Seven Principles for Good Practice in Undergraduate Education

by

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Summary

Following is a brief summary of the Seven principles for Good Practice in Undergraduate Education as compiled in a study supported by the American Association of Higher Education, the Education Commission of the States, and The Johnson Foundation.

1. Good Practice Encourages Student-Faculty Contact

Frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement. Faculty concern helps students get through rough times and keep on working. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and future plans.

2. Good Practice Encourages Cooperation among Students

Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's own ideas and responding to others' reactions improves thinking and deepens understanding.

3. Good Practice Encourages Active Learning

Learning is not a spectator sport. Students do not learn much just sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives. They must make what they learn part of themselves.

4. Good Practice Gives Prompt Feedback

Knowing what you know and don't know focuses learning. Students need appropriate feedback on performance to benefit from courses. In getting started, students need help in assessing existing knowledge and competence. In classes, students need frequent opportunities to perform and receive suggestions for improvement. At various points during college, and at the end, students need chances to reflect on what they have learned, what they still need to know, and how to assess themselves.
5. Good Practice Emphasizes Time on Task

Time plus energy equals learning. There is no substitute for time on task. Learning to use one's time well is critical for students and professionals alike. Students need help in learning effective time management. Allocating realistic amounts of time means effective learning for students and effective teaching for faculty. How an institution defines time expectations for students, faculty, administrators, and other professional staff can establish the basis for high performance for all.

6. Good Practice Communicates High Expectations

Expect more and you will get it. High Expectations are important for everyone - for the poorly prepared, for those unwilling to exert themselves, and for the bright and well motivated. Expecting students to perform well becomes a self-fulfilling prophecy when teachers and institutions hold high expectations of themselves and make extra efforts.

7. Good Practice Respects Diverse Talents and Ways of Learning

There are many roads to learning. People bring different talents and styles of learning to college. Brilliant students in the seminar room may be all thumbs in the lab or art studio. Students rich in hands-on experience may not do so well with theory. Students need the opportunity to show their talents and learn in ways that work for them. Then they can be pushed to learning in new ways that do not come so easily.
## Taxonomy for Learning, Teaching, and Assessing

<table>
<thead>
<tr>
<th>Cognitive Process</th>
<th>Example Question Stem</th>
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<tbody>
<tr>
<td><strong>Remember</strong>&lt;br&gt;(Retrieve relevant knowledge from long-term memory.)</td>
<td>Define the term...&lt;br&gt;Identify the five major...&lt;br&gt;Who is responsible for...&lt;br&gt;Write the equation for...&lt;br&gt;List the characteristics of...</td>
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<tr>
<td><strong>Understand</strong>&lt;br&gt;(Reproduction or communication of knowledge without verbatim repetition.)</td>
<td>Paraphrase important aspects of...&lt;br&gt;Explain the causes of...&lt;br&gt;Give examples of the concept...&lt;br&gt;Write a short summary of this video...&lt;br&gt;Classify observed or described cases of...</td>
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<tr>
<td><strong>Apply</strong>&lt;br&gt;(Carry out or use a procedure in a given situation.)</td>
<td>Relate the principle of ___ to this situation....&lt;br&gt;Describe an experiment to answer the question...&lt;br&gt;Determine ___ using the equation for...&lt;br&gt;Write a short poem using the style of...&lt;br&gt;Apply shadowing to produce depth in a drawing...</td>
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<tr>
<td><strong>Analyze</strong>&lt;br&gt;(Break material into constituent parts and determine how parts relate to one another or to an overall structure of purpose.)</td>
<td>Identify the assumptions underlying...&lt;br&gt;Given the argument for ___, enumerate the positive and negative points presented...&lt;br&gt;Analyze the following ____ and determine the frequency of...&lt;br&gt;Given a ________, identify the necessary components and any constraints...&lt;br&gt;Determine the author's point of view in terms of his or her views on...</td>
</tr>
<tr>
<td><strong>Evaluate</strong>&lt;br&gt;(Make judgments based on criteria and standards.)</td>
<td>Given an argument on this position, enumerate the logical fallacies in that argument...&lt;br&gt;Given the data available on a research question, take a position and defend it...&lt;br&gt;Evaluate a work of art, giving &quot;reasons for your evaluation...&lt;br&gt;On the basis of operating data over the past six months, describe if the company in the case study should buy materials from source A or source B...</td>
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<tr>
<td><strong>Create</strong>&lt;br&gt;(Put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure.)</td>
<td>Write a logically organized argument in favor of...&lt;br&gt;Given a set of data, derive a hypothesis to explain them...&lt;br&gt;Construct an original work that incorporates five common materials...&lt;br&gt;Write a short story relating a personal experience...</td>
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Adapted from:


Introductions

Purpose of class: We are here today to discuss techniques that will help accomplish the Media Assignment.
- Distinguish popular from scholarly articles
- Become aware of varied methods for finding good articles for your topic
- Identify best databases for accomplishing your project
- Learn specialized tools within and across the databases to find information most efficiently
- Spend some time searching

