

**15:295:510 Cooperative and Collaborative Learning Spring 2016**

<b>Class Meets:</b>	Room 347, GSE, Wednesday 4.50 – 7.30 p.m.
<b>Instructor:</b>	Dr. A. O'Donnell
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<b>Office Hours:</b>	Tues, Thur 1 p.m. to 2 p.m. or by arrangement.

Course Materials

1. Journal articles and chapters will be posted on [www.sakai.rutgers.edu](http://www.sakai.rutgers.edu)

**Goals**

The learning goals for this course are shown as they align with the overall learning goals of the LCD master's degree program in the table below. In addition, the table shows how each goal will be assessed.

<b>LCD master's program goals</b>	<b>Course Goals</b>	<b>Assessment of Course Goals</b>
1. Attain mastery of psychological constructs and theories relevant to learning, cognition, and development.	You will be able to define basic concepts related to cooperative and collaborative learning and give examples of these concepts.	In weekly comments you will be able to explain, comment and reflect critically on the readings.
2. Appropriately apply these psychological constructs and theories to educational setting and related applied contexts.	You will be able to recognize the operation of these constructs in practical examples drawn from real life	
3. Achieve skill in the critical evaluation of empirical evidence related to the psychology of education	You will be able to respond critically to the readings in the course or raise questions related to the readings.	In weekly comments you will be able to explain, comment and reflect critically on the readings
4. Attain competence in oral and written communication on topics with educational psychology.	You will be able to provide a coherent presentation of selected content to their peers and be able to answer student questions about the content.	In a presentation to the class, you will provide an overview of a select area of work in cognition and memory.
	You will develop skills of writing a literature review on a topic of interest	In a class paper, you will write a review of research on a topic of interest to you.

**Course Description**

The course presents an overview of current theory and research on cooperative and collaborative learning techniques with particular reference to classroom learning. The course is not intended to be a *methods* course but rather focuses on theoretical perspectives on cooperative learning that will inform the practical choices to be made in classrooms. We will consider examples of techniques and discuss the research findings on the effects of cooperative learning on cognitive and affective outcomes will be discussed. We will also address the role of high level discourse

and the teacher’s role in supporting such discourse by the selection of tasks and the prompting of cognitive and metacognitive strategies. We will examine cooperative and collaborative learning from different theoretical perspectives including those from developmental, social, and cognitive psychology, sociology, and sociolinguistics and the limitations of these various approaches.

Evaluation

ACTIVITY	DUE DATE	% GRADE	RESPONSIBILITY
Weekly Notes/Participation	Weekly	25%	Individual
Article Critique	March 30th	15%	Individual
Term Paper	April 27 <sup>th</sup>	35%	Individual
Presentation	TBA	25%	Individual

Weekly Notes

Purpose:

The purpose of writing weekly notes is to have you articulate your specific reactions to the assigned reading materials/lecture about particular content in the course.

The Task.

You will need to write a 1-2 page reaction paper to the assigned reading each week. You can provide one of the following different types of responses.

- (1) *Questions about the readings:* In this type of assignment, you will be asked to identify 3 questions that you have about the assigned readings for the week. You will need to justify why your questions are interesting or important.
- (2) *Theory critiques:* I will provide a problem to the class and ask how it might be explained from a particular theoretical viewpoint. For example, I may present a case of a student with learning difficulties and suggest how a particular theory might explain the situation. Your task would be to critique the limits of the theory to explain the case.
- (3) *Identification of limitations.* You will need to identify a limitation of a theory or principle from the readings of the week. You will provide an explanation of the limitation and provide a constructive suggestion for how this limitation could be ameliorated.

Critique of an Article on Cooperative Learning

Purpose: The goal of this activity is to have you learn to critically evaluate an empirical research article on the topic of cooperative or collaborative learning. You will need to select an article from a reputable research journal such as those listed below. Other journals may be suitable but you should verify the appropriateness of the journal with me before proceeding.

Journal of Educational Psychology.	Journal of Educational Research.	Journal of Experimental Education.
Reading Research Quarterly	American Educational Research Journal.	Journal of Research in Mathematics Education
Cognition and Instruction.	Review of Educational Research.	Journal of Special Education.
Instructional Science.	Journal of Learning Disabilities.	Learning and Instruction
Educational Psychology Review	Journal of Research in the Teaching of Science	College Composition and Communication
Journal of the Learning Sciences		

Your paper should be 5-6 pages in length, typed, and double spaced. Your title page should include your name, your course number, and you should indicate that the paper is being submitted in order to satisfy the research participation requirement in your class.

