

INSTRUCTOR'S GUIDE



Teaching Technique 39

Comprehensive Factors List

ACTIVITY TYPE

- Learning Assessment
- Reflecting
- Writing

TEACHING PROBLEM ADDRESSED

- Poor Attention/Listening

LEARNING TAXONOMIC LEVEL

- Foundational Knowledge

Comprehensive Factors List

In *Comprehensive Factors List (CFL)*, students write all the relevant factors they can think of about a specific topic, drawing from course content and personal experiences.

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- 1** Clarify your teaching purpose and learning goals for the *CFL*
 - 2** Select the focus of the *CFL*
 - 3** Set assignment parameters (including time allowed)
 - 4** Develop a plan for learning assessment or grading
 - 5** Communicate assignment instructions to students
 - 6** Present the prompt and have students brainstorm and list factors
 - 7** Reflect upon the activity and evaluate its effectiveness

Step-By-Step Instructions

In this section we provide you with guidance on each of the seven steps involved as you consider this technique.

STEP 1: CLARIFY YOUR TEACHING PURPOSE AND LEARNING GOALS

Comprehensive Factors List is a learning assessment technique that involves brainstorming and recalling information. If used frequently, this technique can help students improve their skills at paying attention, listening, and concentration. *Comprehensive Factors List* can also be used to help students activate prior knowledge and surface pre-existing beliefs.

As a learning assessment technique, *Comprehensive Factors List* can help the instructor to determine whether students have understood which features, elements, facts, and so forth related to a given lesson are the most important. It also provides insight into students' level of comprehension. Finally, this technique can also help teachers identify potential misunderstandings of the subject matter.

Comprehensive Factors List may be used for diagnostic assessment as well as at the end of an assignment or activity to assess students' recall and understanding. It also makes an effective pre- and post-instruction assessment tool to determine change over time.

STEP 2: IDENTIFY THE LEARNING TASK'S UNDERLYING PROBLEM AND PROMPT

Create an assignment prompt that asks students to list any and all factors pertinent to a topic that they have encountered through a reading assignment, lecture, illustration, performance, or other course experience. The topic should be well-defined so that it is manageable and also so that it reduces irrelevant guessing.

STEP 3: SET ASSIGNMENT PARAMETERS

- Determine the amount of time students will have to complete their lists. You will not need long; *Comprehensive Factors List* activities typically last approximately 3–5 minutes. The idea is to generate as many relevant factors as possible within the time available.
- Determine how students should record their responses; index cards can be useful and also can limit the volume of responses students have.
- Try out the prompt yourself to see how many factors you generate. This list can also be used for comparison when you review students' responses.

Step-By-Step Instructions (CON'T)

STEP 4: DEVELOP A PLAN FOR LEARNING ASSESSMENT OR GRADING

Because *Comprehensive Factors List* is a *Learning Assessment Technique*, you will want to consider the following four components:

- **Examining Individual Learning Artifacts**
Collect students' responses and review the answers to determine how well students are recalling the main points. You may want to do a simple count of how many factors a student listed. You also may want to determine a simple scoring system to gauge quality, such as:
 - › **+1** Bull's-eye
 - › **0** On the board
 - › **-1** Missed the mark
- **Grading Individual Performance**
Comprehensive Factors List is a quick activity intended to gather formative data, so you should not assign a high-stakes grade to it. Instead, consider a participation grade. If you have students write their names on their responses, you may want to return their scored responses so that they have feedback on how well they did. On the other hand, this is an activity that you may want to do anonymously. If you do it anonymously, you simply won't report individual results.
- **Examining Learning Artifacts in Aggregate**
You can determine an average number of items. You can also do a simple tally of the percentage of scores in each of the quality indicators you created.
- **Reporting Aggregated Information**
Use a table to present your results. Consider a chart such as a pie chart to illustrate percentages.

STEP 5: COMMUNICATE ASSIGNMENT PARAMETERS TO STUDENTS

Assignment parameters can be communicated to students simply by posting the prompt on the board or in a presentation slide and then announcing the time constraints.

Step-By-Step Instructions (CON'T)

STEP 6: IMPLEMENT THE TECHNIQUE

- Present the prompt, and tell students they will list all the factors they can think of related to it.
- Announce the time limit for the activity, and ask students to begin.
- Close the activity by telling students that the time has ended.
- Collect the Learning Artifacts.
- If desired, have student volunteers report some of their ideas.

