

## Reliability Integration for the Organization Reliability Program Assessment

### **DEFINITION**

A **systematic evaluation** of a broad range of potential reliability **activities and tools** as **currently employed and integrated**.

We can perform the **Assessment** for the Hardware, for the Software, or for both.

[Download Brochure \(pdf\)](#)

### **SITUATION**

A variety of circumstances require knowledge of the current reliability program and how best to make changes to improve product reliability:

- 1) Increasing field returns or changes in customer expectations
- 2) Management decision to compete on reliability
- 3) Decision to reduce warranty costs

### **OBJECTIVES**

From an understanding of the current reliability program, develop a set of short and long term actions that will significantly improve the organization's ability to develop and produce reliable products.

### **VALUE TO YOUR ORGANIZATION**

An objective view of the existing reliability program permits the effective investment in areas of the program that will efficiently improve product reliability. The very rapid ability to focus improvement efforts on the critical few items coupled with a long term view and plan to get there assists an organization to dramatically alter their reliability program's capability.

### **RELIABILITY INTEGRATION**

An example of Reliability Integration during the Reliability Program Assessment is as follows:

#### **The Reliability Program Assessment Drives Reliability Goal Setting and Tool Selection Activities**

The high level view of the existing reliability program quickly highlights strengths and weaknesses. The connections into business objectives, customer expectations, technical constraints and product price and volume bound the acceptable reliability program. Within the program, the identification of efficient processes around goals,

risks, tools, and feedback and the appropriate use of the right tools connect to each area of reliability engineering and management.

## **METHODOLOGY**

To quickly determine the tools and approaches used across an organization, we conduct a set of 8 to 12 detailed interviews with key personnel. From the summary of these interviews we will be able to narrow down the focus of the assessment to a few areas for a detailed analysis. This may include more interviews, data analysis, reviewing test programs and results, or a combination of these. These rounds of assessment typically provide a clear set of recommendations to improve the reliability program.

## **CASE STUDIES/OPTIONS**

The following case studies and options provide example approaches. We shall tailor our approach to meet your specific situation.

### **1) High Field Failures with Multiple Causes**

At a Military Communications company, a recent change in senior management and an important customer complaining about product reliability led the organization to a Reliability Program Assessment to focus their product reliability improvements. We started with a series of interviews to define the current program plus discussions to understand the business model and constraints. This led us to a set of recommendations for immediate changes in design verification and the establishment of clear reliability goals.

### **2) Focusing Reliability Efforts to Enter New Markets**

A Microwave Test Equipment company saw the opportunity to compete on reliability for their products. However, they needed help in choosing where to direct their efforts, so they requested a Reliability Program Assessment. We carefully analyzed their existing field failure and in-house testing data, and it highlighted the need to focus on improving component reliability from about a dozen key vendors. Then we set in motion long-term plans for the development of improved design risk analysis to identify high risk vendors and components.

### **3) Assessments Used to Reduce Warranty Costs**

For a Medical company, high warranty costs relative to competitors created the opportunity to significantly reduce costs with changes to the reliability program. In-house expertise did not exist to make organization level changes. Our Reliability Program Assessment and resulting recommendations found that they lacked design feedback from reliability tools. We helped them implement Reliability Predictions and Highly Accelerated Life Testing (HALT), and we helped them integrate these tools into their design process. Once these were installed, the customer dramatically reduced the field failure rates.

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[http://www.opsalacarte.com/Pages/reliability/rel\\_prog\\_assessment.htm](http://www.opsalacarte.com/Pages/reliability/rel_prog_assessment.htm)

## Doctoral Portfolio Evaluation

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### Purpose of Portfolio Examination

The purpose of the portfolio evaluation is to provide, at an early point in the doctoral program, feedback on the strengths and weaknesses, if any, of a student's work thus far. Use of a portfolio, rather than an examination, has the dual benefits of distributing the assessment period over a longer time frame and of allowing the evaluation to be used on a range of the types of materials and performances that will be expected during the student's doctoral work.

Criteria for Submission of Portfolio (dependent upon enrollment date)

#### A. Eligibility criteria for students who matriculated in **Summer 2013 or later:**

Must have completed at least 18 credit hours (since matriculation) by September 30, 2014.

Must have completed:

- a. ED 506 Doctoral Research Methods
- b. One additional [doctoral-level course](#) among those identified for their program

#### B. Eligibility criteria for students who matriculated in **Spring 2013 or earlier:**

Must have completed at least one year of full-time study or two years of part-time study.

Must have completed at least two of the Doctoral Core Seminars (e.g., ED 508, ED 509, ED 500, ED 501).

Students who are required to submit a completed portfolio, but do not do so, will be judged not to have passed. A doctoral student whose portfolio is not judged passable after two submissions will not be permitted to continue in the doctoral program.

### **Incomplete Grades**

Students who have an incomplete grade in any of the following must complete the coursework for that course(s) prior to submitting a portfolio:

ED 506 Doctoral Research Methods

the one additional doctoral-level course among those specified

any of the Doctoral Core Seminars

Students who do not both complete the coursework for the course(s) indicated above and receive a grade for the course(s) prior to September 30, 2004 will fail the portfolio examination.

Students are strongly encouraged to complete all other incomplete courses, because all grades of incomplete will be considered as part of the portfolio evaluation.

### **Deadline for Submission of Portfolio**

Your portfolio must be submitted to either [Brenda Grosswirth](#) or [Claire Urbanowicz](#) in the Office of Student Services (Dewey Hall 2-161) no later than 5 p.m. on September 30.

### **Portfolio Requirements**

Your portfolio must include:

A curriculum vitae or resume.

A copy of your approved program of study, or a copy of your proposed program of study signed and dated by your advisor. However, if your program of study has been submitted to the Office of Student Services, please call (888) 275-1009. Students Services will review and update your program, place a copy of your program in your portfolio file, and mail a copy to you.

A narrative statement of no more than four double-spaced, typed pages. In this narrative statement, you should explain how your coursework and other doctoral

experiences are integrated into a coherent plan of intellectual growth and scholarship, and you should articulate a cogent plan for continued doctoral study. This personal narrative should provide a context for reading the remainder of the portfolio by making apparent your academic development and scholarly interests. (See [Portfolio Evaluation Checklist](#) for more detail about the criteria used to evaluate this narrative statement.)

Two papers that have been submitted for, and evaluated in, Warner School courses, including all comments written by the instructor and the grade for the paper. At least one of these two papers must be single-authored. These papers should be chosen to demonstrate the skills identified in Part III of the [Portfolio Evaluation Checklist](#).

Keep a copy of all the materials that you submit in your portfolio. Materials submitted in the portfolio will not be returned. Portfolio materials are confidential to the Warner School.

In addition, Warner School faculty members will be invited to complete and submit evaluation forms to the Office of Student Services to be added to your portfolio. In particular, your advisor and the faculty in your program area will be encouraged to complete and submit such forms, as will the instructors of the doctoral seminars and the doctoral research methods courses. If you want instructors from outside the Warner School to submit written evaluations, please ask them to do so on stationery bearing the letterhead of their institution/school/department. Please request that the letters from outside the Warner School be mailed to the Office of Student Services, Attn: Portfolio/ Assessment.

### **Evaluation and Assessment of Portfolio**

Evaluation of the portfolios will be undertaken by the Portfolio Committee, which has been constituted by the faculty and consists of one member from each of the three program areas. The advisor of each student also serves as a non-voting member of the Committee for the evaluation of his/her advisee's portfolio. For your reference, the written materials in the portfolio will be evaluated according to the [Portfolio Evaluation Checklist](#). That evaluation of the writings and an assessment of the other materials in the portfolio will be incorporated into the overall judgment of the portfolio.

It is important to underscore that the Portfolio Committee will assess each student with a view to the future based in part on past performance. The Committee is responsible for deciding whether each doctoral student shows promise to develop a breadth of knowledge about a specific research focus that is needed for successful completion of a dissertation. The Committee will be looking for evidence to identify a coherence between interests, program of study, motives, and scholarly work produced thus far.

There have been instances when the Committee did not "pass" a portfolio, even though the two course papers included in the portfolio were given grades of "B" or higher by other Warner faculty. Producing a passing paper for a specific course assignment does not necessarily mean that such a paper meets the criteria articulated in Part III of the [Portfolio Evaluation Checklist](#) or that the student will be successful

in the advanced portion of doctoral work. Students therefore are encouraged to check their two papers for appropriateness and also to use their personal statements to make clear the coherence described in the paragraph above. You should reflect on your “intellectual trajectory and scholarly direction” and focus on your plans to achieve your research goals. Discussing a concept for a dissertation topic and demonstrating academic curiosity will help provide evidence of future academic promise.

### **Portfolio “Exemplars”**

Students may review (not photocopy) “exemplars” from past portfolio submissions in the Office of Student Services. In order to review these exemplars, you must schedule an appointment by calling (585) 253-2927. Scheduling appointment times enables the Office of Student Services to give each student sufficient time for reviewing the exemplars.

### **Advisor/Faculty Role in Portfolio Preparation**

It is recommended that you speak with your advisor about preparing your portfolio and personal narrative. However, advisors or other faculty members should not be asked to review drafts or final versions of your personal narrative.

### **Notification of Students Regarding the Results of Portfolio Assessment**

Upon evaluating the completed portfolios, the Committee will write a letter to each student informing him or her of the decision of “pass” or “no pass” and their reasons for this decision. A copy of this letter will be sent to the advisor, the program chair, and the associate dean for inclusion in the student’s file. The assessment letter will be mailed to each student’s home address.

### **Procedures Following Notification of Results**

Students who pass the portfolio are expected to meet with their advisor to receive further feedback about the portfolio’s contents and the Portfolio Committee’s assessment. Students whose portfolios are not passed will receive specific feedback in the Committee’s letter about what steps should be taken to improve portfolios for the second submission. Of course, students in this category should also meet with their advisor to discuss this feedback.

Please contact the Office of Student Services at (585) 255-1009 if you have questions.

<http://www.rochester.edu/Warner/programs/portfolio/details.html>

### **Assessment Guidelines**

The Effective Writing course will be built around portfolio assessment. Midterm and final grades will be based on student portfolios. Guidelines for what may be included in the portfolio are intended to provide for assessment of the quality of final, revised texts, participation in the writing and research processes, and preparation for and participation in class through a reading-response journal, collaborative work, and a record of work in interactive computer environments.

The writing portfolio fosters student responsibility and individualized instruction. Contents of the portfolio should be specified but should leave room for student selection among the texts they have written for the class. Both self-assessment and peer assessment are important parts of portfolio pedagogy, though the degree to which the individual teacher considers those assessments in determining a grade should be an individual choice. Students may be asked to think of the portfolio as a representation to others of what they have done and learned in the course.

A midterm portfolio may include a range of informal writing and formal writing, showing drafting and revising, a reflective cover essay that includes self-evaluation, and some planning of reading and writing for the second half of the semester. The final portfolio must include the minimum course requirements of three essays and one research paper, representing the three disciplinary areas of the humanities, sciences, and social sciences, and should also include a cover essay that introduces the portfolio contents and assesses the student's experience of the class (that is, the student should be asked to present some picture of what he or she has learned during the semester).

Formal writing should be evaluated in the following areas, which are commonly used as the basis for assessing student writing: focus, organization, development, synthesis, coherence/cohesiveness, documentation, conformity to the rules of standard written English. (The rules of standard written English may be interpreted as meaning all conventions of grammar, syntax, usage and mechanics--spelling, punctuation, capitalization, etc.--which are outlined in handbooks and dictionaries.) Beyond meeting minimum standards in these areas, grading should also take into account the degree of complexity of analysis and organization, originality or insight into the topic, depth of research, and writing style.

Informal writing may be evaluated in terms of thoroughness of task completion, effort, evidence of preparation for class, and depth of thinking. Texts may include: reading-response journal entries or dialogic journals; summaries, critiques, reviews, reports; reflective writing on students' writing experiences and writing practices; self-evaluative writing or assessments of others' writing; brainstorming and planning documents such as clustering, tree diagrams, or outlines; drafts of essays that have been revised for the final portfolio or essays that students have chosen not to revise further for formal evaluation. The student may be asked to select his or her most articulate or insightful work from among all of the texts written for class.

The student should be asked to include a cover essay explaining the contents of the portfolio, especially his or her rationale for selections from informal writing, and including some evaluation of his or her writing strengths and identification of areas for improvement. This cover essay enables students to evaluate their own work and to identify areas they need to improve in their writing. The cover essay also functions as an introduction for the reader, whether student or teacher, to focus the reader's attention on what the student writer feels was most important in his or her experience of the class.

When peer assessment is made a part of the process, students should be allowed class time for exchange of portfolios and should be given guidelines for evaluating each

other's portfolios. A written peer assessment should become a part of the portfolio it assesses.

If collaborative writing is included as a portion of the course, the teacher should specify how the grade will be assigned: the same grade for each student in the group or individual grades according to the share each student has had in the process. If the latter approach is taken, it may be useful to require students to include a brief cover document that discusses the part each student has played in preparing the finished text. Fair (teacher) and honest (student) assessment may be more likely if this is a descriptive rather than evaluative document; e.g., Student A's part may have been to research Items x, y, and z, while Student B's part may have been to write the introduction, and Student C's part may have been to take responsibility for final editing and proofreading, rather than Student A did 40% of the work and Students B and C each did 30% of the work.

A class may be asked to collaboratively create a Web site that represents the collective experience of the class. Standards for evaluating a Web site should be modified from those used to evaluate students' formal writing to include visual presentation of information and the sophistication of using links within and among documents.

#### Sample Midterm Portfolio Requirements

Your midterm portfolio should include the following texts:

First essay, with drafts (3-5 double-spaced pages)

Current draft of second essay (3-5 double-spaced pages)

Planning documents for your research paper, including:

Statement of topic and your interest in it

Preliminary bibliography (at least 10 sources; 15 if many of the 10 are short)

3 texts of peer group activities (Choose texts that you feel were good responses to assigned tasks or that you feel represent well your contribution to the group's work.)

A selection of 3 to 5 posts to the computer conference (Choose posts that represent good thinking and writing on your part or an interesting interaction with other students. Length is not a factor. If your thinking evolved through several interactions, you may include posts from other students to show this evolution.)

A cover essay (Guidelines follow.)

Peer assessment (to be completed in class when portfolio is due)

The cover essay should serve as an introduction to your portfolio. In it, you need to accomplish two tasks: description and evaluation of the contents. Your essay needs to describe what you aimed to accomplish in each text, possibly to say something about your writing process, and to evaluate the strengths and weaknesses of the text. For example, in discussing your first essay, you may describe what you intended to convey to the reader in your essay, why you selected the evidence that you did to support your main points, how much writing and revising you did, which comments from your peers were useful, and what you think you did well and what you feel could still be improved. When discussing your posts to the computer conference, you will probably need to explain why you selected them: Did you say something really important? Did you say something really well? Does this post mark a moment of real insight or learning? Did the interaction with others help you understand a text or a concept?

Your cover essay will be a guide for both the peer who evaluates your portfolio and for me. The peer assessment will be performed during class on \_\_\_\_\_. Please bring your completed portfolio to class, and be prepared to give feedback as well as to receive it.

#### Peer Assessment Guidelines (Midterm Portfolio)

As you review your peer's portfolio, keep some informal notes which will serve as the basis for your written assessment. Start by reading the cover essay, so that you will know what the writer wants you to pay attention to in reading his or her texts. If you have any questions about why the writer has selected the particular texts he or she has included, note those questions.

You will also be reading to assess quality. As you read each text, ask yourself, "What do I like about this text? What do I think the writer could do better? What could I say to this writer that would help him or her improve as a writer?" I am asking you to look beyond single-item advice like, "Spell this word correctly." You may want to pay attention to issues like focus, organization, use of evidence, style, originality, interest value, etc. However, if the writer has a pattern of grammatical, spelling, or punctuation errors, you will want to point that out to him or her.

After you have read through the portfolio, write a full paragraph to one-page summary of your response. Your assessment should answer the following questions: Which text(s) do you like the best? Why? What does this writer do well in his or her writing? What areas need improvement? Would you rate the writer as average, above average, or below average? How well does the writer's cover essay represent his or her work, in your opinion?