Your paper should include the following kinds of information. Some sample questions which might guide your critique are given below, but you should not limit yourself to addressing only these. An empirical article typically has an introduction, a methods section, a results section, and a discussion/conclusions section.

Introduction:

You should provide a summary of the objectives of the research reported. Why was the research conducted? You should critique the stated objectives of the research by addressing whether or not the rationale for the research reported was convincing. Was the problem addressed an important problem?

Was adequate background information to the problem presented? Was the educational significance of the topic discussed? (yes or no answers to these sample questions are not acceptable.)

Methods

You should describe how the research was conducted. Was the subject population adequately described and appropriate to the questions addressed? Could the objectives of the research be met by the methods used to conduct the research? Was the description of the procedures clear and detailed enough to allow someone else to replicate the research?

Results

What were the results of the research?

Discussion/conclusions

What were the theoretical implications of the results?

What were the practical implications of the results?

Could the results be generalized?

What were the limitations of the research?

**TERM PAPER**

This will consist of a thorough literature review on a topic chosen by you. The paper is worth 35% of your grade. The topic of your paper should be relevant to the content of the course. The paper should be written using APA style, which is the style of the American Psychological Association. If you do not already have a copy of the APA Style Manual (6<sup>th</sup> edition), you can get access to one at the reference section of the library. The final paper should be between 20 and 25 pages long, excluding references. For the purpose of the literature review, a convergence approach is probably the best approach to adopt, that is, you should start with general ideas and converge on specific issues which you feel have been ignored in the current literature, or are interesting and worth pursuing. You should provide me with a title and abstract of the paper (general idea of what you might include) of the paper on March 11th. The purpose of this is so I can help you either narrow your focus to something manageable or expand the focus. The final paper is due on April 29th. A detailed description of how to do a literature review can be found at the end of the syllabus.

**Tentative Schedule of Class Meeting and Readings**

<b>Date</b>	
<b>Jan 20</b>	Introduction: Chapters 2 and 3 from Bowles and Gintis (2001)
<b>Jan 27</b>	Chapter 1, 2 and 6 from Tyler (2011)
<b>Feb 03</b>	Chapter 2 De Lisi & Golbeck (1999)
<b>Feb 10</b>	Sun, Anderson, Lin & Morris (2015)
<b>Feb 17</b>	Chapter 1 Webb (2013)
<b>Feb 24</b>	Tutoring: Person & Graesser (1999) Mathes, P. G., & Fuchs, L. S. (1994). The efficacy of peer tutoring in reading for students with mild disabilities: A best-evidence synthesis. <i>School Psychology Review</i> , 23, 55-76.

### Tentative Schedule of Class Meeting and Readings

<b>Mar 02</b>	Studying collaborative learning: Cress & Hesse (2013); Sawyer (2013); Barron, Pea & Engle (2013)
<b>Mar 09</b>	Roles in Groups. Palinscar & Herrenkohl (1999) Cornelius, Herrenkohl, & Wolfstone-Hay. Organizing collaborative learning experiences around subject matter domains: The importance of aligning social and intellectual structures in instruction.
<b>Mar 16</b>	<b>Spring Break</b>
<b>Mar 23</b>	The Role of the Teacher: Cooper (1999); Meloth & Deering (1999)
<b>01</b> <b>Mar 30</b>	Cooperative Learning in the Inclusion Classroom Fuchs, D., Fuchs, L. S., Mathes, P. G., & Simmons, D. C. (1997). Peer-assisted learning strategies: Making classrooms more responsive to academic diversity. <i>American Educational Research Journal</i> , 34, 174-206.  Fuchs, D., Fuchs, L. S., Mathes, P. G., & Martinez, E. A. (2002). Preliminary evidence on the social standing of students with learning disabilities in PALS and no-PALS classrooms. <i>Learning Disabilities Research</i> , 17(4), 205-215.  Jenkins, J. R., & O'Connor, R. E. (2003b). Cooperative learning for students with learning disabilities: Evidence from experiments, observations, and interviews. In H. L. Swanson & K. R. Harris & S. Graham (Eds.), <i>Handbook of learning disabilities</i> (pp. 417-430). New York: The Guilford Press.  Ashman & Gillies (2013) Collaborative learning for diverse learners.
<b>Apr 06</b>	Status Characteristics Cohen, E. G., & Lotan, R. A. (1995). Producing equal-status interaction in the heterogeneous classroom. <i>American Educational Research Journal</i> , 32, 99-120. O'Donnell (1999)
<b>Apr 13</b>	Motivation in collaborative groups. Rogat, Linnenbrink-Garcia, & DiDonato (2013)
<b>Apr 20</b>	Learning through collaborative argumentation. Chinn & Clarke (2013)
<b>Apr 27</b>	Metacognition and computer supported collaborative learning. Winne, Hadwin, & Perry (2013)
<b>May 04</b>	Selection of Tasks Cohen, E. G. (1994). Restructuring the classroom: Conditions for productive small groups. <i>Review of Educational Research</i> , 64, 1-36.  Lotan, R. A. (2003). Group-worthy tasks. <i>Educational Leadership</i> , 60(6), 72-75.

