

# Ideas and Resources for Teaching to ILO: Critical Thinking and Problem Solving

---

## Student Positions

### Instruction Ideas

- Discussions on personal opinion
- Add “Student Position” to assignment grading rubrics

### Activities

- (MA) Students are given a health care related law or statute that they must pick “for or against”
- (RN) Students analyze patient data to prioritize patient care
- Current event debates
- Ask students to provide cross-cultural perspectives
- Historical comparisons
- Family vs individual expectations and constraints
- Music – physics of sound
  - Pre-conceived ideas of cultural differences
- Math – initial assumptions as positions
- Require students to take alternative positions
- Online discussion forms that elucidate debate
- Class discussions that take the form of a Socratic seminar
- Ask students to re-evaluate their position
- Essays focusing on supporting a position
- In class discussions where students have to determine their position and support it
- Develop hypothesis – prove wrong or right
- Set up debates with teams of students
- Discussion boards on issues

### Resources

- Case studies of other people

## Evaluate Potential Solutions

### Instruction Ideas

- Directly instruct the linguistic forms of analysis and argumentation
  - “however”, “as a result”, “consequently”, “therefore”, “on the other hand” -- provide language scripts so that students can orally practice presenting a claim and a counter claim
- Train students to use media bias [factcheck.org](http://factcheck.org) to evaluate their sources
- During lecture discuss (societal) problems – students request solutions. When no clear solution demonstrate critical thinking to discuss/analyze problem

- Present opposing viewpoints
- Train students in estimation skills in order to evaluate math solutions

## Activities

- (MA)Practice Triage – ID main issue
  - Related concerns about diagnoses/meds
  - Best next steps
- Comparison of methods through student presentations
- Causal analysis paper
  - Cause and effects – why? and/or what?
- Comparison/contrast
  - Cultures: Spanish
- Design activities in which students research information to present to class instead of providing the sources
- Giving open-ended activities allows students to sort their values and formulate reasons for their rankings – allows students to understand their values & others
- Provide pro-con articles to read and evaluate ([Newsela](#), [ProCon.org](#), [Opposing Viewpoints from Gale](#))
- Ask students to justify and explain
- Writing assignments that require positions on “hot topic” issues such as gun control
- Offer math projects/activities that require students to evaluate computed data and use it to support choices or recommendations
- (CAS) Evaluate web sites that are not “optimized” for solutions to enhance optimization
- Evaluate other students’ papers/projects/decisions
- Ongoing projects (ie. the big earthquake – tools to evaluate position progressively)
- In class small group work addressing benefit – cost grid
- Use of

Problem	Solution

- Capstone synthesis project
- Lab-work: compare hurricane warnings and aftermath
- Service Learning – send to opposing groups to observe

## Resources

- Literature on problem solving
- [Newsela](#), [ProCon.org](#), [Opposing Viewpoints from Gale](#)