Please print a hard copy of your assessment and allow the writer to read it when you return the portfolio to him or her. It is each student's responsibility to include the peer assessment in his or her own portfolio when turning it in to me at the end of the class period. In my assessment of each portfolio, I will note the extent to which I agree with the peer assessment.

#### Sample Final Portfolio Requirements

Think of your final portfolio as a picture of your entire experience of this semester's Effective Writing class. You will want to show a variety of things: your preparation and participation, your writing and revising process, your research process, and the best final products that you can write. Your final portfolio should include the following texts:

Three essays, representing each of the disciplinary areas, in final revised form (2–3 pages minimum)

All drafts of one of your essays (This is to illustrate your writing and revising process. If you have consulted a Writing Center tutor or met with me to discuss the paper, include a statement about that, or if you got written feedback from a peer, include that feedback.)

A research paper (minimum length of 2000 words), with a selection of texts to illustrate your research paper (This may include your preliminary bibliography, some of your notes or hard copies of sources you have underlined or highlighted, planning documents, a summary or critique of one of your sources, any email or conference exchanges that illustrate your research process.)

Δ texts of peer group activities (Include the 3 that were in your midterm portfolio.)

A selection of 4 to 6 posts to the computer conference (Choose posts that represent good thinking and writing on your part or an interesting interaction with other students. Length is not a factor. If your thinking evolved through several interactions, you may include posts from other students to show this evolution. You may use some of the same texts you included in your midterm portfolio.)

A short description (one paragraph) of your contribution to the class Webpage

Your midterm cover essay

Your midterm peer assessment

My midterm assessment

A cover essay (Guidelines follow.)

Peer assessment (to be completed in class when portfolio is due)

The cover essay should serve as an introduction to your portfolio. Like the cover essay for your midterm portfolio, this essay should both describe and evaluate the contents. Additionally, your essay should say something about your overall experience of this class: What have you learned? What did you enjoy? What requirements were least useful to your learning experience? What would you like to continue to work on in your writing for future classes?

Plan to bring your completed portfolio at the beginning of the scheduled final exam period. We will use the exam time for peer assessments.

#### Peer Assessment Guidelines (Final Portfolio)

We will follow the same procedures that we did at midterm, but you should assess a different person's portfolio. There will also be some differences in the focus of your comments on the final portfolio.

You will need to read selectively. Please read the cover essay, two other essays, and part of the research paper. Please briefly look over the writer's evidence of his or her writing process and research process for the research paper. If you wish to read more, you may, but if this is all you look at, that's fine.

In your written assessment, you will want to address the same questions that you did in the midterm portfolio, as well as to add some final commentary. Consider the following:

Which text(s) do you like the best? Why? What does this writer do well in his or her writing? What areas need improvement? Would you rate the writer as average, above average, or below average? How well does the writer's cover essay represent his or her work, in your opinion? Do you see evidence of improvement? On the basis of the research-based writing you've read, does the writer seem to have done thorough research and to sound well-informed?

#### Portfolio Assessment

When some class time and individual office conferences (generally initiated by the student) are devoted to discussing and preparing the final portfolio, the teacher may satisfactorily determine a final grade with a pretty quick reading of the final portfolio--"skimming," if you will. The grade is not determined on the basis of finding every error. If error is intrusive, it will be a factor in the evaluation but not the only factor.

See [Checklist for Portfolio Assessment](#).

Assigning point values does not seem very useful in assessing complex pieces of writing. One may instead assign a single grade to a student's portfolio. The written assessment may take the form of a half-page list or paragraph that explains what the grade is based on--i.e., what the student is doing well and what he or she is not doing well. Sometimes this is consistent across student texts in a single portfolio: e.g., most of the student's texts reflect strong organization and development but not much originality, which puts him or her in the B range, but perhaps excellent preparation, and participation, with evidence of conscientious revising and research result in the teacher's deciding on an A for the final grade as representative of the work the student did. In another case, a student may have two or three really excellent pieces of work with so-so research and average attendance, preparation, and participation, so the teacher may feel that a B is a fair final grade.

Written by Effective Writing Committee, Summer 1998

Posted by A. L. Trupe, April 26, 2001

<http://www.bridgewater.edu/~atrupe/GEC101/Assessment.htm>

### Portfolio Assessment Checklist<sup>1</sup>

Victoria McGillin, Ph.D., Associate Provost

JoAnn Barbour, Ph.D., Professor, Educational Leadership

The following checklist can be used to both guide the development of one's portfolio and evaluate portfolio and contents before submission. The material has been adapted from several sources noted in the footnote.

\_\_\_\_\_ The academic portfolio includes the proper documents and is in the format specified by TWU.

\_\_\_\_\_ A complete table of contents is included.

\_\_\_\_\_ Appropriate appendices are included.

\_\_\_\_\_ Every claim made in the narrative is supported by hard evidence either in the appendices, or in charts/tables embedded in the narrative, or in a separate file system and can be easily accessed and shared if needed.

\_\_\_\_\_ I was sufficiently selective in what I included in the portfolio.

\_\_\_\_\_ I made appropriate decisions about additional visual items to be included, such as photos, reviews, videos, charts, graphs, tables, for example, included as necessary to enhance portfolio.

\_\_\_\_\_ The material included supports philosophy statement(s).

\_\_\_\_\_ As needed, I have noted in the narrative component expectations that are in addition to TWU expectations.

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<sup>1</sup> Adapted from a variety of documents including: Eison (1996), Seldin (2003) and Reis <http://sll.stanford.edu/projects/tomprof/newtomprof/postings/13.html>

\_\_\_\_\_ I have noted and explained any department and/or institutional factors that have influenced effectiveness in teaching, scholarship/creative activities, and/or service.

\_\_\_\_\_ I described creative or innovative approaches that others might not understand.

\_\_\_\_\_ I explained my growth and improvement as an academic and/or included efforts at growth and improvement.

\_\_\_\_\_ I documented the outcomes of efforts, not just the efforts themselves.

\_\_\_\_\_ Have summarized evaluation results over time (e.g., student course evaluations, scholarly or creative work, and impact of service).

\_\_\_\_\_ I was sufficiently reflective and included appropriate reflective appropriately.

\_\_\_\_\_ Someone reading the portfolio can identify the following:

\_\_\_\_\_ What I teach \_\_\_\_\_ How I teach \_\_\_\_\_ Why I teach as I do.

\_\_\_\_\_ What I research/write/create \_\_\_\_\_ Methodological choices \_\_\_\_\_ Why I research/write/create as I do.

\_\_\_\_\_ How I have served others professionally \_\_\_\_\_ Why I provide the service to others

**Portfolio Assessment Checklist** \. Victoria McGillin, Ph.D., Associate Provost.

JoAnn Barbour, Ph.D., Professor, Educational Leadership ...

[www.twu.edu/facultycenter/handouts/portfolio\\_checklist.doc](http://www.twu.edu/facultycenter/handouts/portfolio_checklist.doc) - [Similar pages](#)

## ¶. Reporting the Final Mark

Instructors will need to determine a method for making sense of formative assessments in order to make a decision about the learner's final mark for the course. There is no one way to determine this. Some possibilities are included in this section.

### ¶ a) Sample Weighting for Final Evaluation

At the end of the course, a Learner's Portfolio could contain artefacts or samples from components related to all three units. The sample below illustrates differences in the weight allotted to each component to demonstrate an increasing emphasis on the development of reflection and critical analysis throughout the entire

course. However, depending on learners' needs and abilities, instructors may choose to weight each component the same for each unit.

Unit 1: Culture and Identity	Unit 2: Systems of Governance	Unit 3: Extended Learning Opportunity
<p>8% Reflective Journal</p> <p>Understanding of concepts</p> <p>Quality of critical analysis</p> <p>Depth of personal reflections and analysis of own thinking/ideas</p>	<p>10% Reflective Journal</p> <p>Understanding of concepts</p> <p>Quality of critical analysis</p> <p>Depth of personal reflections and analysis of own thinking/ideas</p>	<p>18% Reflective Journal</p> <p>Understanding of concepts</p> <p>Quality of critical analysis</p> <p>Depth of personal reflections and analysis of own thinking/ideas</p>
<p>8% Portfolio</p> <p>Selects items for inclusion that represent best work</p> <p>Provides effective justification for items chosen for inclusion</p>	<p>10% Portfolio</p> <p>Selects items for inclusion that represent best work</p> <p>Provides effective justification for items chosen for inclusion</p>	<p>18% Portfolio</p> <p>Selects items for inclusion that represent best work</p> <p>Provides effective justification for items chosen for inclusion</p>
<p>18% Tests</p> <p>Short answer, multiple choice, true/false, matching, essay</p> <p>Concept maps, analytical grids and charts</p>	<p>10% Tests</p> <p>Short answer, multiple choice, true/false, matching, essay</p> <p>Concept maps, analytical grids and charts</p>	<p>8% Tests</p> <p>Short answer, multiple choice, true/false, matching, essay</p> <p>Concept maps, analytical grids and charts</p>
<p>78% Daily Assessments</p> <p>Anecdotal notes, observations checklists, rating scales, rubrics</p> <p>Self-and-peer assessment</p> <p>Discussions, group participation, debate, role play, simulation</p> <p>Resource use: identification, location, and variety of sources</p>	<p>70% Daily Assessments</p> <p>Anecdotal notes, observations checklists, rating scales, rubrics</p> <p>Self-and-peer assessment</p> <p>Discussions, group participation, debate, role play, simulation</p> <p>Resource use: identification, location, and variety of sources</p>	<p>88% Daily Assessments</p> <p>Anecdotal notes, observations checklists, rating scales, rubrics</p> <p>Self-and-peer assessment</p> <p>Discussions, group participation, debate, role play, simulation</p> <p>Resource use: identification, location, and variety of sources</p>

Written reports	Written reports	Written reports
Oral reports and presentations	Oral reports and presentations	Oral reports and presentations
Multi-media presentations	Multi-media presentations	Multi-media presentations
Unit 1 Total = 100%	Unit 2 Total = 100%	Unit 3 Total = 100%
<p>Final Mark:</p> <p>(Allot an equal 33 1/3 marks for each of the three units to arrive at a final mark for the entire course.)</p>		

Note that in the above example, there is the opportunity within the daily assessment component to weight various activities differently based on the focus for individual learners or targeted skills. For example, in Unit 1 the focus may be on written reports, and in Unit 2 the focus may be on oral reports and presentations.

4 b) Sample Summative Assessment Rubric

Assessment Range	Word Descriptions
90 – 100% Exceptional	Overall formative assessments reflect profound insight and a sophisticated grasp of content. The learner's high quality work clearly indicates thorough knowledge of concepts and demonstrates mastery of skills in a thoughtful and reflective manner.
80 – 89% Excellent	Overall formative assessments reflect insight and critical thinking skills. The learner's work is very well done, clearly indicating excellent knowledge of concepts and demonstrating a firm grasp of skills.

<p>70 - 79%</p> <p>Very Good</p>	<p>Overall formative assessments reflect considerable thought and insight into a relevant and challenging learning context. Skills continue to improve and work is of good quality.</p>
<p>60 - 69%</p> <p>Good</p>	<p>Overall formative assessments demonstrate an average effort. Some evidence of critical thinking and idea development is apparent. Quite often work indicates a lack of insight into concepts and a weak grasp of skills.</p>
<p>50 - 59%</p> <p>Adequate</p>	<p>Overall formative assessments indicate a naïve or vague understanding of concepts. Incomplete work demonstrates weak skill development and little insight. A lack of effort is apparent.</p>
<p>Below 50%</p> <p>Inadequate</p>	<p>Overall formative assessments create a clear picture of inadequate skill development. Too many skills are left incomplete and insufficient to meet exit standards.</p>

Arani.ORG

¶ c) Sample Portfolio Rubric – Learner Self-Assessment

**Directions:** Circle the description that most nearly describes your Portfolio presentation, the neatness and the accuracy of your work, and your attitude and effort in class. Total up the points from those descriptions that you circled out of a possible 100 points. (This assessment tool may also be used by the instructor, or in collaboration between the learner and instructor.)

Outcome Assessed	3	2	1
Overall Presentation	12 pts. Portfolio very neat and organized	6 pts. Portfolio somewhat neat and organized	4 pts. Portfolio not neat and organized
Writing Samples	12 pts. Writing shows depth and elaboration of topic; few errors in mechanics; strong thinking skills are evident	8 pts. Competent treatment of topic; occasional errors in mechanics; evidence of thinking is present	4 pts. Writing lacks depth and elaboration of topic; frequent errors in mechanics; evidence of thinking is not present
Work Samples	10 pts. Samples show variety of skills; consistently completed with above average accomplishment	10 pts. Samples show some variety of skills; inconsistent accomplishment	0 pts. Samples lack variety of skills; few samples presented, with only minimal accomplishment

Content Area Learning	12 pts. Understands and uses necessary terminology and skills; concepts are integrated	8 pts. Understands and uses necessary terminology; skills and concepts are evident but not integrated	4 pts. Basic terminology, skills and concepts have not been mastered; unable to integrate
Self Reflection	9 pts. Clearly communicates analysis of self as learner; recognizes and celebrates successes	6 pts. Some uncertainty in self as learner; recognizes but does not celebrate successes	3 pts. Message does not convey self as learner; does not recognize or celebrate success
Attitude	9 pts. Daily positive I CAN attitude; cooperative on a daily basis	6 pts. Most days positive I CAN attitude; uncooperative attitude sometimes	3 pts. Seldom has positive attitude; uncooperative attitude most of the time
Use of Time	6 pts. Makes every minute count; cleans up work area daily	4 pts. Usually makes time count; usually cleans up work area	3 pts. Often wastes time; seldom cleans up work area

Total Points: \_\_\_\_ out of 75

Range: \_\_\_\_

¶ d) Sample Portfolio Assessment Rating Scale

Name	Date				
Criteria to be Assessed	Excellent 5	Very Good 4	Good 3	Adequate 2	Needs Much Improvement 1
Table of Contents is sequentially organized and contains adequate detail.					
Representative of achievements or progress of this reporting period.					
Includes a variety of activities, projects and assignments that reveal a range of abilities, processes and skills.					
Includes evidence of					

learner reflection (e.g., self-assessment forms or notes).					
Includes evidence of goal setting and readjustment of goals.					
<b>Anecdotal Notes</b>					
This learner can:					
This learner needs:					

(Adapted from Native Studies 10, Saskatchewan Learning, 2002, p.61.)

Arani.Org

## Assessing Process and Product

It is important to assess for growth in both learners' processes and products. As learners become more adept at using processes, such as the research process and the writing process, their resulting products will improve in quality.

Opportunities can be made to help learners clarify or articulate the processes they already use and to discuss how effective those processes are. If learners are not finding their approach effective or are not aware of possible processes used to complete a certain task, information and practice in using processes can be provided. This may take the form of a set of steps or stages in a checklist for learners to follow. Instructors might create rating scales or rubrics that qualitatively describe each step or stage in the process, and use these tools to assist learners to determine how effectively they are able to use the process and to determine if the process suits their learning preferences. There is often more than one process or way to approach any given task; the challenge is to encourage the learner to reflect on these processes and identify those that work best for the learner. A sample checklist for the writing process is provided below.

Look for Growth in Both Process and Product: The Writing Process	
Process	Product
Learners demonstrate:	Learners demonstrate:
comfort with writing	ability to understand and adhere to criteria for specific genre (e.g., editorial, five paragraph essay)
willingness to write	ability to proofread for errors in conventions of writing
willingness and ability to reflect upon his/her writing	ability to edit to improve conventions of writing
thinking of him/herself as a writer/author	ability to present finished, polished pieces
ability to determine audience and purpose for piece	ability to determine if and where to share or publish
use of a writing process(es) appropriate for the task	
understanding the stages of the writing process(es)	
willingness to conference with peers and instructor	
willingness to share and/or publish	
keeping a portfolio of best work	

willingness and ability to talk about his/her writing	
handling of complex revisions (add, delete, rearrange)	
ability to compare pieces of writing and state examples of improvement	
participation in and effectiveness of responses to writing of self and others	

Chapter 9 contains sample tools for assessing the research and writing processes, and other tools for assessing the final product.