### References

- Ashman, A. F., & Gillies, R. M. (2013). Collaborative learning for diverse learners. In Hmelo-Silver, C. E., Chinn, C. A., Chan, C. K. K., & O'Donnell, A. M. (Eds.), *The international handbook of collaborative learning* (pp. 297-313). New York: Routledge.
- Barron, B. J. S., Pea, R., & Engle, R. A. (2013). Advancing understanding of collaborative learning with data derived from video records. In Hmelo-Silver, C. E., Chinn, C. A., Chan, C. K. K., & O'Donnell, A. M. (Eds.), *The international handbook of collaborative learning* (pp. 203-219). New York: Routledge.
- Bowles, S., & Gintis, H. (2011). *A cooperative species: Human reciprocity and its evolution*. Princeton, NJ: Princeton University Press.
- Chinn, C. A., & Clark, D. B. (2013). Learning through collaborative argumentation. In Hmelo-Silver, C. E., Chinn, C. A., Chan, C. K. K., & O'Donnell, A. M. (Eds.), *The international handbook of collaborative learning* (pp. 314-332). New York: Routledge.
- Cohen, E. G. (1994). Restructuring the classroom: Conditions for productive small groups. *Review of Educational Research*, 64, 1-36.
- Cohen, E. G., & Lotan, R. A. (1995). Producing equal-status interaction in the heterogeneous classroom. *American Educational Research Journal*, 32, 99-120.

- Cooper, M. A. (1999). Classroom choices from a cognitive perspective on peer learning. In A. M. O'Donnell & A. King (Eds.), *Cognitive perspectives on peer learning* (pp. 215-234). Mahwah, NJ: Erlbaum.
- Cornelius, L. L., Herrenkohl, L. R., & Wolfstone-Hay, J. (2013). Organizing collaborative learning experiences around subject matter domains: The importance of aligning social and intellectual structures in instruction. In Hmelo-Silver, C. E., Chinn, C. A., Chan, C. K. K., & O'Donnell, A. M. (Eds.), *The international handbook of collaborative learning* (pp. 333-350). New York: Routledge.
- Cress, U., & Hesse, F. W. (2013). Quantitative methods for studying small groups. In Hmelo-Silver, C. E., Chinn, C. A., Chan, C. K. K., & O'Donnell, A. M. (Eds.), *The international handbook of collaborative learning* (pp. 93-111). New York: Routledge.
- De Lisi, R., & Golbeck, S. L. (1999). Implications of Piagetian theory for peer learning. In A. M. O'Donnell & A. King (Eds.), *Cognitive perspectives on peer learning* (pp. 3-38). Mahwah, NJ: Erlbaum.
- Fuchs, D., Fuchs, L. S., Mathes, P. G., & Simmons, D. C. (1997). Peer-assisted learning strategies: Making classrooms more responsive to academic diversity. *American Educational Research Journal*, 34, 174-206.
- Fuchs, D., Fuchs, L. S., Mathes, P. G., & Martinez, E. A. (2002). Preliminary evidence on the social standing of students with learning disabilities in PALS and no-PALS classrooms. *Learning Disabilities Research*, 17(4), 205-215.
- Hmelo-Silver, C. E., Chinn, C. A., Chan, C. K. K., & O'Donnell, A. M. (2013). *The international handbook of collaborative learning*. New York: Routledge.
- Jenkins, J. R., & O'Connor, R. E. (2003b). Cooperative learning for students with learning disabilities: Evidence from experiments, observations, and interviews. In H. L. Swanson & K. R. Harris & S. Graham (Eds.), *Handbook of learning disabilities* (pp. 417-430). New York: The Guilford Press.
- Lotan, R. A. (2003). Group-worthy tasks. *Educational Leadership*, 60(6), 72-75.
- Mathes, P. G., & Fuchs, L. S. (1994). The efficacy of peer tutoring in reading for students with mild disabilities: A best-evidence synthesis. *School Psychology Review*, 23, 55-76.
- Meloth, M. S., & Deering, P. D. (1999). The role of the teacher in promoting cognitive processing during collaborative learning. In A. M. O'Donnell & A. King (Eds.), *Cognitive perspectives on peer learning* (pp. 235-256). Mahwah, NJ: Erlbaum.
- O'Donnell, A. M. (1999). Structuring dyadic interaction through scripted cooperation. In A. M. O'Donnell & A. King (Eds.), *Cognitive perspectives on peer learning* (pp. 179-196). Mahwah, NJ: Erlbaum.
- Palinscar, A. S., & Herrenkohl, L. R. (1999). Designing collaborative contexts: Lessons from three research programs. In A. M. O'Donnell & A. King (Eds.), *Cognitive perspectives on peer learning* (pp. 151-178). Mahwah, NJ: Erlbaum.
- Person, N. K., & Graesser, A. G. (1999). Evolution of discourse during cross-age tutoring. In A. M. O'Donnell & A. King (Eds.), *Cognitive perspectives on peer learning* (pp. 69-86). Mahwah, NJ: Erlbaum.
- Rogat, T. K., Linnenbrink-Garcia, L., & DiDonato, N. C. (2013). Motivation in collaborative groups. In Hmelo-Silver, C. E., Chinn, C. A., Chan, C. K. K., & O'Donnell, A. M. (Eds.), *The international handbook of collaborative learning* (pp. 250-267). New York: Routledge.
- Sawyer, R. K. (2013). Qualitative methodologies for studying small groups. In Hmelo-Silver, C. E., Chinn, C. A., Chan, C. K. K., & O'Donnell, A. M. (Eds.), *The international handbook of collaborative learning* (pp. 126-148). New York: Routledge.
- Sun, J., Anderson, R. C., Lin, T., & Morris, J. (2015). Social and cognitive development during collaborative reasoning. In L. R. Resnick, C. Asterhan, & S. Clarke (Eds.), *Socializing intelligence through academic talk and dialogue* (pp. 63-77). Washington, D. C.: AERA.
- Tyler, T. R. (2011). *Why people cooperate: The role of social motivations*. Princeton, NJ: Princeton University Press.
- Webb, N. M. (2013). Information processing approaches to collaborative learning. In Hmelo-Silver, C. E., Chinn, C. A., Chan, C. K. K., & O'Donnell, A. M. (Eds.), *The international handbook of collaborative learning* (pp. 19-40). New York: Routledge.
- Winne, P. H., Hadwin, A. F., & Perry, N. E. (2013). Metacognition and computer-supported collaborative learning. In Hmelo-Silver, C. E., Chinn, C. A., Chan, C. K. K., & O'Donnell, A. M. (Eds.), *The international handbook of collaborative learning* (pp. 462-479). New York: Routledge.