Review the assignment that we will be preparing for today.
- Media Assignment (4 pages, 10% of grade):
  - Find a written description of a psychology study in the popular media (newspaper, newsmagazine, the Web). ... Next find the actual research using PsycINFO, Medline, or some other library resource. ... What important aspects of the research design were reported in the media description, and what were not? [taken from the syllabus for Psych 303]
- Later assignments will build on this one

Questions for class discussion:

1. Why do researchers refer to the professional literature?
   Reviewing the literature is an essential part of the research process:
   - A lit review is part of any research write-up for publication or upper-level course work
   - You want to demonstrate knowledge of the current state of research on your topic, including an awareness of the issues, facts, trends, scholars
   - You also need to create a foundation for your study, by documenting the problem, hypotheses, significance and (possibly) methodology as well as identify the gaps in the literature that your work would fill demonstrate or justify the need/place for your research
   - This will help to focus your research
2. Researchers will look for academic or peer-reviewed material. What are peer-reviewed journals?
   - Expert review and critique of proposed articles or books prior to publication
   - Intended to assure quality of research and publications
   - Takes time so scholarly publication may come after popular reports

3. Distinguishing popular and scholarly articles (examples)

4. To accomplish this assignment, first step is to find popular article. Where would you find a popular article?
   - Newspapers
   - News magazines
   - Popular magazines like Psychology Today, Science, National Geographic
   - Web sites (sleepeducation.com)

5. How can you find peer-reviewed articles?
   - There are databases that cover specific subjects and focus on scholarly articles; Google/Google Scholar will be of limited help and actually take more time than a specialized database that's already been filtered for you
   - It helps to know which databases cover your topic and we will talk about that today (refer to handout listing databases)
   - referrals from professional colleagues
   - tracing bibliographies of other relevant articles

SEARCHES

I.
Search in ProQuest, Advanced search (note differences between advanced and basic):

College students and sleep and learning
[select Limit results to Full text documents only]

Select magazines tab; look at information given on the results page to judge usefulness of article. Some things to look for:
- titles of the articles [for clues on actual topic]
- numbers of pages, if shown [very short articles will have less information about the study and could be as short as a single paragraph]
- is there an author [anonymous articles may be really short reports]
- full text availability
- date of article [popular article often precedes the scholarly write-up so a very recent article might not yet have a published scholarly report]

(no. 5 on the result list)

Distribute copies of the article. How is this “popular?” (e.g., no references, author of article didn’t do the original study, no specialized vocabulary, goofy illustrations, news is in the title of the publication)

Ask students to see if they can find the clues that will help them to find the research article.

Information: authors’ names (Mednick and Stickgold) and the date (“new study” in 2002) are enough. Can also use the authors’ affiliation.

Questions?

II.
Option: Do another search demonstrating the way to search in document text for specific words like “university,” “study,” “experiment” or “research.” Note that this will eliminate some possible good articles. (See illustration below.)
III.
Option: Also search in Academic OneFile. Try, for example, Monkey (keyword) Social behavior (keyword) Limit to documents with full text

Under Magazines look at “Monkey’s Best Friend.” Have students locate the key information needed to find the scholarly article reporting the research findings. [name of publication in which the scholarly article appears (Science), rough date ("last week"), names of authors (Silk, Alberts and Altmann)]

Question for discussion: What is the minimum information you would need to locate the scholarly version of the article?

Review how to get to databases using Library home page. Go to PsycINFO.

IV.
(Have students find the original article?)

Search in PsycINFO for authors Mednick and Stickgold (You don’t have to change to Author as a search type to get to the right article, but it might be helpful to demonstrate this feature); article: “Sleep-dependent learning: A nap is as good as a night.” May also include name of publication and date in the search.

Review MGet It to find full text or print
TIME TO SEARCH ON THEIR OWN; WALK AROUND, HELP OUT, ANSWER QUESTIONS

Questions?

Review RefWorks. Mark documents in ProQuest or PsycINFO. Export to RefWorks. Generate a bibliography in APA style using last imported records. Note that they do need to know enough about APA style to proofread the citations. Note RefWorks LibGuide.
Psychology 303, Top Ten Tips for your Library Research

For more information, see the online guide at http://guides.lib.umich.edu/psychology303

Finding Popular Media Coverage of Psychology Research

1. Searching for an article by subject: ProQuest Research Library database can help you to locate popular magazine articles. Type your keywords into the search boxes and click search. You can also try searching the full text by selecting the option “Document text” in the pulldown list of choices and using words like “university” or “study” or “research”. These may be very limiting, so use with care.

2. Or browse Psychology Today for an article that makes reference to an academic study. Find recent print issues at the Graduate Library (call number BF 1 P975). Browsing the print can actually be easier and faster than browsing online!