### Assessment Tasks and Tools

A variety of techniques are used in social sciences to assess learners' progress as they develop a range of skills and abilities. Diversity in assessment tasks reflects the diverse learning needs and multiple intelligences of adults. Instructors will emphasize various skills and strategies depending on the needs and interests of the learners.

Depending on the structure of the class, projects that require the application of skills and knowledge from several subjects may be used. In other settings, team projects may be replaced by individual reports. The instructor, therefore, has significant flexibility in determining how to structure the course and assess the learning processes and products.

Assessment activities are determined during the planning of the course. Generally, the instructor considers the following questions:

What important facts, concepts, principles, generalizations, skills and procedures need to be developed in this course?

How will I determine the extent of learners' prior knowledge?

Where, and in what ways, can I collaborate with the learner to develop assessment strategies to meet specific needs and interests?

What misconceptions or gaps in learning and skills will I need to address when planning instruction for learners?

What is the most appropriate way and time to assess whether learning of knowledge, procedures, and skills has occurred?

Assessment activities have a clear purpose and reflect instructional strategies and content/Generic Skills. Before being assessed, learners will have had ample opportunities to develop and use the skills; learners will have read about and discussed the social sciences concepts, for example, before being asked to demonstrate their knowledge and understanding in an assessment activity. The standards or expectations for each task are clearly outlined and, where appropriate, developed collaboratively with the learners.

Authentic assessment tasks include such activities as problem-solving scenarios, journals, projects, performances, computer simulation tasks, checklists, interviews, journal records, observations, participation charts, folders or scrapbooks, peer evaluation, questionnaires, and self-evaluation. Samples of some assessment tools are provided in the next chapter. If used, these samples may need to be adapted to suit the emphases in your Social Sciences course and the needs of your learners.

You will note that sample quizzes and exams are not provided. Instructors will develop quizzes and exams to reflect the specific content and resources used in their courses. Tests will reflect application of skills and knowledge in addition to recall of information.

### Portfolio Assessment

Portfolio assessment involves developing performance criteria that is clearly articulated. This means that rubrics, checklists, rating scales, self-assessment, self-reflections, and instructor's comments are part of the portfolio, in addition to examples of the learner's best work.

An assessment portfolio is an organized collection of a learner's work that demonstrates, to her and others, the evidence of effort, skill achievement, and progress over a period of time. The learner selects the contents of the portfolio. The instructor may provide support and set parameters around what needs to be included in the portfolio based on the learning outcomes of the curriculum.

Portfolios can be assessed in different ways, but each item that is included is usually individually assessed using specific criteria. A holistic scoring process may be used to establish a final assessment of the overall impression of the learner's collection of work. Sample rubrics for portfolio work are included in the next chapter. It is common for instructors to work together to establish consensus regarding standards for learners' demonstrations of skills.

Instructors can encourage critical analysis and metacognitive awareness by having learners decide which of their works to include in their portfolio, and then explain why they have chosen those particular items. To stimulate this thinking, the instructor may wish to use reflective questions such as the ones below:

What makes this your best piece?

How did you go about researching it?

What problems did you encounter? How did you solve them?

What goals did you set for yourself? How well did you accomplish them?

Why did you select this piece of work?

What was particularly important to you during the process of creating this work?

If you could work further on this piece, what would you do?

What do you want me to look for when I evaluate this work?

How does this relate to what you have learned before?

What grade would you put on this report? Why?

Of the work I've done recently, I feel most confident about ...

What I still don't understand is ...

How is your work at the end of this course different from your work at the beginning?

Has the way you plan work changed over time? If so, how?

Does your work show that you are persistent (e.g., self-confident, motivated)? How?

Has your persistence (e.g., motivation, self-confidence) changed since the beginning of the course? How?

What type of assignments do you enjoy most (least)? Why?

What do you find most challenging? Why?

Do you like working with others on projects? Why or why not?

What are the ways you find working with others useful? Not useful?

These are just some of the questions that can be incorporated into self-evaluation and reflection, as well as into journal writing and finally, portfolio collections.

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If you could work further on this piece, what would you do?

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Chapter 9: Assessment Samples

## 1) Rubrics

Rubrics can be used to assess specific tasks, products, or strategies as well as larger, more holistic aspects of learning. In general, a rubric is a scoring guide used in subjective assessments. A rubric organizes the defining criteria of an assessment for a particular task and identifies standards that reflect the learner's level of mastery of the criteria. Used with a rating scale, a rubric becomes an explicit description of

performance characteristics that allows a learner to know the expected qualities for a given task.

The instructor can make rubrics for specific assignments or for entire units of study. Rubrics can also be made collaboratively with learners or with other instructors.

Guidelines for developing rubrics include:

Brainstorm a list of criteria related to the objectives to be achieved.

Generate a list of indicators that specify the types of performances on a graduated scale for each criterion.

Create a scale that lists indicators of expectations for each criterion.

Ensure that the expected performance is correlated with the appropriate learning objective.

Explain to learners the value of the task and the intended objectives.

Monitor and assess learners' efforts throughout the process.

Record a list of learners' goals for continuing learning.

Rubrics generally follow a template such as the following:

Performance Criteria	Word or number reflecting level of mastery	Word or number reflecting level of mastery	Word or number reflecting level of mastery	Word or number reflecting level of mastery
First performance criteria	Description of identifiable performance criteria reflecting a beginning level of performance.	Description of identifiable performance criteria reflecting development and movement toward mastery of performance.	Description of identifiable performance criteria reflecting mastery of performance.	Description of identifiable performance criteria reflecting the highest level of performance.

\ a) Sample Rubric for Oral Presentation

Performance Criteria	4	3	2	1
	Insightful,	Perceptive,	Adequate,	Sketchy,

Content	Provocative	Substantial	Practical	Disorganized
	clear, articulate statement of purpose and topic;  focussed, well-defined position supported by relevant, accurate, and specific details;  clear, memorable and cohesive explanation and description;  conclusions clearly stated and supported; may include a new perspective	strong statement of purpose and topic;  clear position stated with appropriate, substantial details for support;  cohesive and focussed explanation and description provided;  conclusions supported by data and/or evidence	informative introductory statement of general purpose and topic;  definite position stated with some supporting details;  explanation and description mostly accurate and supported by examples, facts, and/or statistics	purpose of presentation not clearly stated;  vague information provided, may not directly relate to topic;  incomplete and/or confusing explanation and description; may use opinion as fact;  thin data/evidence in support of ideas;  weak, partial conclusion; no summary
Language	Rich, Memorable	Precise, Well-chosen	Clear, Adequate	Vague, Minimal
	vivid, precise, accurate use of language;  innovative, precise, and varied word choices;  clearly reflects personal voice;  all statements structurally correct and interrelated;  speaks sensitively and respectfully of others	clear, specific language with few errors;  most statements structurally correct and related to the topic;  choice and arrangement of words reflect personal voice;  effectively uses language to achieve desired effects;  usually speaks	clear, accurate language for the most part but with some errors;  several errors in sentence structure and grammar;  avoids awkward phrases and wordiness, but lacks use of descriptive language to create interest;  at times speaks insensitively and	vague, general use of language, often inaccurate;  awkward sentence structure creates a lack of clarity;  unfinished, grammatically incorrect; errors;  familiar, generalized language; frequently repeats favourite words and phrases;

		sensitively and respectfully of others	disrespectfully of others	unaware when speaking insensitively or disrespectfully of others
Presentation/ Delivery Style	Enthusiastic, Fluent	Polished, Effective	Competent, Adequate	Unenthusiastic, Inconsistent
	relaxed, self-confident, self-composed;  effective use of voice tone and volume creates interest;  effective use of pause provides sense of drama;  excellent choice of speech content and delivery for given audience;  natural movement and descriptive gestures display energy, create mood and audience interest;  presentation delivered in allotted time	relaxed for the most part; recovers easily from occasional moments of tension;  variation of tone, volume, and inflection; pauses used to good effect;  good choice of speech content and delivery for given audience; movements and gestures generally enhance delivery;  presentation delivered in the allotted time	attempts to maintain self-composure;  some variation of tone, volume, and inflection;  pattern of delivery generally successful;  message reflects limited awareness of audience; may refer to common interests and experiences;  uses appropriate but minimal or exaggerated body language;  presentation runs over or under allotted time	minimal self-composure; or may demonstrate indifference;  uneven volume with little or no inflection, may use monotone speech;  uneven or inappropriate patterns of delivery;  message reflects little awareness of audience; often off-target;  insufficient movement or awkward gestures impede effectiveness;  presentation too short/long for allotted time

\ b) Sample Assessment for Presenting a Perspective on an Issue

Criteria	५	३	२	१
Issue (५ marks)	an issue is identified; it is explained what	an issue is identified; some attempt is made to	an issue statement is attempted;	issue is vaguely mentioned

	makes it controversial	explain what makes it controversial	lacks clarity	
Alternatives (4 marks)	alternative views are identified clearly and accurately	alternative views are identified briefly	one alternative view is identified	alternative views are not mentioned, or are vague
Thesis Argument (4 marks)	a factually accurate, crafted argument is supported with a variety of sources	a factually accurate well crafted argument is provided	an argument is given based on generalities not facts	general information provided but does not aid argument
Opposing Argument (4 marks)	a factually accurate, crafted argument is supported with a variety of sources	a factually accurate well crafted argument is provided	an argument is given but it is based on generalities not facts.	general information provided but does not aid argument
Personal Resolution (4 marks)	The argument includes specific resolution(s) with justification stated	a personal resolution is given; the arguments are not supported	a personal resolution is given; vague reasons stated	no personal resolution is provided
Organization (14 marks)	a compelling opening, informative middle, and satisfying conclusion	clear opening, middle, and conclusion	attempt made to organize; difficult to follow	aimless; little or no attempt made to organize
Conventions (4 marks)	language conventions used accurately	generally correct conventions used; few errors	several errors in conventions interrupt flow	numerous errors; difficult to follow
Sentence fluency (4 marks)	clear, complete sentences of varying complexity	well-constructed sentences	sentences are often awkward, run-ons, or fragments	difficult to understand due to sentence structure errors
Works Cited (4 marks)	credit is given to the sources of information	some sources of material are given credit	sources of information are not properly given credit	sources not mentioned; plagiarism is likely

1 c) Sample Assessment Rubric for Biographical Writing: The Product

Criteria	Attempted	Somewhat Evident	Clearly Evident	Exemplary
	۱	۲	۳	۴
Focus is on one event or experience.				
Specific people, locations, and objects are described using details that appeal to the reader's senses.				
Actions and/or dialogue included demonstrate an emotional investment in the experience or event.				
<p>Structure</p> <p>Clear, creative introductory paragraph.</p> <p>Descriptive details in the paragraphs that form the body of the narrative.</p> <p>Concluding paragraph that connects to the introduction and brings the narrative to an effective and interesting conclusion.</p>				
<p>Conventions of Written Language</p> <p>complete sentences</p> <p>correct punctuation</p> <p>correct, accurate use of language</p> <p>correct spelling</p>				

Total Score \_\_\_\_\_

Comments:

\ d) Sample Assessment for Persuasive Writing: Product

Criteria	Exemplary	Accomplished	Developing	Beginning
	۴	۳	۲	۱
Development	The writer identifies a clear position and fully supports that position with relevant personal and/or factual information.	The writer identifies a clear position and partially supports that position with relevant personal and/or factual information.	The writer identifies a position, yet that position lacks clarity. The writer attempts to support that position with relevant personal and/or factual information.	The writer identifies an ambiguous position with little or no relevant personal and/or factual information to support that position; or the writer fails to identify a position.

Organization	The writer presents an organizational plan that is logical and consistently maintained.	The writer presents an organizational plan that is logical and consistently maintained, but with minor flaws.	The writer presents an organizational plan that is only generally maintained.	The writer does not establish an organizational plan, or if an organizational plan is established, it is only minimally maintained.
Attention to Audience	The writer effectively addresses the needs and characteristics of the identified audience.	The writer adequately addresses the needs and characteristics of the identified audience.	The writer minimally addresses the needs and characteristics of the identified audience.	The writer does not provide information relevant to the needs of the audience.
Language	The writer consistently uses language choices to enhance the text.	The writer frequently uses language choices to enhance the text.	The writer sometimes uses language choices to enhance the text.	The writer seldom, if ever, uses language choices to enhance the text and in a manner appropriate to the literary form.

\ e) Sample Research Rubric

	Novice	Basic	Apprentice	Expert
Writing Process/ Organization/ Format	Little evidence of a cohesive plan. No planning documents or drafts handed in. Little or no description or detail. Ideas seem scrambled, jumbled, or	Some evidence of a cohesive plan and drafts. Some effort on description and detail. Ideas are developing, but not quite clear.	Provides planning and draft documents. Organizes material in an appropriate manner, but may lack some clarity or consistency. Presents basic information but may have	Provides planning and draft documents. Editing demonstrated in final version. Organizes material in a clear, appropriate, and precise manner.

	disconnected.		extraneous material. Some evidence of editing from initial draft.\	
Content	Little evidence of appropriate content.	Material is appropriate, but may lack a clear connection to the purpose.	Material is clear, relevant, and accurate, but may be lacking conciseness, transitions, or coherency.	Material content is clear, relevant, accurate, coherent and concise. Appropriate transitions used.
Writing Conventions	Little or no evidence of correct writing. Poor conventions seriously limit the paper's readability.	Some evidence of appropriate use of writing conventions. However, poor conventions limit the paper's readability, but not seriously.	Minor errors are present, but they do not detract from the readability of the paper.	Use of conventions enhances the readability of the paper.
Research	Little or no evidence of research presented. Sources not supplied.	Research is limited. Only one source and one perspective presented.	Research reflects different sources, options and perspectives, but three sources not properly identified.	Three sources correctly identified. Clear summarization of research findings.
Interpret Data/ Information	Incorrectly interprets data or information with little or no analysis or conclusion.	Correctly interprets data or information but provides little evidence of analysis or conclusion.	Correctly interprets data or information, but analysis or conclusion may not be supported by the research.	Correct interpretation of data or information. Analysis and conclusion are based on research.
Appropriate Vocabulary for Audience and Purpose	Inappropriate vocabulary use occurs.	Some inappropriate vocabulary present or limited use of	Articulates appropriate vocabulary but is still somewhat limited.	Articulates appropriate vocabulary and terms associated with the subject

	appropriate vocabulary.	matter and the audience.
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(Adapted with permission from Samaritan House, 2000, p.402.)

\\ f) Sample Rubric for Assessment of Reflective Journal

Outcome Assessed	Unsatisfactory	Limited	Satisfactory	High	Very High	Weight and Mark
	1	2	3	4	5	
Personal response to issues/ concepts raised in designated texts	No personal response is made to the concepts raised	Analysis conveys little evidence of a personal response	Some evidence of personal response	Evidence of personal response and new ways of reflecting	Extensive evidence, demonstration of personal growth and political awareness	X1
Reflects on own work, provides examples, demonstrating metacognition	No reflection on own work, no examples of reflection on improvement	Some reflection on own work, no examples	Some reflection, minimal examples	Good reflection, consistent examples, metacognition beginning	Reflects well, many examples, demonstrates a range of metacognition	X1
Reflects on what is discussed	No reference to what is discussed	Minimal reference	Alludes to discussion topics	Reflections indicate good listening	Indicates good listening; relates what is heard to what is read	X2
Comprehends and reflects on what is read	Is not comprehending or reflecting on what is read or viewed	Demonstrates some basic comprehension but not making connections in bigger picture	Comprehends surface level; beginning to make connections to general knowledge	Able to make inferences; comprehends some deeper meaning-making connections consistently	Makes good inferences; comprehends deeper meaning and relevance; demonstrates insight	X1
Expresses opinions,	Not able to express	Some development	Beginning to express	Consistently expressing	Clearly expressing	X2

arguments and responses	opinions and responses	in ability to express opinions	arguments, opinions and responses	arguments, opinions and responses	arguments, opinions and responses	
Effort	Very little effort to reflect	Little effort	Some effort	Much effort	Much effort, originality and initiative	XV
Grammar and syntax  (optional)	Uses incorrect grammar and syntax consistently	Some evidence of correct spelling, grammar, punctuation	Few errors in spelling, grammar and punctuation	Good command of Standard English	Very good command of Standard English, plus flair and originality	XV

Raw Score:

Comments:

g) Sample Assessment Rubric for Conceptual Understanding

Performance Criteria
Exemplary
Accomplished

Developing

Beginning

Explain States

ates

thoroughly supported, and justifiable accounts of events, issues, facts, and concepts

States clearly supported accounts of events, issues, facts, and concepts

Relates events, issues, facts, and defines concepts; may offer some support

Offers incomplete accounts of events, issues, facts, and concepts

Interpret Makes complex, credible interpretations of concepts, events, and information; gives insightful historical or personal connection to concepts and events; uses anecdotes, stories, and

analogies to make concepts, issues, and information personal and accessible. Usually makes appropriate, credible interpretations of concepts, events, and information; makes some historical or personal connections to concepts and events. Attempts to make appropriate interpretations of concepts and information; makes an unclear personal connection. Provides vague interpretations of ideas and information; struggles to find a personal connection.