## Guidelines for Student-Led Presentation/Discussion

### Student-Led Discussion Requirements

- A student will lead a 25 minute presentation/ of PART of the week's readings (typically one of the readings assigned for the week)
- The presenter should allocate:
  - minute for an introduction, outlining the topic and previewing main content (with a slide),
  - 13-15 minutes for content presentation,
  - 8-9 minutes for discussion (embedded throughout presentation or at the end),
  - About 1 minute for conclusion/wrap-up, with a summary slide (following all discussion).
- **The entire presentation/discussion must not exceed 25 minutes.**
- For each presentation, the students will create:
  - A visual presentation using PowerPoint
  - A copy of a 4-5 page detailed handout (much more information than in the PowerPoint slides)
  - A list of about 4-5 higher order thinking discussion questions (copies to class). Presenters should also prepare at least one follow-up probe for each question in case of limited audience response.
- The student will assume a teaching role, reviewing the assigned reading and facilitating discussion. Content presentation will cover only the main concepts and supporting information. We assume that all students have read the material.
- You should rehearse to make sure their presentation timing is appropriate and oral delivery is smooth. Above all, make sure that you are not reading slide or note text to the audience, but rather, talking to them about the content, frequently linking to real-world considerations. Be careful to manage your presentation time so that all group members get an opportunity to contribute.