STEP 7: REFLECT UPON THE ACTIVITY AND EVALUATE ITS EFFECTIVENESS

When reflecting on the activity and how effective it was, consider the following questions:

- Did the technique match the course learning goals and objectives?
- Did it meet my goals for this learning module?
- Was it appropriate for the students?
- Did the technique keep the students engaged?
- Did it promote student learning?
- Did it provide me with information about student understanding?

If you answer yes to all or most of these questions, next consider how you might improve the activity for the next use.

Support Materials

The materials in this section are intended to help you with the process of implementing this technique. For *Comprehensive Factors List*, we are providing you with ideas to vary it.

VARIATIONS

- Consider setting a limit to the number of factors, such as “Identify 5 key factors...” This variation is desirable if you have a particularly large class.
- **Individual Comprehensive Factors List** is particularly effective (e.g., Miller, 2009), as students may stay more focused and generate the greatest possible number of ideas.
- **Group Comprehensive Factors Lists**, however, can be useful as well. The best approach may be to combine individual and group approaches. One option is to have students brainstorm individually and then get into small groups to compare types of items generated. Groups may be asked to identify themes from their lists, which can help facilitate the analysis process.

Technique Template

Following are two templates to assist you as you think through how you might implement this technique in your own class. The first is a completed template, providing an example of how a Professor adapted *Comprehensive Factor List* in their course, *Social Work in the Schools*. The second is a blank template for you to fill out to tailor this technique for your course.

Technique Template

Sample *Comprehensive Factors List* Completed Technique Template:

Content from *Learning Assessment Techniques: A Handbook for College Faculty*

Social Work in the Schools

Course Name

COURSE CHARACTERISTICS

What are the situational factors that impact this course? For example, is it on campus or online? How many students? Is it lower division or graduate? Are there student attributes such as attitudes, prior knowledge, reasons for enrolling, and so forth that should be taken into account as you consider this technique?

This course is an online course in an online Master of Social Work degree program. The program is designed to prepare graduates for professional practice with individuals, families, groups, organizations and communities in an array of settings and with diverse populations.

STEP 1: CLARIFY YOUR TEACHING PURPOSE AND LEARNING GOALS

Why are you choosing this technique? What do you hope to accomplish?

*The instructor had a learning goal that "upon completion of this course, students will know/understand the effect that bullies can have on their victims." She decided to use *Comprehensive Factors List* to help assess attainment of this outcome. She wanted a pre-instruction/post-instruction administration to help her gauge how much student knowledge changed as a result of instruction.*

STEP 2: IDENTIFY THE LEARNING TASK'S UNDERLYING PROBLEM AND PROMPT

What is the question you want learners to address, or problem you want them to solve?

To help her assess the increased level of knowledge regarding bullying that resulted from her instruction, she created a prompt: "What are the main effects of bullying on the victims" and then used this in a pre- and post-instruction quiz.

STEP 3: SET ASSIGNMENT PARAMETERS

What are the assignment logistics? For example, will this be assigned individually or is it group work? How long will the assignment take? Will students be submitting a product? What materials, resources, or additional information do you anticipate needing?

I typically have students complete this assignment as an out of class activity. a Before the learning module, she announced the activity, which she posted as a timed quiz. When students took the quiz, they had five minutes to provide their lists. They then worked through the learning module asynchronously. When they completed the module, they took the quiz again. They complete the work as individuals and post their responses to the course LMS.

STEP 4: DEVELOP A PLAN FOR LEARNING ASSESSMENT OR GRADING

If you decide to assess learning, how will you determine that learning has occurred? For example, will you use a simple +/check/- grading system? If you use a rubric, will you use an existing one or create one? What will be your criteria and standards?

She created her own list, including feelings of worthlessness, increased use of tobacco, alcohol, or other drugs, increased mental health problems, including depression and anxiety, absenteeism, and suicide. She used this as a reference to compare students' lists. She also created a table in which she tracked "average number of factors" before instruction and after instruction.

STEP 5: COMMUNICATE ASSIGNMENT PARAMETERS TO STUDENTS

How will you communicate assignment parameters to students? For example, through a handout? A prompt on a presentation slide? Assignment instructions in your online course?

She communicated instructions through the LMS.

STEP 6: IMPLEMENT THE TECHNIQUE

How will you adapt steps/procedures for your students? Are there any additional logistical aspects to consider?

She implemented this as a quick quiz both before and after the learning module. There were no additional logistical aspects to consider.