You can also browse magazines like Psychology Today online in ProQuest. (Select Publication title in the pulldown list next to the text box; type the name of the journal/magazine in the text box.) As above, you can also add words like “university” or “study” as a document text search to search within the publication for articles that have those words in their text.
### SELECTED CLASS ASSESSMENT TECHNIQUES (CATs) FOR GETTING FEEDBACK ON STUDENTS’ LEARNING AND RESPONSE TO TEACHING

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Its Benefits</th>
<th>Time required</th>
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<tr>
<td>Background knowledge probe</td>
<td>Before introducing an important new concept, subject, or topic, students respond to questions that will probe their existing knowledge of that concept, subject or topic.</td>
<td>Allows you to determine how to introduce a topic and the appropriate level of instruction.</td>
<td>Preparation: Medium. In class time: Low.</td>
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<tr>
<td>Concept Maps</td>
<td>Students produce diagrams or drawings that show and name the connections between major concepts and other concepts, facts, or principles that they have learned. Very useful in courses requiring conceptual learning.</td>
<td>Asks students to consider how their ideas are related. Helps visual learners. Useful for pre-writing and note-taking.</td>
<td>Preparation: Medium. In class time: Medium.</td>
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<tr>
<td>Directed paraphrasing</td>
<td>Ask students to write a layman’s “translation” of something they have just learned—geared to a specified individual or audience—to assess their ability to comprehend and transfer concepts.</td>
<td>Assesses students’ ability to comprehend and transfer concepts. Phrasing an idea in their words aids in retention.</td>
<td>Preparation: Low. In class time: Medium.</td>
</tr>
<tr>
<td>Focused listing</td>
<td>In a given time period, students write down as many ideas that are closely related to a single important term, name, or concept. Works well in classes of any size and is useful in courses in which a large amount of new information is regularly introduced.</td>
<td>Gauges students’ recall of recently presented material. Works well in large courses.</td>
<td>Preparation: Low. In class time: Medium.</td>
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<tr>
<td>Hand Voting (or Clickers)</td>
<td>Students signal their votes by raising a specified number of fingers. If technology is available, personal response systems (clickers) can be used instead for anonymous voting.</td>
<td>Offers quick and low-stakes means of assessing student comprehension.</td>
<td>Preparation: Low. In class time: Low.</td>
</tr>
<tr>
<td>Minute paper</td>
<td>During the last few minutes of the class period, ask students to answer on a half-sheet of paper: “What is the most important point you learned today?” and, “What point remains least clear to you?” The purpose is to elicit data about students’ comprehension of a particular class session.</td>
<td>Provides immediate mid-course feedback and allows quick response to students. Fosters active learning and engagement.</td>
<td>Preparation: Low. In class time: Low.</td>
</tr>
<tr>
<td>Muddiest Point</td>
<td>Ask students to jot down a quick response to one question: “What was the muddiest point in ______?” The focus could be a lecture, a discussion, homework, a play, or a film.</td>
<td>Assesses whether you need to return to a topic, and pushes students to consider what they don’t understand.</td>
<td>Preparation: Low. In class time: Low.</td>
</tr>
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How can you incorporate teams and groups to bring active learning into your classroom?

The following list summarizes some approaches.

- **Think-Pair-Share**: Have students work individually on a problem or reflect on a passage. Students discuss their responses with a partner. The instructor then asks pairs to share their responses with the whole class.

- **Small-Group Discussion**: Students discuss a topic in small groups based on a reading, video, or problem. The instructor may prepare a list of questions to facilitate the discussion. After allowing time for group discussion, ask students to share their discussion points with the rest of the class.

- **Team Problem-Solving**: Students are assigned a problem to solve in groups.

- **Lab Experiments**: Teams of students work together to complete a lab.

- **Peer Review**: Students are asked to complete an individual homework assignment or short paper. On the day the assignment is due, students submit one copy to the instructor to be graded and one copy to their partner. Each student then takes their partner’s work and, depending on the nature of the assignment, gives critical feedback, and corrects mistakes in content and/or grammar.

- **Group Evaluations**: Similar to peer review, students may evaluate group presentations or documents to assess the quality of the content and delivery of information.

- **Games or Simulations**: The instructor creates realistic scenarios or games, and students work on these in groups to learn course material.

- **Role Playing**: Here students are asked to “act out” a part or a position to get a better idea of the concepts and theories being discussed. Role-playing exercises can range from the simple to the complex.

- **Jigsaw Discussion**: In this technique, a general topic is divided into smaller, interrelated pieces (e.g., a puzzle is divided into pieces). Each member of a team is assigned to read and become an expert on a different topic. After each person has become an expert on their piece of the puzzle, they teach the other team members about that puzzle piece. Finally, after each person has finished teaching, the puzzle has been reassembled, and everyone on the team knows something important about every piece of the puzzle.
This spectrum arranges active learning techniques by complexity and classroom time commitment.

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