Explain. States thoroughly supported, and justifiable accounts of events, issues, facts, and concepts. States clearly

supported accounts of events, issues, facts, and concepts

Relates events, issues, facts, and defines concepts; may offer some support

Offers incomplete accounts of events, issues, facts, and concepts

Interpret

Makes complex, credible interpretations of concepts, events, and information; gives insightful historical or personal connection to concepts and events; uses anecdotes, stories, and analogies to make concepts, issues, and information personal and accessible

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personal connections to concepts and events] Attempts to make appropriate interpretations of concepts and information; makes an unclear personal connection] Provides vague interpretations of ideas and information; struggles to find a personal connection] States thoroughly supported, and justifiable accounts of events, issues, facts, and concepts] States clearly supported accounts of events, issues, facts, and concepts] Relates events, issues, facts, and defines concepts; may offer some support] Offers incomplete accounts of events, issues, facts, and concepts] ] I

interpretations of concepts, events, and information; gives insightful historical or personal connection to concepts and events; uses anecdotes, stories, and analogies to make concepts, issues, and information personal and accessible

Usually makes appropriate, credible interpretations of concepts, events, and information; makes some historical or personal connections to concepts and events

Attempts to make appropriate interpretations of concepts and information; makes an unclear personal connection

Provides vague interpretation

s of ideas and information; struggles to find a personal connection

States clearly supported accounts of events, issues, facts, and concepts

Relates events, issues, facts, and defines concepts; may offer some support

Offers incomplete accounts of events, issues, facts, and concepts

Interprets

Makes complex, credible interpretations of concepts, events, and information; gives insightful historical or personal connection to concepts and events; uses anecdotes, stories, and analogies to make concepts, issues, and information personal and accessible

Usually makes appropriate,

credible interpretations of concepts, events, and information; makes some historical or personal connections to concepts and events

Attempts to make appropriate interpretations of concepts and information; makes an unclear personal connection

Provides vague interpretations of ideas and information; struggles to find a personal connection

Relates events, issues, facts, and defines concepts; may offer some support

Offers incomplete accounts of events, issues, facts, and concepts

Interprets

Makes complex, credible interpretations of concepts, events, and

information;  
gives  
insightful  
historical or  
personal  
connection to  
concepts and  
events; uses  
anecdotes,  
stories, and  
analogies to  
make  
concepts,  
issues, and  
information  
personal and  
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sually makes  
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information;  
struggles to  
find a  
personal  
connection[]

Offers incomplete accounts of events, issues, facts, and concepts

Interpret

Makes complex, credible interpretations of concepts, events, and information; gives insightful historical or personal connection to concepts and events; uses anecdotes, stories, and analogies to make concepts, issues, and information personal and accessible

Usually makes appropriate, credible interpretations of concepts, events, and information; makes some historical or personal connections to concepts and events

Attempts to make appropriate interpretations of concepts and information;

makes an unclear personal connection  
Provides vague interpretations of ideas and information; struggles to find a personal connection  
□ Interpret

Interpret  
Makes complex, credible interpretations of concepts, events, and information; gives insightful historical or personal connection to concepts and events; uses anecdotes, stories, and analogies to make concepts, issues, and information personal and accessible  
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during performance

- Usually uses and adapts what is known in diverse contexts; listens to feedback; often self-adjusts during performance
- Sometimes applies what is known in other contexts; may require prompting to adjust during performance
- Attempts to apply what is known in other contexts; requires much guidance and prompting; may be reluctant to adjust during performance
- □ Perspective
- e] Critically analyzes own and others' points of view; identifies the assumptions underlying a point of view; recognizes when an argument or language used is largely

persuasive or ideological

Apply Effectively uses and adapts what is known in diverse contexts; is sensitive and responsive to feedback; self-adjusts during performance

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□ Perspective

□ Critically analyzes own and others'

points of view; identifies the assumptions underlying a point of view; recognizes when an argument or language used is largely persuasive or ideological

Perspective  
Critically analyzes own and others' points of view; identifies the assumptions underlying a point of view; recognizes when an argument or language used is largely persuasive or ideological

Often critically analyzes own and others' points of view; often identifies the assumptions underlying a point of view; some awareness of language used as a persuasive tool  
Attempts to critically analyze

others' points of view; may be unable to critically analyze own point of view; requires prompting to identify the assumptions on which a point of view is based; takes language used at face value

May attempt to critically analyze others' points of view with guidance and prompting; unable to identify assumptions on which a point of view is based

Attempts to critically analyze others' points of view; may be unable to critically analyze own point of view; requires prompting to identify the assumptions on which a point of view is based; takes language used

at face value  
May attempt to critically analyze others' points of view with guidance and prompting; unable to identify assumptions on which a point of view is based

May attempt to critically analyze others' points of view with guidance and prompting; unable to identify assumptions on which a point of view is based

Empathize  
Consistently puts self

into and appreciates others' situation or point of view; values others' points of view and works to understand them; attends to what is not said or done, as much as to what is said and done. Usualy tries to put self into and to appreciate others' situation or point of view; often tries to understand others' points of view; may attend to what is not said or done in some instances. Demonstrates some understanding of others' situations and points of view with prompting and guidance; attends to only what is said and done. Generally can see only one's own situation and point of view; seldom open to new

views and situations

- Empathize
- Consistently puts self into and appreciates others' situation or point of view; values others' points of view and works to understand them; attends to what is not said or done, as much as to what is said and done

Usually tries to put self into and to appreciate others' situation or point of view; often tries to understand others' points of view; may attend to what is not said or done in some instances

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Self-knowledge] Recognizes own prejudices and biases; questions own beliefs and strives for intellectual honesty; able to accurately self-

assess □ Usually recognizes own prejudices and biases; questions own beliefs; able to accurately self-assess in most situations □ Sometimes identifies personal prejudices and biases with prompting and guidance; attempts to self-assess in some situations □ Reluctant to admit to personal prejudices and biases, may maintain that none exist; unable to self-assess □ □ Usually recognizes own prejudices and biases; questions own beliefs; able to accurately self-assess in most situations □ Sometimes identifies personal

prejudices and biases with prompting and guidance; attempts to self-assess in some situations] Reluctant to admit to personal prejudices and biases, may maintain that none exist; unable to self-assess] ] Sometimes identifies personal prejudices and biases with prompting and guidance; attempts to self-assess in some situations] Reluctant to admit to personal prejudices and biases, may maintain that none exist; unable to self-assess] ] Reluctant to admit to personal prejudices and biases, may maintain that none exist; unable

to self-  
assess □ □

COM 489C

Final Portfolio Assessment Checklist

Student Name \_\_\_\_\_

### COURSE ASSESSMENT

Department Portfolio Turned In Complete and On Time \_\_\_\_\_ 100 points

Professional Portfolio Prepared, Complete, and Turned in On Time

\_\_\_\_\_ 100 points

Attendance and Participation \_\_\_\_\_ 100 points

Turned in in-class assignments complete and on time \_\_\_\_\_ 100 points

Turned in homework complete and on time \_\_\_\_\_ 100 points

Final Exam score \_\_\_\_\_ 100 points

Sub-total \_\_\_\_\_ 600 points

### PORTFOLIO

Contents Checklist

Low

High

Title Page

1

2

3

4

5

Program Summary	1	2	3	4	5
Resume	1	2	3	4	5
Autobiography	1	2	3	4	5
Writing Samples	1	2	3	4	5
Production Samples	1	2	3	4	5
Planning Samples	1	2	3	4	5
Internship Outline	1	2	3	4	5
Exit Essay	1	2	3	4	5
Five Year Career Plan	1	2	3	4	5

Subtotal (out of 50) \_\_\_\_\_

#### Presentation Checklist

Professional Portfolio or Cover	1	2	3	4	5
Layout/Design	1	2	3	4	5
Clean Copy	1	2	3	4	5
Easy to Follow	1	2	3	4	5
Visually Appealing	1	2	3	4	5

Subtotal (out of 25) \_\_\_\_\_

#### Knowledge Demonstration

Strategic Planning	1	2	3	4	5
Full Range of Writing Skills	1	2	3	4	5
Media Relations Skill	1	2	3	4	5

Generalist Knowledge      1      2      3      4      5

Specialist Knowledge      1      2      3      4      5

Subtotal (out of 25) \_\_\_\_\_

Total Points Possible for Contents = 100

Points for Portfolio as presented: \_\_\_\_\_

## APPLYING ASSESSMENT STRATEGIES IN PSYCHOLOGY

### Linking Assessment to the Psychology Learning Goals and Outcomes

The Task Force members believe that the *Undergraduate Psychology Learning Goals and Outcomes* and assessment planning are inextricably intertwined. Specifying performance criteria in the absence of well-developed plans to gather evidence on program effectiveness is likely to be an unproductive enterprise. The development of the *Undergraduate Psychology Learning Goals and Outcomes* was driven by our belief that each goal with its associated outcomes must reflect measurable aspects of the undergraduate psychology major.

After drafting the goals and outcomes, we discussed appropriate assessment methods that could be applied to each goal and its related outcomes. We considered a wide variety of both quantitative and qualitative assessment strategies (e.g., objective tests; essays tests; formative assessments; projects; student portfolios; self-assessment practices; surveys of current students, alumni, and employers; and unobtrusive/archival measures). We also examined the potential advantages and disadvantages of each strategy for measuring specific outcomes listed for each goal. Ultimately, we estimated how optimal the various methods might be in producing a viable assessment strategy for a specific learning goal.

### Principles of Assessment in Psychology

- A set of outcomes is meaningful and useful in improving instruction only if student abilities are measured thoughtfully with the specific intent of improving teaching and learning. Whenever possible, students should receive direct feedback to facilitate their learning from completing assessment activities.
- Assessment planning should encourage systematic improvement rather than concentrate on deficiency. Depersonalizing the potential threat imposed by assessment may make it easier for faculty members to embrace assessment practices.
- Although some aspects of assessment can be accomplished using multiple-choice testing formats, other approaches to assessment often provide a richer picture of student

achievement.

- Departments may choose to focus only a few goals on an annual basis. The document proposes ideal goals and outcomes under optimal conditions with appropriate resources to support assessment activity. Departments can craft assessment plans that provide feedback on targeted dimensions that will help improve or maintain high quality education. One strategy may involve assessing a subset of desired goals and outcomes in a given year with the expectation of assessing other goals and outcomes in later years.
- Departments will benefit from discussions that compare existing curricula to the *Undergraduate Psychology Learning Goals and Outcomes* to establish departmental expectations. Examining how individual courses contribute to achieving departmental expectations will help departments identify their relative strengths as well as areas that need improvement or are less highly valued in the mission of the department.
- Wherever possible, assessment is most beneficial when embedded within existing coursework. Such strategies reduce the burden for faculty and increase the motivation for students to take assessment activities seriously.
- In assessment-unfriendly departments, individual faculty may still be able to participate in assessment activities by using the *Undergraduate Psychology Learning Goals and Outcomes* to facilitate individual course planning.
- Assessment deserves to be treated as a legitimate area of applied scholarship for faculty. To the extent that the results of an assessment activity receive an external review, such work should count as part of the faculty scholarship portfolio.
- Departments will need to ask specific individuals in the department to assume overview responsibilities for departmental assessment. Assessment planning is energy and time intensive. This important work should be supported with release time and recognition for service to forestall deteriorating attention to assessment concerns.
- Assessment activities are expensive. Departments should not be expected to implement assessment plans without appropriate financial support.
- ¥ Assessment activities can involve activities that are not class-room based. Co-curricular activities, advising measures, and conference attendance represent viable venues for the collection of data that can influence program planning.
- ¥ Successful strategies in assessment may begin with the recognition that faculty are looking for an acceptable minimum of contribution. Departments may want to start from the proposition of the least intrusive activities and determine how satisfying the answers to curricular evolution might be. Arguing for more complex strategies may emphasize saving time and aggravation in the long run by adopting a proactive stance of curriculum evaluation.

Return to [Assessment CyberGuide home page](#)

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Education Directorate

750 First Street, NE • Washington, DC • 20002-4242

Phone: 202-336-5970 • TDD/TTY: 202-336-6123

Fax: 202-336-5962 • [Email](#)

## APPLYING ASSESSMENT STRATEGIES IN PSYCHOLOGY

Critique of Assessment Strategies  
Applied to Goals and Outcomes

## CHOOSING ASSESSMENT METHODS

### Goal 1: Knowledge Base of Psychology

Demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.

- 
- 1.1: Characterize the nature of psychology as a discipline.
  - 1.2: Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, overarching themes, and relevant ethical issues.
  - 1.3: Use the concepts, language, and major theories of the discipline to account for psychological phenomena.
  - 1.4: Explain major perspectives of psychology (e.g., behavioral, biological, cognitive, evolutionary, humanistic, psychodynamic, and sociocultural).

