Developing Students’ Problem Solving Skills in the Multilevel ESL Class

Sponsored by CALPRO
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By the end of this Webinar you’ll be able to:

• Identify the underlying principles of the problem solving technique.
• Make use of the steps of the problem solving technique with multilevel classes.
PROBLEM SOLVING

Part 1
- Look at the picture. Talk about what you see.

Part 2
- Discuss these questions: What is the problem? What are the solutions?

Part 3
- Think about this question: What’s the best solution? Why?
  Share your ideas. Chose the best solution.

Part 4
- Act out what you think Manny should do and say.

Manny works as a skiploader. On his lunch hour the boss asked him to open some boxes to make sure they were the right order. He didn’t have a knife so he borrowed a co-worker’s knife to open the boxes. The boxes were okay, so he went out to take a break. When he came back, the co-worker was yelling that his knife had been stolen. Manny didn’t want to say anything because he didn’t want to get in trouble.

THE PROBLEM SOLVING TECHNIQUE

Problem solving is not only a great way to apply language skills, but is one of the key elements in the list of SCANS Thinking Skills and the CASAS Learning to Learn competency. When students examine a difficult situation in order to identify both the problem and a meaningful solution, they are learning skills that will serve them well in the workplace, in their communities, at home with their families, and in their daily lives.

Before you can conduct a problem solving activity, your students need to have the vocabulary and social skills to enable them to agree and disagree successfully. E.g., I don’t think that’s correct. I agree, but I also think that... You might be right, but in my opinion, etc. You can teach a mini lesson, modeling this language and helping students practice it with content that is already familiar. For example, in an intermediate high class, you could pose a question such as: Is it better to live in a house or an apartment?, propose different answers, and have students take turns expressing their opinions about each answer.

To conduct a Problem Solving activity:

1. Present a problematic situation to the class by either:
   a. providing a text version of the problem for students to read and restate;
   b. reading the problem to the class and asking comprehension questions,
   c. providing a picture story and eliciting the situation from the class;
   OR
   c. acting out the situation and asking students to tell you what happened.

2. Clarify and check students’ comprehension of key vocabulary and concepts.

3. Ask students to identify the main problem in the situation. (If students disagree, list their different ideas and then ask them to prioritize to find the most pressing problem.)

4. Have students brainstorm solutions to the problem, within a set time limit, in any of these ways:
   a. Form teams of four and have team members take turns suggesting solutions, as the team recorder writes down their different ideas;
   b. Form pairs and have each pair generate a list of solutions that they then share with another pair;
   c. Have individual students write their solutions and share them with a partner;
   OR
   d. Conduct a whole class brainstorm to determine possible solutions.

5. Once students have generated a list of solutions, have them report back to the class. List solutions on the board.

6. Take one of the proposed solutions on the board and discuss its consequences. Present the language students will need to agree and disagree with each other, and demonstrate supporting a solution by naming the consequence, e.g., Julia should ask the shop owners to clean up. It will help them get more business.

7. Set a time limit of at least 10 minutes and have students in groups or pairs list the consequences of their solutions and then decide which one is the best.

8. Evaluate students’ work by collecting each group’s list and having each group report back on their decision.

Follow up a problem solving activity by having students:

a. write a letter, giving advice to someone experiencing a similar problem.

b. role play a conversation that illustrates the way a person could solve the problem.

Or

c. survey their relatives and friends to discover additional solutions to the problems.

Adapted from Tools for ESL Lesson Planning/Division of Adult and Career Education, Los Angeles Unified School District. 2000
PROBLEM SOLVING LESSON PLANNING CHECKLIST

(BEFORE CLASS)

☐ Choose a topic for the problem scenario that matches the lesson theme/objective.
☐ Locate or write a problem scenario relating to the lesson topic.
   ___ find news articles about a local community issue
   ___ use ready-made problem scenarios from a text or website
   ___ use student-generated problem scenarios

☐ Identify the key vocabulary and concepts that may be new to students

☐ Determine how you will share the scenario with learner(s)
   ___ write the scenario on the board, or project it, for students to read
   ___ read the problem to the learner(s).
   ___ act out the situation
   ___ show a video depicting the problem
   ___ provide a handout that includes the situation and comprehension questions

☐ Plan the application stage of the lesson where the learner(s) explain the solution and the rationale for selecting it. Will the learner(s)...
   ___ write a letter to propose the solutions?
   ___ role play a conversation that explains their solution?
   ___ create a presentation explaining the solution?
   ___ survey others about the problem?

(IN CLASS)

☐ Share the lesson objective and link it to learners’ needs and goals.