STEP 7: REFLECT UPON THE ACTIVITY AND EVALUATE ITS EFFECTIVENESS

Note: This step will be completed after you have implemented the technique.

Did this technique help you accomplish your goals? What worked well? What could have been improved? What might you change if you decide to implement the activity again?

After she had implemented and scored the pre- and post-quiz, she was pleased to see the visible difference in student responses. She reported the results to the students, who also seemed pleased with the visible progress.

Technique Template

This template is intended for use when planning to implement **Comprehensive Factor List** in your class. Fill in the blanks below, and use the information provided elsewhere in the Instructor’s Guide to assist you in your thinking.

Course Name

COURSE CHARACTERISTICS

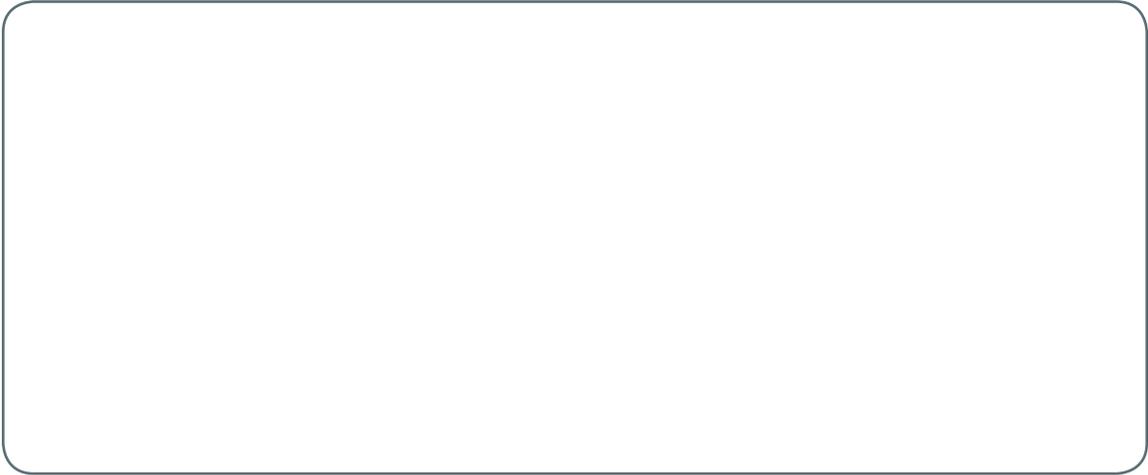
What are the situational factors that impact this course? For example, is it on campus or online? How many students? Is it lower division or graduate? Are there student attributes such as attitudes, prior knowledge, reasons for enrolling, and so forth that should be taken into account as you consider this technique?

STEP 1: CLARIFY YOUR TEACHING PURPOSE AND LEARNING GOALS

Why are you choosing this technique? What do you hope to accomplish?

STEP 2: IDENTIFY THE LEARNING TASK'S UNDERLYING PROBLEM AND PROMPT

What is the question you want learners to address, or problem you want them to solve?



STEP 3: SET ASSIGNMENT PARAMETERS

What are the assignment logistics? For example, will this be assigned individually or is it group work? How long will the assignment take? Will students be submitting a product? What materials, resources, or additional information do you anticipate needing?



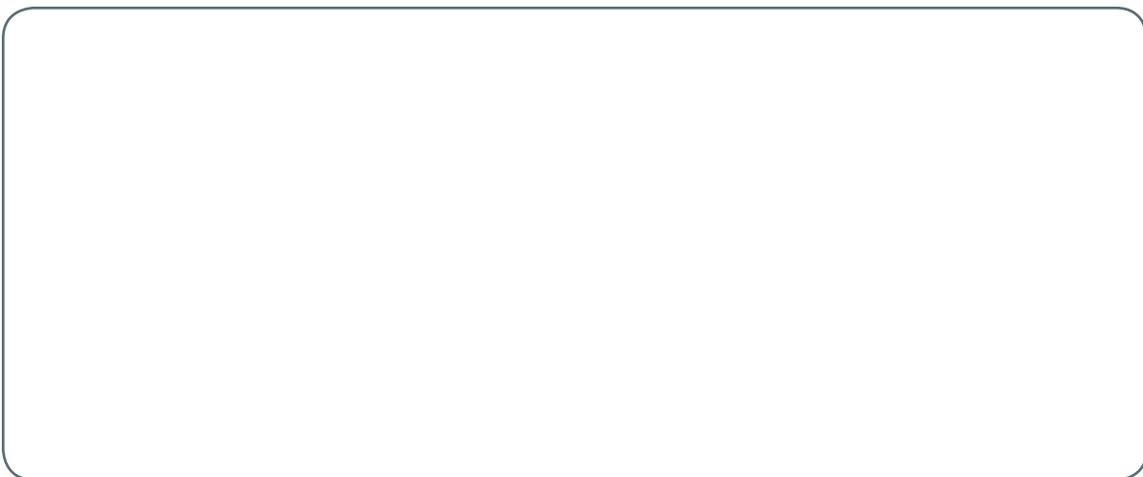
STEP 4: DEVELOP A PLAN FOR LEARNING ASSESSMENT OR GRADING