ASSESSMENT  
CATEGORY

ESTIMATE OF METHOD'S POTENTIAL

<p>CLASSROOM/COURSE DATA</p>	<p>Overall Strong potential. Classroom activities and course data naturally provide venues in which to assess content knowledge in psychology. However, current assessment trends suggest that concentrating solely on these indices may not provide sufficient information to provide meaningful feedback on program integrity.</p>
<p>OBJECTIVE TESTS</p>	<p>Strong potential. Despite the inherent difficulties in constructing valid and reliable objective tests, the method can effectively assess content learning. However, most objective tests tend to evaluate student knowledge more routinely at lower levels of thinking (e.g., rote, simple application).</p>
<p>ESSAY TESTS</p>	<p>Strong potential. Despite the labor intensiveness of providing feedback on essay tests, this approach facilitates greater access to measuring deeper levels of content learning. Faculty are increasingly turning to the use of rubrics and specified criteria to address problems of reliability in grading.</p>
<p>EMBEDDED QUESTIONS AND ASSIGNMENTS</p>	<p>Strong potential. Choosing some courses in which program assessment activities can occur can still facilitate specific assessment of content knowledge. For example, embedding a departmental assessment of ability to demonstrate APA format in a methods class provides a reasonable vehicle for assessing content knowledge of APA format. Other emphases are possible in embedded assessments, including ethics, persistent themes, or historical detail among others.</p>
<p>CLASSROOM ASSESSMENT TECHNIQUES</p>	<p>Strong potential. Faculty engage in classroom assessment techniques to provide spot checks of how well students are learning specific concepts. Although the focus is understandably narrow (e.g., the content of a particular class), the method provides optimal feedback for the faculty member concerned with what students are learning and retaining.</p>

<p><b>INDIVIDUAL PROJECTS/PERFORMANCE ASSESSMENT</b></p>	<p>Overall Strong potential. The knowledge base of psychology is predictably the foundation for most individual projects. These generally offer the advantage of studying some corner of the discipline in depth; however, breadth of exposure to content may be a casualty given the time limitations most faculty and students face.</p>
<p><b>WRITTEN PRODUCTS</b></p>	<p>Strong potential. When assignments are well-designed, written products should provide insight into what students know and don't know about content. Faculty have discovered that specifying how much content (e.g., number of required references) may facilitate the depth of exploration the faculty member had in mind when designing the project instructions.</p>
<p><b>ORAL PRESENTATIONS</b></p>	<p>Strong potential. oral presentations also provide insight into student learning of the content. In addition, the opportunity to engage students in questions allows faculty and classmates to probe the depth of student knowledge while building oral communications skills.</p>
<p><b>GRAPHIC TESTS AND DISPLAYS</b></p>	<p>Strong potential. Concept maps can reveal the nature of associations that students develop regarding specified content in the discipline.</p>
<p><b>POSTERS</b></p>	<p>Strong potential. posters can provide a more global sense of what students understand due to the brevity of the medium. However, informal questioning can fill in the gaps about what students have not communicated in the poster.</p>
<p><b>STRUCTURAL/SITUATIONAL ASSESSMENTS</b></p>	<p>Strong potential. Although situational assessments tend to emphasize application of learning, applications are built on a disciplinary foundation. The success of assessment of content learning will depend on the expertise demonstrated in the design of the applied assessment.</p>

<p><b>SUMMATIVE PERFORMANCE ASSESSMENT</b></p>	<p>Overall Mixed potential. Assessments that occur at the end of a program vary in their effectiveness for assessing content. In some cases, depth of knowledge required by some demonstrations will</p>
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	not allow an estimate of broad knowledge in the discipline.
STANDARDIZED TESTS	Mixed potential. Currently there are two primary standardized exams that allow for comparison across institutions as well as tracking changes in program achievement over time: the Academic Concentration Applied Test (ACAT) and the Major Fields Test by ETS. Each exam measures knowledge in the subdisciplines of psychology, but student course selection may adversely affect overall performance on either instrument. Care must be exercised in interpreting the results.
LOCALLY DEVELOPED TESTS	Strong potential. Developing a department examination is a time-consuming but effective way to track changes in student knowledge over time but does not provide normative comparison with other programs. In addition, test security and changes in content knowledge make this practice complex.
CAPSTONE EXPERIENCES	Mixed potential. The utility of capstone performance to assess content knowledge greatly depends on the scope of the course design. Students are more likely to develop deep levels of expertise in more narrowly defined areas of psychology in most capstone designs. To the extent that their performance represents what they can do within specific performance parameters, the capstone may be a satisfying method to assess the ability to deal with content in sophisticated ways. However, more broadly conceived capstone courses (e.g., history, systems of psychology) may provide broader assessment opportunities.
INTERNSHIP/PROFESSIONAL APPLICATIONS	Moderate potential. Internships and professional applications facilitate specific types of applications. For example, an industrial-organizational internship may be an optimal way for a student to demonstrate the knowledge base related to the subdiscipline, but it may not be satisfying as a broad assessment.
PORTFOLIOS	Strong potential. Selecting and justifying selections from explicit departmental criteria will facilitate student reflection regarding the level of expertise they have developed in the content of

	psychology.
ASSESSMENT CENTER METHODS	Strong potential. Similar to structured assessments, the in-basket strategies of assessment center methods can provide insight into student abilities to apply principles from the content of psychology.
CASE AND LONGITUDINAL STUDIES	Limited potential. Because much of content learning is fragile, longitudinal studies of content retention are likely to be disappointing sources of student learning. In addition, merely reporting how sturdy content learning is over time rather than directly assessing may be content learning will be a less reliable measure.

SELF-ASSESSMENT	Overall Mixed potential. As can be seen from student anticipation of how well they performed on an exam, student ability to judge their own expertise is variable.
STUDENT JOURNALS	Moderate potential. Journal instructions can specify the manner in which students should interact with the content of the discipline. For example, instructions might require that students demonstrate the appropriate application of five concepts or principles from the discipline. Students will vary in their own expert judgment on the success of addressing the concepts or principles in the manner anticipated by the faculty.
SELF-CRITIQUES	Mixed potential. Students have limited experience in making judgments about how well they have met the content criteria of a given assignment. Students often drift to the easier-to-judge aspects of performance, such as format concerns, interest generation, or comfort level rather than exploring how well they have reflected content expertise.

COLLABORATION	Mixed potential. Some methods offer effective avenues for examining content and theory, while others are less promising.
RESEARCH TEAMS	Strong potential. Research teams give students an opportunity to demonstrate content expertise in two

	dimensions: research methods and the subject matter that the research is designed to explore. Students can receive separate evaluations on the extent to which they have collectively demonstrated research expertise as well as whether they have appropriately represented the target content.
GROUP PROJECTS	Strong potential. Group projects can also provide a content-based opportunity to develop group skills. Projects can reflect successful or unsuccessful strategies to master relevant content and principles. However, group projects suffer similar limitations to individual projects. Committing in-depth study to one arena may require the sacrifice of exposure to other content in the course.
ON-LINE ACTIVITIES	Limited potential. Unless students are given very constrained instructions regarding how to pursue content collaboration, the use of chat room or email exchanges to monitor content expertise may be challenging.

INTERVIEWS & SURVEYS	Mixed potential. In general, surveys and interviews are not recommended because the assessment of content is not likely to be direct.
SATISFACTION SURVEYS	Poor potential. Assessing content expertise through satisfaction surveys is too indirect to be recommended.
PERFORMANCE REVIEWS	Moderate potential. Although this method is time consuming, the next step (e.g., grad school or employment) can provide for direct observation of the content of psychology.
EXIT INTERVIEWS	Limited potential. Exit interviews tend to focus on affective dimensions of learning as well as the collection of impressions that may facilitate program improvement. Content mastery is not routinely the focus of exit interviews.
EXTERNAL EXAMINER INTERVIEWS	Moderate potential. A rigorous external examiner protocol could focus on the depth of content mastery of individual students. However, the expense and time limitations of this approach tend to focus on other aspects of student performance.
FOCUS GROUPS	Not recommended. Focus groups typically convene to solve a specific problem rather than provide a measure of

	content mastery. Such academic development may be inferred but there are other more direct methods to assess mastery.
FOLLOW-UP ALUMNI INTERVIEWS	Not recommended. Engaging with alumni over the specifics of content that they can recall is likely to be a discouraging assessment strategy since the detail of the discipline dims with distance from graduation.

ARCHIVAL MEASURES	Mixed potential. Archival measures can provide some insight into the content bases to which students have been exposed but will do little to assess more formal learning of the content in the discipline.
TRANSCRIPT ANALYSIS	Limited potential. Individual transcript analysis can provide not just a measure of the various content bases to which the student has been exposed but through grades can provide a gross measure of achievement in those areas. However, assessment experts recommend that other noncourse-based strategies will be more effective in providing legitimate measures of student and program achievement.
ANALYSIS OF TRANSFER PATTERNS	Limited potential. Examining patterns of what transfer students provide can help departments determine what and when to offer in the curriculum, but will shed little light on the quality of learning.
SYLLABUS AUDIT	Limited potential. A syllabus audit can isolate the range of content exposure that students experience but will be poor indicators of actual learning.
DEMOGRAPHIC DATA ANALYSIS	Not recommended. Understanding the characteristics of the student body will provide little insight into their content mastery.
ALUMNI DATABASE	Not recommended. The alumni database does not directly reveal student expertise in the content of psychology. However, many programs rely on the percentage of students who go on to graduate school in the area as an indirect measure of content expertise.
LIBRARY STATISTICS USAGE/WEB HITS	Not recommended. Content expertise is not apparent in this archival analysis.

## CHOOSING ASSESSMENT METHODS

### Goal 2: Research Methods in Psychology

Understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.

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- 2.1 Describe the basic characteristics of the science of psychology.
- 2.2 Explain different research methods used by psychologists.
  - Describe how various research designs address different types of questions and hypotheses
  - Articulate strengths and limitations of various research designs
  - Distinguish the nature of designs that permit causal inferences from those that do not
- 2.3 Evaluate the appropriateness of conclusions derived from psychological research.
  - Interpret basic statistical results
  - Distinguish between statistical significance and practical significance
  - Describe effect size and confidence intervals
  - Evaluate the validity of conclusions presented in research reports
- 2.4 Design and conduct basic studies to address psychological questions using appropriate research methods.
  - Locate and use relevant databases, research, and theory to plan, conduct, and interpret results of research studies
  - Formulate testable research hypotheses, based on operational definitions of variables
  - Select and apply appropriate methods to maximize internal and external validity and reduce the plausibility of alternative explanations
  - Collect, analyze, interpret, and report data using appropriate statistical strategies to address different types of research questions and hypotheses
  - Recognize that theoretical and sociocultural contexts as well as personal biases may shape research questions, design, data collection, analysis, and interpretation
- 2.5 Follow the APA Code of Ethics in the treatment of human and nonhuman

participants in the design, data collection, interpretation, and reporting of psychological research.

۲.۶ Generalize research conclusions appropriately based on the parameters of particular research methods.

Exercise caution in predicting behavior based on limitations of single studies

Recognize the limitations of applying normative conclusions to individuals

Acknowledge that research results may have unanticipated societal consequences

Recognize that individual differences and sociocultural contexts may influence the applicability of research findings

**ASSESSMENT  
CATEGORY**

**ESTIMATE OF METHOD'S POTENTIAL**

<p><b>CLASSROOM/COURSE DATA</b></p>	<p>Mixed potential. Useful for providing assessment of factual knowledge and some limited application. Research skills will be better assessed with other strategies that involve activities outside the traditional classroom.</p>
<p><b>OBJECTIVE TESTS</b></p>	<p>Moderate potential. Good method for assessing primarily factual knowledge, especially if the test questions can be demonstrated to have strong psychometric properties. Less useful in assessing application and higher level comprehension such as designing original research or performing and interpreting statistical calculations.</p>
<p><b>ESSAY TESTS</b></p>	<p>Moderate potential. More powerful method for assessing application and higher level comprehension, but is still limited in its ability to assess ability to design original research or perform and interpret statistical calculations because of limited time frame in testing situation.</p>
<p><b>EMBEDDED QUESTIONS AND ASSIGNMENTS</b></p>	<p>Strong potential. Because research methods courses are often a prerequisite for advanced courses, departments may also dictate specific assignments (e.g., research projects) that should be embedded in required coursework across different sections of the same methods and/or statistics courses and in</p>

	subsequent courses in the curriculum.
<b>CLASSROOM ASSESSMENT TECHNIQUES</b>	Moderate potential. Provides quick, but often limited assessment, on student understanding and performance.

<b>INDIVIDUAL PROJECTS/PERFORMANCE ASSESSMENT</b>	Strong potential. Faculty can interpret sophistication in research skills from intellectual products. Because projects are done outside class, there may be some risk that a student's work is not an individual production. However, this limitation can be addressed by including a reflective piece that assesses the targeted skills.
<b>WRITTEN PRODUCTS</b>	Strong potential. Written reports of original research provide an ideal context for assessing the methodological skills and ethical issues involved in designing, conducting, and evaluating the results. Time constraints (e.g., IRB approval) and the labor intensive nature of original research may limit usefulness in some courses. Research projects may also only assess an understanding of the particular methods used, not a broader understanding.
<b>ORAL PRESENTATIONS</b>	Moderate potential. Individual oral presentations provide some opportunity to evaluate quality of research skills and ability to present a shorthand summary. However, these may be challenging to judge in the moment and they often lack details that allow for in depth assessment.
<b>GRAPHIC TESTS AND DISPLAYS</b>	Moderate potential. Graphical presentations can be useful in mapping the research process. Statistical understanding can be assessed through the accuracy and clarity of graphical presentations.
<b>POSTERS</b>	Moderate potential. The limited space available in most posters may not provide an ideal context in which to evaluate the full understanding and application of research methods.
<b>STRUCTURAL/SITUATIONAL ASSESSMENTS</b>	Strong potential. The presentation and interpretation of research findings in the popular media can be used to have students demonstrate

	<p>their skill in addressing issues related to the design and interpretation of research. Current events can also be used as a starting point for students to design and conduct original research projects.</p>
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<b>SUMMATIVE PERFORMANCE ASSESSMENT</b>	Mixed potential. Strategies in this category range from poor to strong.
<b>STANDARDIZED TESTS</b>	Moderate potential. Although standardized tests assess factual knowledge related to research methods and statistics, they fail to evaluate application of skills at the level identified for these outcomes.
<b>LOCALLY DEVELOPED TESTS</b>	Moderate potential. Like standardized tests, they primarily focus on factual knowledge as opposed to application. In addition, they may lack strong psychometric properties.
<b>CAPSTONE EXPERIENCES</b>	Strong potential. Assuming that the capstone course or project has an expressive requirement (e.g., writing or speaking), it can provide an integrated demonstration opportunity.
<b>INTERNSHIP/PROFESSIONAL APPLICATIONS</b>	Limited potential. The focus of most applied internship experiences tends to be in applied areas of psychology. However, some experiences may include the opportunity to design, conduct, and evaluate research (i.e., a research internship).
<b>PORTFOLIOS</b>	Strong potential. Explicit criteria that ask students to select "works" based on what these reveal about their research skills can provide an opportunity to evaluate the evolution of their abilities through a focused reflection on why they selected the items they did.
<b>ASSESSMENT CENTER METHODS</b>	Poor potential. Assessment center methods are generally limited in time and focus. They are unlikely to provide in depth information on all the outcomes associated with this goal because of inherent time constraints.
<b>CASE AND LONGITUDINAL STUDIES</b>	Limited potential. The complexities of tracking all of these skills over time mitigates against

	adopting this strategy to monitor their evolution, especially where different courses in the curriculum vary in the requirement to use these skills. Programs requiring both a survey research methods course with an original research project and a capstone research experience may have a limited opportunity to evaluate longitudinal development.
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SELF-ASSESSMENT	Mixed potential. Developing students' metacognition of their understanding of research methods has seldom been addressed self-assessment strategies.
STUDENT JOURNALS	Moderate potential. Although it may be unlikely that faculty would choose to invest time reading about students' struggle to learn research methods, this technique can be adapted to a research journal where students keep a record of research ideas, development and progress that reflects application of research methods knowledge.
SELF-CRITIQUES	Limited potential. When faculty can specify relevant performance criteria, students can provide an estimate of their research and statistical skills.

COLLABORATION	Moderate potential. Techniques in this category are moderate to limited in usefulness.
RESEARCH TEAMS	Moderate potential. Research teams can develop and evidence expertise in research skills through peer involvement and often model the collaborative nature of research at the professional level. Unfortunately, research teams may reduce a beginning or weak student's direct involvement in generating research ideas, research design, statistical analysis, and interpretation of results.
GROUP PROJECTS	Moderate potential. Group projects involve similar issues to those of research teams.
ON-LINE ACTIVITIES	Limited potential. Archived on-line chat rooms, listservs, or bulletin boards can provide opportunities to assess the development and evolution of research ideas from start to finish.

INTERVIEWS & SURVEYS	Mixed potential. The assessment of attitudes by the students or other stakeholders may provide some feedback about research methods and statistical competence, but attitudes may not be an accurate indication of true skill attainment.
SATISFACTION SURVEYS	Strong potential. The abilities of students to design, conduct and evaluate research can be evaluated by employers, graduate advisors, or other stakeholders. External evaluators may explicitly need to be prompted to address these skills. This may be particularly effective for those students who continue in graduate programs in psychology.
PERFORMANCE REVIEWS	Strong potential. Stakeholders can provide an estimate of strengths and weaknesses within research skills with appropriate prompts for reflection.
EXIT INTERVIEWS	Moderate potential. Students can be asked to reflect on the evolution of their research and statistical skills.
EXTERNAL EXAMINER INTERVIEWS	Limited potential. External examiners can ask probe questions to evaluate student comfort levels about research and statistical skills, but the evaluation of self-report relative to actual performance quality may be problematic unless evaluators also review actual products.
FOCUS GROUPS	Limited potential. Although focus groups most often convene to solve specific departmental problems, this area is often core to a program and challenging to students and may be more likely to be addressed in this context.
FOLLOW-UP ALUMNI INTERVIEWS	Limited potential. Although a follow-up interview on this topic might invite demand characteristics, it may be useful to assess perceived skill levels in post-graduate settings.