☐ Model the problem solving process with the class.
   1. Share the scenario with the learner(s).
   2. Check learners’ comprehension of key vocabulary and content, and provide instruction as needed.
   3. Ask the learner(s) to identify the main problem in the situation. (If students disagree, list their different ideas and then engage them in a prioritizing task to help them determine the most pressing problem.) *
   4. Have students brainstorm solutions to the problem while you record them. *
   5. Take one of the proposed solutions and discuss its consequences. *

☐ Have the learner(s) identify the consequences of the remaining solutions *

☐ Have the learner(s) select the best 2-3 solutions and present their rationale to the class.

☐ Follow up a problem solving activity by having the learner(s):
   ___ write a letter, giving advice to someone experiencing a similar problem.
   ___ write and/or roleplay a conversation that demonstrates how to solve the problem
   ___ create a presentation that explains and defends the solution
   ___ design a survey to find out which solutions other people would choose (school staff, students from other classes, relatives, colleagues at work, friends.) *

*See additional notes on p. 4
NOTES for CHECKLIST on p. 3

NOTES: Before you plan:

- Listen for issues learners are having in their daily lives at work, at school, at home, and in the community.
- Find or create problem scenarios that relate to learners’ own situations while being sure to keep learners’ personal information out of the scenario.

NOTES: Ways to help learners analyze the problem:

- elicit ideas from learner(s).
- have learner(s) select from a list of problems.
- have learner(s) identify problems from different points of view.
- have the learner(s) look at how the problem affects different people.
- have the learner(s) research similar problems.

NOTES: Ways to help learners identify solutions:

- elicit a list of ideas from all learners.
- provide a list for learners to choose from.
- have groups brainstorm a list of solutions to share with the class.

NOTES: Ways to help learners to analyze and rate solutions:

- identify advantages and disadvantages of each solution.
- identify highest risk and safest solution.
- identify long term and short-term results of solutions.

MULTILEVEL TIPS FOR PROBLEM SOLVING LESSONS

Tip #1- Provide different levels of the problem scenario for beginners and intermediate/advanced learners. In some cases, you may prefer to have beginners work from pictures or picture sequences that depict the problem.

Tip #2- For low-level classes or low-level like-ability groups, provide learners with a list of possible solutions to the problem for them and let them choose from the list. Be sure to let learners know that they can come up with their own solutions, too!

Tip #3- If you have learners work in mixed-level groups to brainstorm solutions, expect some first language use as lower-level learners may not be able to express themselves to their satisfaction. You can encourage higher-level learners to restate lower-level learners’ first language statements into English. You can also provide a “translation corner” in the room where learners can use bilingual dictionaries, ask classmates, or (if Internet is available) use a translation program to help them express their ideas.

Tip #4- If the lesson includes a follow-up writing activity, such as writing an email, note card or letter with suggestions on how to solve the problem, provide sentence frames for lower-level learners to fill in. You can also pair higher- and lower-level learners and have the higher-level learner elicit ideas from his/her partner and write them accurately into the letter.
PROBLEM SCENARIOS

When Julia walks in her neighborhood, she notices litter and graffiti everywhere. People throw their fast food boxes and cups on the sidewalk. There are usually flyers and other papers in the gutters. And the trashcans are always full. Many of the stores have graffiti on their windows and walls. The graffiti is colorful, but Julia doesn’t like it. Sometimes Julia thinks about picking up the trash, but she doesn’t want to touch it. She wants her neighborhood streets to look better, but she doesn’t know what to do.

Adapted from “Navigating the Community” EL Civics Toolkit, (2011) p. 48; Ace of Florida/Lighthearted Learning

Mario is at the wedding reception of a co-worker. His boss and several other co-workers are guests as well.

When the reception ends, Mario knows thinks his boss has been drinking all evening. The boss offers to give Susana, Mario’s co-worker and friend, a ride home Mario does not think his boss should drive. What can Mario do?

**PROBLEM SCENARIOS (Continued)**

**Level-High Beginning**  
*Topic: Workplace*  
*A New Job, A New Problem*

Ahmed started his job two weeks ago. He works as a ticket collector in the movie theater. He is on time every day. He wears neat clothes. He checks the tickets carefully. But he cannot always understand what the manager says. He is also very shy. He doesn't like to ask, "Could you repeat those instructions, please?" Sometimes he makes mistakes.

**Level-Intermediate**  
*Topic: Auto Insurance*  
*What to do?*

Bach Yen had a traffic accident this morning. At a stoplight, the driver behind him hit his car. Bach Yen got out of the car to exchange insurance information, but the other driver had a different idea. He didn’t want the insurance companies to get involved. He offered to pay Bach Yen for the damage to his car. It didn’t look like there was much damage to the car, but Bach Yen wasn’t sure if resolving the problem without insurance companies is the right thing to do. He still isn’t sure what to do.

