and approaches of co-workers, even if they are different from yours

If you have scored less than 25:

- You are used to doing things on your own
 - Learn to work well with others
 - Listen to what other people have to say
 - Offer to help other people to give you practice on working with others
 - Find a neighbourhood club or volunteer organization and join in their activities
-

Employability Skills (Cont.)

Employability Skills Quiz

Part III – Academic Skills



1. Can you understand and speak English and/or French?
a. English b. French c. Both
2. I am told that I am a good listener.
a. Sometimes b. Never c. Often
3. Do you enjoy reading?
a. I read when I have to b. I love reading c. I don't like reading
4. Can you read, understand and use written material (i.e. reading a map, following a recipe or a set of instructions to assemble a toy or a piece of furniture)?
a. Yes b. No c. It depends
5. Do you write well in English and/or French (i.e. letters to friends, memos, instructions or lists)?
a. It depends b. Writing is a challenge c. Yes, always
6. Do you like making a decision?
a. Never b. All the time c. Sometimes
7. Do people come to you to help them solve problems at work or at home?
a. Never b. All the time c. Sometimes
8. Can you solve problems that require basic math skills (i.e. balancing a cheque book, making change or working with measurements)?
a. No problem b. Math scares me c. I can with effort
9. Can you use technology like computers or fax machines?
a. I'm trying to learn b. Never used c. I use them all the time
10. Do you have special knowledge or training that you could use at work?
a. A trade, degree or college diploma
b. Computer Skills
c. No special training

Employability Skills (Cont.)

What's Your Score? – Academic Skills

1.	a-3	b-3	c-5
2.	a-3	b-0	c-5
3.	a-3	b-5	c-0
4.	a-5	b-0	c-3
5.	a-3	b-0	c-5
6.	a-0	b-5	c-3
7.	a-0	b-5	c-3
8.	a-5	b-0	c-3
9.	a-3	b-0	c-5
10.	a-5	b-3	c-0

If you have a score of 30 or more:

- You have skills and talents that are valued by employers
- Remember, however, that the work place is constantly changing and your skills may need to be upgraded tomorrow
- The key to employment success is education
- Set goals for yourself based on continued learning
- No matter the level of education, think of improving it
- Never stop learning
- On your resume, add that you are adaptable and willing to learn
- At your interview, impress the employer with a your willingness to acquire new skills or take new courses

If you have scored less than 30:

- Your academic skills may need a tune-up
- An employer looks at your level of education and technical skills when hiring
- If you never finished high school, try to do so now
- Take evening and correspondence courses to improve your marks
- Look into a training program at a local community college (talk to the counsellors there)
- Find out what skills are in demand in your area and apply for a course to get them
- If you are interested in a specific trade, find out the required skills and work towards attaining them

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