ARCHIVAL MEASURES	Limited potential.
TRANSCRIPT ANALYSIS	Moderate potential. Transcript analysis can reveal the pattern of courses students may engage in (or avoid) in the development and use of research methods and statistical skills. The transcript analysis can provide both patterns and some in-class estimates of quality of student performance although the value of these may be limited.

ANALYSIS OF TRANSFER PATTERNS	Limited potential. Departments can benefit by understanding the transfer courses that students may have taken in research methods and statistics and making comparisons to students who took departmental courses in these areas.
SYLLABUS AUDIT	Moderate potential. An analysis of which courses include content or projects emphasizing research methods or statistics may be a helpful first step in diagnosing where these skills need to be enhanced.
DEMOGRAPHIC DATA ANALYSIS	Not applicable.
ALUMNI DATABASE	Not applicable.
LIBRARY STATISTICS USAGE/WEB HITS	Not applicable.

## CHOOSING ASSESSMENT METHODS

### Goal 3: Critical Thinking Skills in Psychology

Respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behavior and mental processes.

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- 3.1 Use critical thinking effectively.
- 3.2 Engage in creative thinking.
- 3.3 Use reasoning to recognize, develop, defend, and criticize arguments and other persuasive appeals.
- 3.4 Approach problems effectively.

ASSESSMENT  
CATEGORY

ESTIMATE OF METHOD'S POTENTIAL

CLASSROOM/COURSE DATA	Overall Mixed potential. Classroom and course data can be used to assess critical and creative thinking, but the quality of the assessment depends on what is measured in these settings and not the setting per se.
OBJECTIVE TESTS	Limited potential. Objective tests can be used to assess critical thinking, but good objective tests of critical thinking are difficult to construct and cannot be used to assess what students actually do in an unstructured setting where critical thinking is required. They cannot assess the propensity to engage in critical thought. They are better as measures of recognition memory, and hence of limited usefulness in assessing critical thinking.
ESSAY TESTS	Strong potential. An essay test that poses an ecologically-valid scenario (ideally somewhat complex) where students need to explain/ describe their thinking and the conclusion they reached or problem they solved can be a good way to assess critical thinking.
EMBEDDED QUESTIONS AND ASSIGNMENTS	Strong potential. An embedded question or assignment can provide a measure of student's propensity to think critically (i.e., do they engage in critical thinking when the need for critical thinking is not cued or labeled).
CLASSROOM ASSESSMENT TECHNIQUES	Poor potential. Classroom assessment techniques can include reflections on what was learned. It is more likely useful as feedback to instructors about what students believe they have learned than a measure of learning per se.

INDIVIDUAL PROJECTS/PERFORMANCE ASSESSMENT	Overall good potential. Individual projects and performance assessment can be good measures of critical thinking, assuming that the project calls for extended and careful thought. The nature of the project or performance (e.g., solve a novel problem) is what determines the quality of the assessment. The quality of a critical thinking assessment most often lies in the way the instructor crafted the assignment and explained it to students.
WRITTEN PRODUCTS	Strong potential. Like essay tests, a written project needs to allow the student to show the

	thinking process that went into a conclusion or a solution to a problem.
ORAL PRESENTATIONS	Strong potential. oral presentations are just an alternative format for presenting one's thinking, and thus are similar to written products in their ability to assess critical thinking.
GRAPHIC TESTS AND DISPLAYS	Strong potential. A graphic display of one's thinking can be an excellent assessment of the quality of a student's thinking. There are many concept maps and other ways to map verbal information onto spatial arrays that are well suited for critical thinking assessment. A completed template that shows the parts of a persuasive argument, for example, can be used to clarify complex topics and provide a "picture" of the student's thinking.
POSTERS	Strong potential. A poster can, and probably should, contain a mix of verbal and graphic displays. It can be used to assess critical thinking, if the topic or reason for the poster requires critical thought.
STRUCTURAL/SITUATIONAL ASSESSMENTS	Strong potential. When this category includes activities such as role-playing, seeing problems from multiple perspectives, and similar activities, it can be a good way to demonstrate critical thinking skills.

SUMMATIVE PERFORMANCE ASSESSMENT	Overall Mixed potential. Summative assessments usually refer to tests that are normed to provide comparative data, usually at the completion of a program of study. The normative information can be useful, but only if the test is valid in that it relates to the way students think critically when they are not in class.
STANDARDIZED TESTS	Moderate potential. There are several standardized tests of critical thinking. Unfortunately, they tend to be multiple-choice tests with short problems or scenarios described in each question. They are not generally good measures because real life is much messier, and there is rarely a single correct answer to ill-

	<p>defined problems. They also do not measure what student's actually do in less structured settings. A quality standardized test is possible, if it includes both constructed response and multiple-choice alternatives to show how students approach problems <i>and</i> whether they can recognize a good response when they have to select from among a small set of alternatives.</p>
<p>LOCALLY DEVELOPED TESTS</p>	<p>Limited potential. A locally developed test can reflect the curriculum that is taught, so it can be more useful to instructors, but locally-developed tests will rarely have the psychometric properties of good reliability and validity that a standardized test will have.</p>
<p>CAPSTONE EXPERIENCES</p>	<p>Strong potential. A capstone experience can be an extended project that requires the application of critical thinking skills to a wide range of issues. If well designed, capstone experiences can provide meaningful measures of critical thinking, but the instructor needs to have clear critical thinking objectives in mind when planning the capstone experience because it is not likely to assess critical thinking without deliberate planning.</p>
<p>INTERNSHIP/PROFESSIONAL APPLICATIONS</p>	<p>Limited potential. Ideally, an internship or other professional application would require evidence of critical thinking, but they would need to be designed with this specific outcome in mind and that rarely happens. In general, instructors do not have direct control over internship experiences, which can make the value of an internship or other application as an assessment of critical thinking hit-or-miss.</p>
<p>PORTFOLIOS</p>	<p>Strong potential. A portfolio that is well planned to show growth in critical thinking skills over time (e.g., four years in college) can provide a good index of gains in critical thinking. Like the other methods, the value of portfolios depends on how carefully the intended critical thinking outcomes are articulated and carried across several different courses.</p>
<p>ASSESSMENT CENTER METHODS</p>	<p>Strong potential . An assessment center is usually a single place where a variety of assessment activities are planned and data are collected. Often they will include simulations of real-life scenarios</p>

	and problems. If the activities are well planned, they can provide valuable data about critical thinking (e.g., an in-basket exercise).
CASE AND LONGITUDINAL STUDIES	Limited potential. Following students' development in critical thinking over time may be somewhat challenging in the absence of objective measures of that growth.

SELF-ASSESSMENT	Overall Mixed potential. A self-assessment is a student's own analysis of how well he or she is thinking. We know from a large number of studies that most people are poor judges of how well or how critically they think. These techniques can be useful over time if students learn to be more accurate in their self-assessment, but there are little data to suggest that this actually happens.
STUDENT JOURNALS	Mixed potential. Student journals seem to work well for a subset of students who actually reflect on their thinking. For many students, they are worthless exercises in filling up paper. Some instructors like to give students the experience of student journals so that those students who benefit from this activity are not penalized by those who do not. It can be useful, but only for some students. Clear instructions for journaling are required.
SELF-CRITIQUES	Limited potential. Given that most people are very happy with their ability to think critically, self-critiques can only be useful if students learn to see their own weaknesses. It is difficult to change belief about how well one thinks, but not impossible. Thus, one outcome of critical thinking instruction is the seemingly paradoxical result that students often rate themselves as poorer thinkers at the end of a course than at the start. This is a positive outcome, but it tells instructors very little about the student's actual ability to think critically.

COLLABORATION	Overall Strong potential. When students collaborate, they think in groups. Because much of the thinking they will do outside of class will involve other people, it can be a valid approach to assess critical thinking.
RESEARCH TEAMS	Strong potential. If the research team is given a problem

	that requires critical thinking and good guidelines for teamwork are provided so that each team member must contribute to some of the thinking, it can be useful. Instructors will want to capture at least a sample of the group thinking process so that it can be reviewed with each team.
GROUP PROJECTS	Strong potential. Group projects may be designed so that success only can occur when the group engages in effective critical thinking. Groups can process where their critical thinking was faulty to learn from their error.
ON-LINE ACTIVITIES	Limited potential. An on-line collaboration offers the possibility of tracking the thinking process via the written exchanges among team members. Of course, instructors would want students to know that their exchanges are being monitored.

INTERVIEWS & SURVEYS	Overall Limited potential. Interviews and surveys usually ask specific questions about individual beliefs and perceptions. They are not useful in assessing what is learned because they to focus on what students believe they learned and how satisfied they are with the learning.
SATISFACTION SURVEYS	Poor potential. Satisfaction surveys are often called "smilies" because respondents indicate how happy they are with an assignment or course. These are not the same as actual measures of what was learned and cannot be substituted for performance indicators.
PERFORMANCE REVIEWS	Limited potential. Stakeholders can be asked to rate the quality of critical thinking in their evaluations of performance but may require training to understand the parameters being investigated.
EXIT INTERVIEWS	Poor potential. Exit interviews occur when students are leaving a course or program, most often at graduation. They are reflections about what was good or bad about a program of study. Although these measures provide useful data, they usually do not measure critical thinking.
EXTERNAL EXAMINER INTERVIEWS	Moderate potential. External examiners are used to provide an outside (i.e., unbiased) evaluation of the quality of learning. The ability of external evaluators to measure critical thinking depends on what they ask. If they ask satisfaction questions, then they are not assessing critical

	thinking, but if they ask students to think through a complex problem and explain what they are doing, the assessment can be a measure of critical thinking.
FOCUS GROUPS	Limited potential. Focus groups are often group evaluations of a program or course. They do not provide evidence of critical thinking unless the group is asked to solve a problem, reach a conclusion, make a complex decision or engage in some other critical thinking task.
FOLLOW-UP ALUMNI INTERVIEWS	Moderate potential. Alumni follow-ups tend to utilize satisfaction questions, but they could provide evidence of the long-term retention of critical thinking skills and their transfer to novel domains if the alumni are asked questions that require critical thinking.

ARCHIVAL MEASURES	Overall Poor potential. Archival methods use data that are already available. As in the other categories, the quality of the assessment depends on what is in the available data.
TRANSCRIPT ANALYSIS	Limited potential. A transcript analysis is not likely to tell us much about critical thinking skills because we do not know what was required in each of the classes. Research has shown that much of the learning that occurs in college is relatively low level direct recall of information or low-level inferences.
ANALYSIS OF TRANSFER PATTERNS	Limited potential. Course-taking patterns are not likely to be useful by themselves, but could be useful to see how different patterns relate to more valid measures of critical thinking.
SYLLABUS AUDIT	Mixed potential. An audit of a syllabus can sometimes show if critical thinking skills are being taught and learned in a particular class, but most often the syllabus is a list of reading assignments, dates assignments are due, and exam dates. There is rarely any information in the syllabus that provides a clue as to what students are required to do with the information to-be-learned.
DEMOGRAPHIC DATA ANALYSIS	Poor potential. These analyses will not tell us anything about the quality of the thinking of any individual or group.
ALUMNI DATABASE	Poor potential. An alumni data base that provides information about the types of careers that students enter

	upon graduation and where they are working in 2 to 3 years can allow us make inferences about critical thinking. In general, some careers (e.g., law, research) require better thinking skills than others (e.g., most clerical positions), but this is not a strong assessment method.
LIBRARY STATISTICS USAGE/WEB HITS	Poor potential. Ideally, students who read more should be better thinkers, but we do not know if this hypothesized relationship is true. A better index might be what they chose to read, but this is not a direct measure of critical thinking ability and it requires too many inferences to qualify as a valid assessment.

## CHOOSING ASSESSMENT METHODS

Goal 4: Application of Psychology

Understand and apply psychological principles to personal, social, and organizational issues.

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- 4.1 Describe major applied areas of psychology (e.g., clinical, counseling, industrial/organizational, school, health).
  - 4.2 Identify appropriate applications of psychology in solving problems, such as
  - 4.3 Articulate how psychological principles can be used to explain social issues and inform public policy.
  - 4.4 Apply psychological concepts, theories, and research findings as these relate to everyday life.
  - 4.5 Recognize that ethically complex situations can develop in the application of psychological principles.

ASSESSMENT  
CATEGORY

ESTIMATE OF METHOD'S POTENTIAL

CLASSROOM/COURSE

Mixed potential. Classroom strategies show variable

DATA	potential in measuring how students apply the concepts and principles they learn in their psychology courses.
OBJECTIVE TESTS	Limited potential. objective tests (e.g., multiple-choice items) can assess knowledge of the roles of applied areas (e.g., employee selection, training, and evaluation in I/O psychology) and the differences among areas of applied psychology (e.g., clinical and counseling psychology).
ESSAY TESTS	Strong potential. Essay questions can assess knowledge of the application of psychology if they require students to describe examples of how psychological principles and methods can be used to solve specific problems (e.g., decreasing a child's tantrums, strengthening a college student's study skills, or helping an adult overcome a phobia) or how ethical issues can decrease the desirability of some applications.
EMBEDDED QUESTIONS AND ASSIGNMENTS	Strong potential. Embedded assessments represent activities that the department has agreed will provide a good measure of student learning or progress but take place within the confines of a class. Classroom assignments can be used to assess students ability to apply psychological principles, theories, and methods if they are designed to do so. For example, students can apply what they have learned about stress management in an assignment that requires them to (1) identify the major stressors in their lives, (2) devise a plan to improve their ability to cope with these specific stressors, and (3) evaluate the effectiveness of their plan.
CLASSROOM ASSESSMENT TECHNIQUES	Not applicable. Classroom assessment refers to informal methods to determine whether or not students understand course material (e.g., the end-of-class one minute paper). Thus they are more suited to providing feedback to teachers about what is going on in their classrooms than producing data about students ultimate ability to apply psychological principles and methods.

INDIVIDUAL PROJECTS/PERFORMANCE ASSESSMENT	Mostly Strong potential. Nearly all of the methods that address individual performance are reasonable to optimal means of addressing the
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	application of concepts.
WRITTEN PRODUCTS	Strong potential. Any written assignment (e.g., a term paper, moral dilemma analysis) that requires students to describe how they would apply their psychological knowledge would be useful as a means of assessing knowledge of how psychological principles and methods can be applied. Of course, knowing how to apply psychological principles and methods and actually being able to apply them successfully are two different stories.
ORAL PRESENTATIONS	Strong potential. oral presentations can be used to assess the ability to apply psychology in the same way that written products can.
GRAPHIC TESTS AND DISPLAYS	Limited potential. Simple graphic representations may be insufficient with regard to clarifying an application.
POSTERS	Strong potential. A poster can provide substantial evidence of students ability to apply what they have learned in their methods classes. It can also provide faculty with an opportunity to evaluate students ability to "think on their feet" when they are asked questions during a poster session, which provides another venue for demonstrating application skills.
STRUCTURAL/SITUATIONAL ASSESSMENTS	Strong potential. Simulations in which a "real world" situation is created in an artificial environment (e.g., counseling sessions in which the student "counselor" must provide counseling to a fellow student who is role playing a particular DSM category) can provide faculty with a rich opportunity to assess students ability to apply what they have learned in the classroom (e.g., listening skills, the development of rapport, professional mannerisms, etc.).