**Level-Intermediate**  
*Topic: Workplace*  
*Teamwork Troubles*

Lawrence has just gotten a promotion at work. He is a team manager for a group of six employees. Lawrence really wants to be a success in his new job, but his group isn’t really a team. Two of the people in his group don’t like each other and argue a lot. There is one team member who talks all the time and another one who never says a word. The team members are from six different countries, and two of the countries they come from don’t get along. Lawrence doesn’t know what to do.

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**Level: Intermediate**  
*Topic: Community and Housing*  
*Rosa’s Problem*

Two months ago three young men moved next door to Rosa and her children. The men stay up late, play loud music and have lots of parties. The walls of the building are thin and Rosa and her children can’t sleep because their neighbors make so much noise. She is afraid to knock on their door and complain to them because they drink a lot and are not very polite.

Rosa called the landlord, but he didn’t do anything. Rosa is very unhappy. She is always tired when she wakes up in the morning. She doesn’t want to move because the apartment is near her children’s school, hear the bus stop, and hear her job. What can she do?

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PROBLEM SCENARIOS (Continued)

**Topic:** Community Issues  
**Level:** Intermediate

Everyday Luis sees the people selling the homeless newspaper on busy streets in the city. They are working for a good cause, but it makes him very nervous to see them walking in the streets between the cars. Luis takes the bus, but his sister-in-law told him that once she almost hit a vendor with her car. Luis sometimes buys the newspaper, because he wants to help support the homeless shelters in the city. Luis wants to tell someone about the danger, but he doesn’t want to get the vendor in trouble.

**Topic:** Community Issues  
**Level:** Advanced

Manuel Robalino’s children walk to school on the weekdays and he worries about their safety. His neighborhood has sidewalks on both sides of the streets, but they are in disrepair and overgrown with neighbors’ trees and bushes. Often, his children have to walk into the street to get around the obstructions on the sidewalks. Manuel is not the only one who is concerned with the situation. One of his neighbors, Sophia, has very limited mobility after having had a stroke. She is in a wheelchair, but can’t use her chair to get around the neighborhood because the sidewalks are buckling and terribly cracked. Manuel and Sophia have discussed the problem, and Manuel has even tried to talk to the neighbors about their bushes and trees. But he has had no success. One neighbor was so hostile that he told Manuel to get off her property. Manuel and Sophia know their city doesn’t have the funds to repair the sidewalks, but they think someone should fix them. They’re unsure of what to try next or who to call.

**Additional Community Resource Problem Solving Scenarios**

- A mother thinks that a child at the community recreation center is bullying her child, but the coaches and center staff have never seen it happen.

- It’s Monday night and the library is closed. Sam’s books were due on Monday, and the return slot is backed up with books.

- Tat Sun’s street has a pothole that is gradually increasing in size. He’s unsure of what to do about it.

- Cecile is studying English and computer technology at the local community college, and she wants to get work experience that can go on her resume. She can’t work full time and go to school, and the part-time jobs she has found are all in food service. She doesn’t think they’d be helpful on her resume. She’s having a hard time figuring out what to do.

- Fatimah recently moved to Tulsa, and she’s new to the bus system. She has been waiting at the bus stop, on a busy street, for an hour for a bus that is supposed to come twice an hour. It’s getting dark and it looks like it may rain. She’s not sure what to do.

From “Navigating the Community” EL Civics Toolkit, (2011) p. 48; Ace of Florida/Lighthearted Learning
**PROBLEM SOLVING LESSON PLAN TEMPLATE**

<table>
<thead>
<tr>
<th>Lesson Theme:</th>
<th>Objective: Ss will be able to….</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary:</td>
<td>Grammar Structure</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Lesson Stage</th>
<th>Goal</th>
<th>Mini-Lecture/Activity(ies)</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm up/Review</td>
<td>Preview concept or language of scenario, build schema</td>
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<tr>
<td>Introduction</td>
<td>Focus students attention on the lesson objective and scenario</td>
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<tr>
<td>Presentation</td>
<td>Share problem scenario</td>
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<td>Guided Practice</td>
<td>Help learners identify the problem</td>
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<td>Communicative Practice</td>
<td>Select the best solution by analyzing the suggested solutions</td>
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<td>Evaluation</td>
<td>Demonstrate understanding of the problem and consequences of the solution</td>
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<tr>
<td>Application</td>
<td>Apply the solution to test it. (Writing an advice letter, roleplaying, etc.)</td>
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<td></td>
</tr>
</tbody>
</table>
Background Reading


Harris, Robert. (1998) *Introduction to Problem Solving*  


Instructional Resources


*Problem-solving Scenarios* (Teaching Strategies DVD) (2009)  

Spruck-Wrigley, H. and Powrie, J *The Missing Utility Knife*.  