If you decide to assess learning, how will you determine that learning has occurred? For example, will you use a simple +/check/- grading system? If you use a rubric, will you use an existing one or create one? What will be your criteria and standards?



STEP 5: COMMUNICATE ASSIGNMENT PARAMETERS TO STUDENTS

How will you communicate assignment parameters to students? For example, through a handout? A prompt on a presentation slide? Assignment instructions in your online course?



STEP 6: IMPLEMENT THE TECHNIQUE

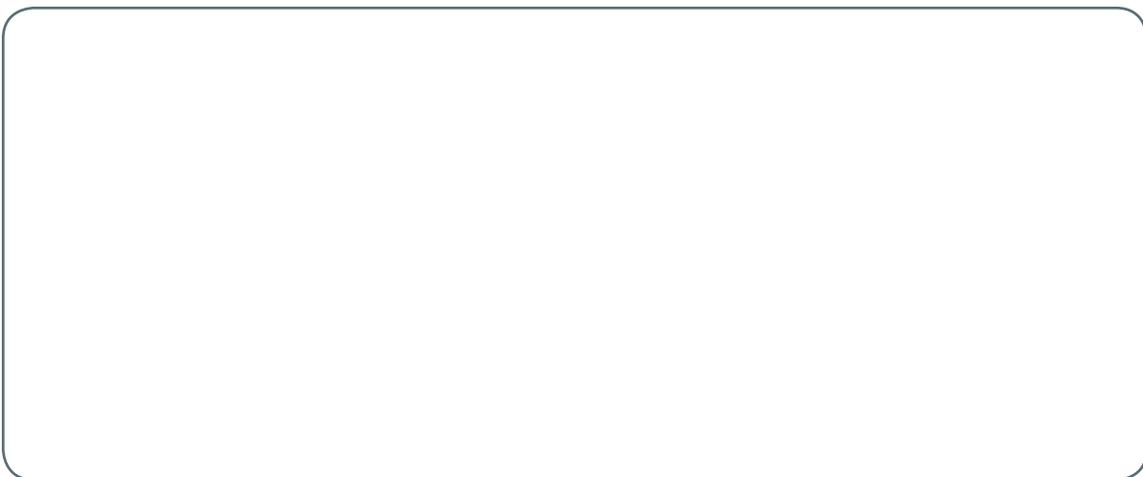
How will you adapt steps/procedures for your students? Are there any additional logistical aspects to consider?



STEP 7: REFLECT UPON THE ACTIVITY AND EVALUATE ITS EFFECTIVENESS

Note: This step will be completed after you have implemented the technique.

Did this technique help you accomplish your goals? What worked well? What could have been improved? What might you change if you decide to implement the activity again?



References and Resources

PRIMARY SOURCE

Content for this download was drawn primarily from “Learning Assessment Technique 5: Comprehensive Factors” in *Learning Assessment Techniques: A Handbook for College Faculty* (Barkley & Major, 2016), pp. 101–104. It includes material that was adapted or reproduced with permission. For further information about this technique, including examples in both on campus and online courses, see the primary source.

Barkley, E. F., Major, C. H. (2016). *Learning Assessment Techniques: A Handbook for College Faculty*. San Francisco, CA: Jossey-Bass.

CITATIONS AND ADDITIONAL SUGGESTIONS FOR FURTHER READING

- Miller, J. (2009). Evidence-based instruction: A classroom experience comparing nominal and Comprehensive Factors List groups. *Organizational Management Journal*, 6(4), 229-238.
- Fulks, J., (2006). Student learning outcomes assessment. http://www2.bakersfieldcollege.edu/courseassessment/Section_1_Introduction/Introduction1.htm

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