SUMMATIVE PERFORMANCE ASSESSMENT	Mixed potential. Summative methods must have a predominant focus on application to serve this goal. Some summative approaches tend to have a broader focus.
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<p>STANDARDIZED TESTS</p>	<p>Limited potential. There are some nationally standardized tests (e.g., the ACAT and the ETS Undergraduate Field Test) that contain subtests that measure student's knowledge of psychological research methods (e.g., research design, statistical analysis, and graphic interpretation), which are legitimate examples of how psychologists apply the scientific method to solvable problems. However, most question sets favor lower-order questions rather than those that involved applied skills.</p>
<p>LOCALLY DEVELOPED TESTS</p>	<p>Limited potential. A locally developed test will allow faculty the opportunity to collaborate to produce a locally developed test that incorporates application, but producing applied items will be as difficult locally as it is in national exams.</p>
<p>CAPSTONE EXPERIENCES</p>	<p>Optimal potential. There are many types of capstone experiences, but those that require enrollees to "do the discipline" are probably the most effective way for a department to assess its student's ability to apply the psychological principles and methods they have acquired in their previous class work. Capstone classes provide students with an opportunity "to demonstrate comprehensive learning in their major through some type of product or performance" (Palomba &amp; Banta, 1999, p. 124). In other words, a capstone is a class in which senior psychology majors are required to pull together what they have learned in their previous classes and use this integrating experience to demonstrate they are capable of doing what they should be able to do as they graduate from the program (e.g., perform research in a capstone laboratory or demonstrate clinical skills during an internship with a local crisis clinic). This process serves a dual purpose. It allows psychology majors with a final opportunity to practice and demonstrate the skills they will need to succeed after graduation on the job or in graduate school. It also provides the Psychology Department with a final opportunity to assess whether or not it has been successful in its mission to produce psychology majors who are capable of applying what they have learned in their previous seven semesters.</p>
<p>INTERNSHIPS OR PROFESSIONAL APPLICATIONS</p>	<p>Strong potential. See Capstone Experiences above for description of internships as assessment strategies. An internship or practicum taken under the direction of an on-the-job professional can be an invaluable experience for psychology students and it can also provide quality feedback to a department about its students' ability to</p>

	<p>apply what they have learned in the classroom if their on-the-job supervisors are willing and able to provide such feedback to the supervising teacher.</p>
<p>PORTFOLIOS</p>	<p>Moderate potential. Portfolios can produce longitudinal information, allow students to reflect upon their progress, and give them a voice in assessment. Artifacts could include test scores in classes that covered application topics, papers written on application, journals from internships, reports of projects, etc. The degree to which application is involved in the portfolio design criteria must be departmentally determined.</p>
<p>ASSESSMENT CENTER METHODS</p>	<p>Mixed potential. Simulations are an excellent way to assess application skills, but the necessity for thorough planning and implementation, plus the expense of training or paying already-trained assessors are strong drawbacks of this method. It might be interesting to train senior psychology majors (as part of their capstone experience) to be assessors in simulations conducted in lower-level classes in which psychological principles, theories, and methods are applied (e.g., case studies requiring DSM diagnoses or detection of flaws such as uncontrolled variables in research designs). This would allow faculty to not only involve students in the assessment process, but also provide students with the opportunity to learn and demonstrate a valuable application of psychology (assessment).</p>
<p>CASE AND LONGITUDINAL STUDIES</p>	<p>Mixed potential. Longitudinal assessment studies involve the collection of pre- and post-information and, as such, they can provide evidence of how students change in their ability to apply the discipline over the course of their education. <i>This type of assessment may be most valuable to departments in non-selective institutions whose students enter with minimal skills. These departments may seek to prove that although their students do not graduate with the same high level of skills exhibited by the graduates of more selective school, their students actually make more progress (i.e., more added value) during their undergraduate years than their more high ability counterparts. As with all types of longitudinal design, it is important to realize that pre- and post-changes may be due to factors other than academic programs (e.g., maturity), and that tracking students through the process can be challenging (e.g., students who drop out).</i></p>

<b>SELF-ASSESSMENT</b>	Strong potential. Both self-assessment methods show promise for assessing application skills in psychology.
<b>STUDENT JOURNALS</b>	Strong potential. Students engaged in internships or service learning projects can be required to journal their experiences by keeping time logs, describing their actual activities, identifying their goals, evaluating whether or not they have accomplished their goals, and illustrating how their goals have been met. A perusal of these journals can give departments an accurate idea of their student's perceptions of their ability to apply the psychological principles and methods they have acquired in the classroom. However, better journal performance is facilitated by explicit directions to reflect application of course content.
<b>SELF-CRITIQUES</b>	Strong potential. When students have criteria that delineate successful performance, they can demonstrate the ability to judge their own skills in applying psychology concepts and principles.

<b>COLLABORATION</b>	Mixed potential. Traditional group projects and research teams show great potential for illustrating application skills; on-line tracking is much more problematic.
<b>RESEARCH TEAMS</b>	Strong potential. One specialized type of group problem-solving is the research team, which requires its members to apply what they have learned in their research methods class in a collaborative setting. The research team can empower students to learn how to apply methods to solve problems without having the full responsibility involved in solo projects. In addition, the number of team members has the potential to enhance the quality of the application just as it has the potential to make completing the project more challenging.
<b>GROUP PROJECTS</b>	Strong potential. Group projects allow faculty to assess their students ability to apply the principles they have acquired in two ways. When students work together to solve problems, they can demonstrate applications in content such as using Kohlberg's stages to determine moral reasoning. Their group work can also illustrate what principles from social psychology can be brought to bear to make the work satisfying (e.g., how to minimize social loafing). Applying these principles is an excellent example of the application of psychological knowledge

	to both everyday life (e.g., persuading children to do household chores rather than being waited upon by their mothers as if they were members of the royal family) and organizational situations (e.g., getting maximum performance from all members of a committee or work team). Carefully devised rubrics to assess collaboration attitudes and skills (e.g., willingness to volunteer and consensus-building) can be used by both faculty and peers at strategic stages of a project.
ON-LINE ACTIVITIES	Limited potential. Tracking group problem-solving process through online discussion can be a rich source of data for determining the evolution of application skills; however, the disadvantages involved in deconstructing the qualitative materials make this strategy less desirable.

INTERVIEWS & SURVEYS	Moderate potential. Interview methods generally can have application skills as a target but this strategy requires making the assessment of application skills a prominent part of the design.
SATISFACTION SURVEYS	Moderate potential. Satisfaction surveys can be used to determine how well current students or alumni perceive they are learning or learned how to apply psychology. However, the survey must be carefully crafted to reflect an estimate of the student's application skills.
PERFORMANCE REVIEWS	Strong potential. Subsequent work settings provide good contexts in which generalization of skills can be evaluated.
EXIT INTERVIEWS	Moderate potential. Exit interviews can be designed to focus on the aspects of application outlined in this goal.
EXTERNAL EXAMINER INTERVIEWS	Moderate potential. External examiner interviewers usually work from a protocol that should be shaped by the department's interest in the effectiveness of application skills.
FOCUS GROUPS	Strong potential. Focus groups can be used to gather initial data that may zero in on a specific problem. As such, the purpose of the group may be to solve a problem and provide feedback to the department based on the expressed purpose. As such, students can apply principles and concepts in psychology both in the process and product of the focus group.

FOLLOW-UP ALUMNI INTERVIEWS	Limited potential. Calling alumni and identifying examples of successful or not so successful applications of psychology can be a source of data, but the demand characteristics of the situation may produce false positive data. If the purpose is not expressly identified by the researcher, the interview may be suspect on the basis of its potential deception.
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ARCHIVAL MEASURES	Mixed potential. In most cases, archival measures cannot provide information about the student's ability to apply psychology. At best, archival records may reveal the intention of course design to address application skills.
TRANSCRIPT ANALYSIS	Limited potential. Transcript analysis might yield the percentage of students engaged in "applied" courses (e.g., internships) as well as the quality of their performance in the class, which could provide a diffuse measure of application skills.
ANALYSIS OF TRANSFER PATTERNS	Not applicable.
SYLLABUS AUDIT	Strong potential. A syllabus audit would be a good first step in determining whether or not faculty are requiring students to engage in assignments that require the application of psychological principles and methods. Where application skills have been identified as a goal by the department, this outcome should be reflected in a reasonable number of syllabi or the department will need to re-examine their curriculum offerings or mission.
DEMOGRAPHIC DATA ANALYSIS	Not applicable.
ALUMNI DATABASE	Limited potential. Determining the percentage of alumni who enter professions that require the application of psychological knowledge and skills would allow a department to get a sense of how successful its curriculum is in preparing students to apply psychology on-the-job. However, the link between job title and application of psychology principles may be fuzzy even for the former student.
LIBRARY STATISTICS	Not applicable.

## References

Palomba, C. A. & Banta, T. W. (1999). *Assessment essentials: Planning, implementing, and improving assessment in higher education*. San Francisco: Jossey-Bass Publishers.

## CHOOSING ASSESSMENT METHODS

Goal Δ: Values in Psychology

Value empirical evidence, tolerate ambiguity, act ethically, and reflect other values that are the underpinnings of psychology as a science.

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- Δ.1 Recognize the necessity for ethical behavior in all aspects of the science and practice of psychology.
  - Δ.2 Demonstrate reasonable skepticism and intellectual curiosity by asking questions about causes of behavior.
  - Δ.3 Seek and evaluate scientific evidence for psychological claims.
  - Δ.4 Tolerate ambiguity and realize that psychological explanations are often complex and tentative.
  - Δ.5 Recognize and respect human diversity and understand that psychological explanations may vary across populations and contexts.
  - Δ.6 Assess and justify their engagement with respect to civic, social, and global responsibilities.
  - Δ.7 Understand the limitations of their psychological knowledge and skills.

ASSESSMENT  
CATEGORY

ESTIMATE OF METHOD'S POTENTIAL

CLASSROOM/COURSE	Not recommended overall. Although the subtypes
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DATA	demonstrate differential opportunities for assessing values, in general, classroom and course data support other goals more effectively. Direct inquiry into values may be vulnerable to demand characteristics. Inferring values from indirect methods may be prone to interpretive error.
OBJECTIVE TESTS	Not recommended. It may be possible to assess values using this technique but it is unlikely to yield an accurate assessment of the student's true commitment to scientific values.
ESSAY TESTS	Limited potential. Questions that are specifically targeted to inferring and discussing relevant science values may be somewhat helpful, but again the demand characteristics may distort validity.
EMBEDDED QUESTIONS AND ASSIGNMENTS	Limited potential. Departments can embed values checkpoints at various points in required courses, but demand characteristics may influence students to respond in socially desirable ways rather than what they truly believe.
CLASSROOM ASSESSMENT TECHNIQUES	Not recommended. Most classroom techniques concentrate on capturing student understanding of content or appraisal of class effectiveness. Their values may be inferred in the latter purpose but those data tend to be of secondary interest in this application.

INDIVIDUAL PROJECTS/PERFORMANCE ASSESSMENT	Mixed potential overall. Individual projects and other forms of performance assessment do provide some opportunity to assess values based on how students develop their arguments and express what they have learned. Errors (e.g., reliance on personal experience vs. empirical evidence) may provide the basis for a strong inference about which scientific values have not been embraced. Faculty may feel uncomfortable offering feedback based on inferences, no matter how compelling.
WRITTEN PRODUCTS	Strong potential. Written work can assess values in psychology either by addressing explicit values as the focus of the writing or by making errors that reveal the notable absence of an expected value (e.g., when students reports that an

	<p>experiment "proves" a hypothesis. The presence of designated scientific values in writing projects tends to enhance the overall evaluation of quality of the work since the voice of the paper reflects the values of the community.</p>
ORAL PRESENTATIONS	<p>Strong potential. Oral presentations can also provide significant information about the degree to which students adhere to the values of the psychological community either by the direct values espoused in the presentation or the errors that reveal either a misunderstanding or rejection of those values. Typically faculty do not directly grade presentations based on the values expressed; however, speeches and presentation that more accurately reflect psychology values may exert a positive influence on the grade and feedback.</p>
GRAPHIC TESTS AND DISPLAYS	<p>Limited potential. The abstract nature of values does not lend itself as readily to this type of assessment.</p>
POSTERS	<p>Limited potential. Unless the assigned poster addresses values in an explicit way, faculty may have to infer relevant values from posters designed to address other more concrete concepts. In addition, spontaneous discussion about the poster production can probe student values as one source of data about how the students solved the problem. However, this situation lends itself to strong demand characteristics so students may report the values that will make the instructor happy, not necessarily the true values that motivate their behavior.</p>
STRUCTURAL/SITUATIONAL ASSESSMENTS	<p>Strong potential. Structured problem-solving scenarios can be designed around the scientific values specified in this goal. Students can be asked to resolve some value conflicts in ways that will illustrate whether they have integrated the common values psychologists most typically espouse.</p>

SUMMATIVE	Mixed potential overall. This category contains
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<p><b>PERFORMANCE ASSESSMENT</b></p>	<p>some methods that show especially good potential for assessing the values that the student has learned to honor, but other methods are less profitable. The department will need to determine their comfort level with whether and how to assess scientific values.</p>
<p><b>STANDARDIZED TESTS</b></p>	<p>Not recommended. There are no commonly used tests of psychological values. There may be more generic scientific value inventories but these have not been implemented.</p>
<p><b>LOCALLY DEVELOPED TESTS</b></p>	<p>Not recommended. There are no known inventories on psychological values that have been developed in local contexts.</p>
<p><b>CAPSTONE EXPERIENCES</b></p>	<p>Strong potential. The design of the capstone experience can and perhaps should include a component in which the student actively identifies the ways in which their work in the course actively expresses scientific values. Values and ethics may be the content base for the capstone as well, which provides several venues to assess what the student recognizes, understands, and practices among scientific ethics.</p>
<p><b>INTERNSHIP/PROFESSIONAL APPLICATIONS</b></p>	<p>Strong potential. Settings in which students can make practical applications of the psychology content they have learned can illustrate the degree to which they have accepted and practiced scientific values. However, not all internship supervisors are likely to have a keenly developed sense of the values expectations. Therefore, a survey or set of criteria may be most useful in framing feedback on the degree to which students illustrate those principles.</p>
<p><b>PORTFOLIOS</b></p>	<p>Strong potential. One criterion that can drive selection of work for the student portfolio is the degree to which those products illustrate psychological values. The criteria add legitimacy to faculty comments about the salience of the values in student performance. Including a self-assessment dimension may further foster student's understanding of the critical values.</p>
<p><b>ASSESSMENT CENTER METHODS</b></p>	<p>Mixed potential. Not all assessment center methods directly address values. However, it may be possible for students to justify the actions they</p>

	<p>take in performance assessment situations from the values to which they subscribe. For example, the student might be asked to simulate serving as an editor who needs to choose among three articles, which differ dramatically in the degree to which those papers adhere to the prescribed values. The justification for the selection would reveal the student's values.</p>
<p>CASE AND LONGITUDINAL STUDIES</p>	<p>Strong potential. Qualitative studies of student's changes over time could capture shifts in their adherence to scientific values although traditionally the emphasis in such studies tends to be more focused on the value of the content base itself. Departments would benefit from knowing what elements of the curriculum foster improvements in the practice of scientific values. For example, in which courses are students likely to become comfortable with complexity and ambiguity? Well-framed qualitative investigation would yield such answers.</p>

<p>SELF-ASSESSMENT</p>	<p>Mixed potential overall. Many departments do not pay direct attention to the assessment of psychological values since these may be regarded as abstract or esoteric. In such situations, students will be less well prepared to self-assess. However, to the extent that departments can clarify their expectations about the ways in which they expect student values to change toward greater appreciation of the scientific aspects of psychology, the more student self-assessment can be facilitated.</p>
<p>STUDENT JOURNALS</p>	<p>Mixed potential. In student journals, values can be addressed directly or they may be inferred based on student discussion of related phenomena. Better journal entries will be framed in ways that students can directly discuss their practice of identified values.</p>
<p>SELF-CRITIQUES</p>	<p>Strong potential. Where departments make their values &amp; expectations explicit, students should be able to evaluate the extent to which their own work matches the department's expectations.</p>

COLLABORATION	Limited potential overall. The assessment of the degree to which individuals express scientific values may be challenging to assess in group contexts. Even when the focus of the group activity is directly linked to values, discussion about values may not predict individual behavior. On the other hand, conflict situations may clarify the degree to which students differ in the values that they profess.
RESEARCH TEAMS	Limited potential. Students who work under the direction of a research mentor are likely to receive indirect training on the scientific values that undergird high quality research. When students are challenged to explain why certain actions are required as part of the research process, their understanding and adherence to scientific values can be assessed.
GROUP PROJECTS	Limited potential. Most group projects that transpire in the undergraduate curriculum are unlikely to address scientific values directly. However, some projects could be designed that would allow students to solve problems in such a way that their collective grasp of scientific principles could be demonstrated.
ON-LINE ACTIVITIES	Poor potential. Values may be inferred from group process but the amount of work required make this assessment approach untenable.

INTERVIEWS & SURVEYS	Mixed potential overall. Various approaches in this goal produce differential outcomes in identifying values.
SATISFACTION SURVEYS	Limited potential. Satisfaction surveys do not tend to focus on values related to psychology education. Perhaps some survey items could be crafted to address values, but that might detract from the main purpose.
PERFORMANCE REVIEWS	Limited potential. Inferring other's values from their performance is dicey business. Perhaps it is not best to describe definitively what the values related to psychology education might be.
EXIT INTERVIEWS	Strong potential. Although assessing values will be determined by the concentration of the interview protocol, it is possible to have students conduct some targeted reflection on the values that they have embraced during the course of their education. An additional problem is

	that the values reported during an interview may not be the values of practice.
EXTERNAL EXAMINER INTERVIEWS	Strong potential. Again, the success in identifying values is dependent on the design of the protocol. It is possible to gain some insight about how values have changed, but personal reports may not correspond to performance realities beyond the interview.
FOCUS GROUPS	Strong potential. A focus group can be convened to address how values change as part of education. However, focus groups tend to have a problem-solving focus apart from values.
FOLLOW-UP ALUMNI INTERVIEWS	Limited potential. Discussing values-related issues with alumni may be a window into their values structure, but the complications of this method, including the problem of deception, make it a less .

ARCHIVAL MEASURES	Not recommended overall. Archival measures generally cannot provide a good gauge of values professed or practiced by psychology students.
TRANSCRIPT ANALYSIS	Not recommended. Although it is possible to infer some values from course selections, there are too many variables that influence course choice for the inferences to be meaningful. In addition, adhering to scientific values cannot be assumed just because science courses have been completed.
ANALYSIS OF TRANSFER PATTERNS	Not recommended. Values cannot be inferred from past coursework.
SYLLABUS AUDIT	Not recommended. Most faculty do not explicitly address the values that a course promotes so an audit is unlikely to produce helpful data about values in psychology education.
DEMOGRAPHIC DATA ANALYSIS	Not recommended. Demographic databases are unlikely to address values in a direct and meaningful manner.
ALUMNI DATABASE	Not recommended. Tracking values explicitly is not a typical feature for the alumni database and doing so could be construed as invasive.
LIBRARY USE/WEB HITS STATISTICS	Not recommended. A checked-out library book or evidence of a web hit does not guarantee that the content

has been examined or has created any influence.

## CHOOSING ASSESSMENT METHODS

Goal 6: Information and Technological Literacy

Demonstrate information competence and the ability to use computers and other technology for many purposes.

- 6.1 Demonstrate information competence at each stage in the following process: formulating a researchable topic, choosing relevant and evaluating relevant resources, and reading and accurately summarizing scientific literature that can be supported by database search strategies
- 6.2 Use appropriate software to produce understandable reports of the psychological literature, methods, and statistical and qualitative analyses in APA or other appropriate style, including graphic representations of data.
- 6.3 Use information and technology ethically and responsibly.
- 6.4 Demonstrate basic computer skills, proper etiquette, and security safeguards.

ASSESSMENT  
CATEGORY

ESTIMATE OF METHOD'S POTENTIAL

CLASSROOM/COURSE DATA	Mixed potential. The only venue in which classroom and course data might reveal information technology expertise would be classes that are heavily mediated. For example, computer labs might be used for on-line testing that would allow some opportunity to gauge student expertise with this method. For the most part, information skills will be better assessed with other strategies that involve activities outside the classroom.
OBJECTIVE TESTS	Limited potential. Knowledge of information and literacy skills could be tested through objective test questions; however, other methods will demonstrate

	their understanding more directly.
ESSAY TESTS	Poor potential. In class essays would have to focus on student reports of their information retrieval and technological strategies that would produce extremely boring reading.
EMBEDDED QUESTIONS AND ASSIGNMENTS	Strong potential. Departments may dictate specific milestones that should be embedded in required coursework. For example, faculty may specify that exposure to a psychology research database might be embedded in required \(\cdot\) classes. In smaller contexts, librarians can be enlisted to help conduct information skills training. Later in the curriculum, faculty might identify a courses or set of courses in which they can commit to a particular length of paper with an explicit minimum of high quality scientific sources. The quality of information skills can be inferred from the product; the quality of technological expertise might require more digging or more explicit reporting mechanisms.
CLASSROOM ASSESSMENT TECHNIQUES	Limited potential. This approach may be helpful only in classes specifically focused on the development of information and technology skills.

INDIVIDUAL PROJECTS/PERFORMANCE ASSESSMENT	Mixed potential. Intellectual products provide a stimulus from which faculty can interpret sophistication in information and technological skills. When construction is remote, there may be some risk that the student's work is not an individual production. However, faculty can address this limitation by including a reflective piece that directly addresses the targeted skills.
WRITTEN PRODUCTS	Optimal potential. Written projects provide an ideal context in which to look at research generation, information evaluation, and technology skills.
ORAL PRESENTATIONS	Moderate potential. Individual oral presentations provide some opportunity to evaluate quality of resources; however, these may be challenging to judge in the moment. oral presentations do provide an opportunity to examine power-point or overhead management. In addition, the coherence

	and development of an oral presentation can reveal research strategies.
GRAPHIC TESTS AND DISPLAYS	Limited potential. Exploring concepts through graphics tends to be an intermediate step in developing research ideas. These may be difficult to assess quality. Such displays may or may not provide an opportunity to assess technology skills,
POSTERS	Moderate potential. The limited space available in most posters may not provide an ideal context in which to evaluate the process of generating research ideas. The poster normally produces highlights so errors or suspect variations may be harder to determine. The execution of the poster will require some technological and aesthetic skills to be successful.
STRUCTURAL/SITUATIONAL ASSESSMENTS	Limited potential. Situational assessments move remote activities into observable territory to facilitate faculty assessment. However, a situational assessment that covers all the outcomes associated with the goal is likely to be fairly intimidating. Performance anxieties may complicate student's ability to perform these complex skills in a situational assessment.

SUMMATIVE PERFORMANCE ASSESSMENT	Mixed potential. Strategies in this category range from zero to maximally helpful.
STANDARDIZED TESTS	Not available. Although there is no standardized approach for measuring research skills, this gap represents an interesting development opportunity.
LOCALLY DEVELOPED TESTS	Limited potential. Some departments have developed methods to assess information skills and research summarizing skills. Assessing these abilities using objective means will be efficient. Asking students to summarize literature will be more challenging and time-consuming but still do-able.
CAPSTONE EXPERIENCES	Strong potential. Assuming that the capstone course has an expressive requirement (e.g., writing or speaking), the capstone course can

	provide an integrated demonstration opportunity.
INTERNSHIP/PROFESSIONAL APPLICATIONS	Limited potential. The focus of most applied summative experiences will not be focused on the development of the targeted skills.
PORTFOLIOS	Strong potential. Providing explicit criteria that ask students to select "works" based on what these reveal about their skills. The evolution of their abilities can be the focus of reflection on why they selected the items they did.
ASSESSMENT CENTER METHODS	Limited potential. Assessment center methods, like situational assessments, move remote activities into observable territory to facilitate faculty assessment. However, a situational assessment that covers all the outcomes associated with the goal is likely to be fairly intimidating. Performance anxieties may complicate student's ability to perform these complex skills.
CASE AND LONGITUDINAL STUDIES	Limited potential. The complexities of tracking these skills over time mitigates against adopting this strategy to monitor their evolution.

SELF-ASSESSMENT	Mixed potential. Developing student's metacognition of their achievement in information and technology skills has not been overtly addressed through self-assessment strategies.
STUDENT JOURNALS	Limited potential. It is unlikely that faculty would choose to invest time reading about student's struggle to learn information and technology skills. However, engaging in student journal writing might provide some keys to faculty about where the particular points of struggle might be.
SELF-CRITIQUES	Strong potential. Where faculty can specify relevant performance criteria, students can provide an estimate of their research conceptualization skills, their sophistication in evaluating information, and their polish in technological execution.

COLLABORATION	Mixed potential. The range of potential in this category ranges from strong to poor.
RESEARCH TEAMS	Strong potential. A research team can develop expertise in research skills through peer involvement. Ironically, research teams may reduce a student's direct involvement in finding resources or producing polished copy. However, the opportunity to brainstorm with peers about developing concepts and executing research strategies makes this an attractive alternative.
GROUP PROJECTS	Moderate potential. Group projects can still involve many of the elements in this target area related to research teams.
ON-LINE ACTIVITIES	Poor potential. Tracking student skill development online will be a complex undertaking unless there is explicit direction for the online traffic to focus on this area of skill development.

INTERVIEWS & SURVEYS	Mixed potential. The assessment of attitudes by the students or other stakeholders may provide some feedback about information/technological competence, but attitudes may not be an accurate indication of true skill attainment.
SATISFACTION SURVEYS	Strong potential. The abilities of students to process information and use technology responsibly can be evaluated by their employers, their graduate advisors, or other stakeholders. External critics may require prompting explicitly to address this skill, but the context in which the critics work provides a reasonable normative comparison.
PERFORMANCE REVIEWS	Strong potential. Graduate school advisors and employers can readily provide comments on the quality of technological preparation for their setting.
EXIT INTERVIEWS	Moderate potential. Students can reflect on the evolution of their information processing and technological execution as part of the interview protocol.
EXTERNAL EXAMINER INTERVIEWS	Limited potential. External examiners can ask probe questions to evaluate student comfort levels about the target skills, but it may be much more challenging to evaluate the quality of their performance from self-report in the absence of concrete evidence. If examiners also review printed materials or tapes of student work, they may be able to make reasonable judgment about student

	competence.
FOCUS GROUPS	Limited potential. Focus groups most often convene to solve specific problems for a department. Although the topic might be the target of a focus group, it is more likely used for other broader problems.
FOLLOW-UP ALUMNI INTERVIEWS	Not recommended. A follow-up interview on this topic would be hard to execute without inviting demand characteristics that might distort the real skill levels attained.

ARCHIVAL MEASURES	Limited potential.
TRANSCRIPT ANALYSIS	Moderate potential. Transcript analysis can reveal the pattern of courses students may engage in (or avoid) in the development of relevant research skills. The transcript analysis can provide both patterns and some in-class estimates of quality of student performance although the value of these may be limited.
ANALYSIS OF TRANSFER PATTERNS	Limited potential. Departments can benefit by understanding how transfer students may be prepared to engage in research and information activities.
SYLLABUS AUDIT	Moderate potential. Departmental activity examining where research and information skills are taught may be a helpful first step in diagnosing where these skills need to be enhanced.
DEMOGRAPHIC DATA ANALYSIS	Not applicable.
ALUMNI DATABASE	Not applicable.
LIBRARY STATISTICS USAGE/WEB HITS	Not applicable.

## CHOOSING ASSESSMENT METHODS

Goal Y: Communication Skills

Communicate effectively in a variety of formats.

- Y.1 Demonstrate effective writing skills in various formats (e.g., essays, correspondence, technical papers, note taking) and for various purposes (e.g., informing, defending, explaining, persuading, arguing, teaching).
- Y.2 Demonstrate effective oral communication skills in various formats (e.g., group discussion, debate, lecture) and for various purposes (e.g., informing, defending, explaining, persuading, arguing, teaching).
- Y.3 Exhibit quantitative literacy.
- Y.4 Demonstrate effective interpersonal communication skills.
- Y.5 Exhibit the ability to collaborate effectively.

ASSESSMENT  
CATEGORY

ESTIMATE OF METHOD'S POTENTIAL

CLASSROOM/COURSE DATA	Moderate to strong potential overall. These methods can be used to assess student's communication skills but only if writing, speaking, and presentation assignments are made part of the coursework.
OBJECTIVE TESTS	Not recommended. Objective tests can be used to assess student's factual knowledge of psychology but have no merit as a metric of student's writing and speaking skills. Poor means of assessing interpersonal skills.
ESSAY TESTS	Strong potential. Essay tests permit careful assessment of student's writing skills.
EMBEDDED QUESTIONS AND ASSIGNMENTS	Moderate potential. This method can be used in any psychology course to assess student's writing skills. Embedding specific departmental assessments to evaluate communication skills in selected courses may be a sound strategy.
CLASSROOM ASSESSMENT	Moderate potential. Classroom assessment techniques that focus on measuring student's writing, speaking,

TECHNIQUES	interpersonal, and presentation skills may be effective tools for this purpose.
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INDIVIDUAL PROJECTS/PERFORMANCE ASSESSMENT	Strong potential overall. All assessment strategies in this category provide direct measures of skills in these areas.
WRITTEN PRODUCTS	Strong potential. Essays, term papers, and laboratory assignments offer perfect opportunities to assess student's conceptual understanding of material; their ability to develop rationale arguments in support of a theory, data, or issues; their understanding of APA style; and language use.
ORAL PRESENTATIONS	Strong potential. Oral reports represent the perfect means of assessing student's public speaking/oral communication abilities.
GRAPHIC TESTS AND DISPLAYS	Strong potential. This method permits assessment of student's abilities to communicate information, particularly numerical data, in a visual medium.
POSTERS	Strong potential. This method permits simultaneous assessment of student's writing skills, graphic display skills, and oral communication skills.
STRUCTURAL/SITUATIONAL ASSESSMENTS	Strong potential. Placing students in situations that require them to role play, participate in mock interviews, and so on, may be an effective means of assessing their ability to think on their feet, speak extemporaneously, and interact with each other.

SUMMATIVE PERFORMANCE ASSESSMENT	Limited to moderate potential overall. Recommendations vary in this category from strong potential to not recommended.
STANDARDIZED TESTS	None available. There are no existing national normed tests to address communication skills in psychology in summative performance.
LOCALLY DEVELOPED	Limited to Strong potential. Locally developed

TESTS	essay tests permit assessment of student's writing skills; objective tests do not.
CAPSTONE EXPERIENCES	Moderate to Strong potential. Capstone courses that include a writing or speaking component represent excellent opportunities to assess senior student's communication abilities. Group activities may be useful in assessing student's interpersonal skills.
INTERNSHIP/PROFESSIONAL APPLICATIONS	Limited potential. Unless the internship/professional application involves writing or speaking components that are directly assessed, this method holds little promise for assessing student's communication skills. However, this method may be useful for assessing student's abilities to collaborate with others in a real-life setting, thus providing information on their interpersonal skills.
PORTFOLIOS	Strong potential. portfolios entail collections of written work that has been created over time and thus represent an effective means of assessing the development of student writing skills.
ASSESSMENT CENTER METHODS	Limited potential. In-basket strategies and other assessment methods need to build in explicit communication tasks to qualify for consideration.
CASE AND LONGITUDINAL STUDIES	Mixed potential Longitudinal tracking of student's communication abilities over time can be a useful source of information, however, the complexities of this approach (e.g., storage, feedback intensiveness) discourages its use.

SELF-ASSESSMENT	Moderate to Strong potential overall. Self-assessment can be used effectively in almost any psychology course. While self-assessment strategies permit insight into student's academic experiences, they vary in value for assessing student's communication abilities. In many cases, faculty construct self-assessment documents casually and this practice may limit opportunity to examine student's polished communication skills.
STUDENT JOURNALS	Moderate to Strong potential. The usual purpose of journal assignments is to encourage personal expression and

	<p>insight rather than as a vehicle for assessing communication skills; however, adding specific communication criteria to journal directions can facilitate assessment in this area.</p>
<b>SELF-CRITIQUES</b>	<p>Moderate to Strong potential. Students can provide judgments of their own communication strengths and weaknesses although personal bias may limit the accuracy of their judgments. Clearly established communication criteria and developmental practice in using the criteria will facilitate the best results.</p>

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