### GRADING and FEEDBACK from Student-Led Presentation/Discussion

#### For Each Presenter

Name # \_\_\_\_\_ DATE \_\_\_\_\_  
 GRADE \_\_\_\_\_/32

CONTENT PRESENTED

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#### GRADING RUBRIC (32 POINTS)

- (3 pts.) Clearly delivered and appropriate introduction (preview main content with overview slide)
- (6 pts.) Accurate, balanced, and effective oral presentation, vibrant, and matched with audience level of professional expertise

- (3 pts.) Appropriate presentation mechanics: ✓ = Good      ? = Borderline      X = Needs Improvement

\_\_\_\_\_ **Enunciation/Voice projection**; \_\_\_\_\_ **Pronunciation**; \_\_\_\_\_ **Eye Contact**; \_\_\_\_\_ **Pacing**;  
 \_\_\_\_\_ **Smooth Flow**; \_\_\_\_\_ **Natural talk (read)**

- (4 pts.) Well designed PowerPoint slides, effectively communicating main ideas with some supporting detail
- (4 pts.) Time management during presentation: (a) overall time use, (b) pacing, & (c) content-to-time match
- (4 pts.) Development of handouts with more detail than that in PowerPoint presentation (about 4- 6 pages, single spaced)

**GENERAL COMMENTS:**

- (6 pts.) Oral facilitation of discussion (Challenging questions; thoughtful and interesting discussion, follow-up probes)
- (2 pts.) Clear and succinct conclusion/wrap-up with summary slide (**AFTER the discussion**)

***GUIDELINES ON WRITING A LITERATURE REVIEW FOR 295:510***

**Some preliminary comments:** You will be required to complete a literature review as part of the assignments in this class. Many people may not have had previous experience in writing a literature review. The information on the following pages is designed to help you understand what is being required. If the information contained in the following pages is too basic for you, please do not feel insulted. The information is intended as a guide to someone who might be nervous about what I expect and unsure of how to proceed. Hopefully, the information contained in the following pages will provide you with some idea of my expectations and some strategies for proceeding with your paper. Irrespective of the degree of expertise you already have in writing such papers, I encourage you to select a topic early and begin to do the background reading for that topic.

The following information can be found in the succeeding pages:

1. A definition of a literature review or review article
2. How do I choose a topic?
3. Selecting information for inclusion in a literature review
4. The nature of the information to be included
5. Finding the information in the library
6. Organizing a literature review
7. Concluding the literature review
8. What the reader should know by reading your review
9. a very abbreviated example of a literature review
10. a commentary on the example

Some of this information has been adapted from the *Publication Manual of the American Psychological Association*.(3<sup>rd</sup>). Its use in this context is for instructional purposes only.

**Additional comments:** This compilation of material will only be useful to you if you actually make the effort to benefit from it which means taking some time to read the other reviews and commentaries. I firmly believe that what you learn from doing this will benefit you in your other courses and your subsequent professional writing.

## **1. Definition of a Review Article or Literature Review**

A tremendous amount of research is conducted on various topics and it is necessary from time to time to review the literature critically and summarize what has been discovered up to this point in time. A literature review is very different in style from an opinion paper, a concept paper, or a reaction paper. In opinion papers, your task may be one of persuasion or simply one of denouement of one's ideas. A reaction paper requires you simply to respond to ideas that are already presented. In many forms of writing, the explicit stance of the writer is one of subjectivity. Although one can never truly rule out one's own subjectivity and its influence on the selection and favoring of certain topics and ideas over others, writing a literature review in psychology requires that you make every effort to maintain objectivity related to the literature being reviewed. While your personal opinions inform the selection of information to include, the organization of the information in the paper, and the conclusion you draw, these opinions must be substantiated by citations of appropriate and current research. This does not mean, however, that you search the literature for information that says what you want to say, assuming that a citation provides more legitimacy than your own opinion. The literature, in this case, is not actually reviewed, it is simply used.

The approach to be taken to doing a literature review on a topic is to frame a problem, approach the literature with an open mind to discover what people have learned about this topic, what are the general themes of the work they have done, what has been neglected, and what can be concluded from the available research. The synthesis of the available evidence should be objective, unemotional, and reasoned. It isn't simply a matter of deciding that 4 studies support a particular position and 8 do not. Many of the studies may be critically flawed; their findings restricted to a very narrow range of behaviors or situations, and may only address a small fragment of a larger problem. Your task is to assemble, critique, and synthesize the work. According to APA (1994), "review articles are critical evaluations of material that has already been published. By organizing, integrating, and evaluating previously published material, the author of a review article considers the progress of current research towards clarifying a problem. In a sense, a review article is tutorial in that the author.

- \*\* Defines and clarifies the problem
- \*\* Summarizes previous investigations in order to inform the reader of the state of the current research
- \*\* Identifies relations, contradictions, gaps, and inconsistencies in the literature, and
- \*\* Suggests the next step or steps in solving the problem." (p. 5)

## **2. How do I Choose a Topic?**

You probably already have some general topics in mind as you selected this course. Specifying a particular topic can be the hardest part of writing a literature review. An



important first step is in narrowing the domain of possibilities. There are basically three approaches to homing in on a topic, a top-down approach and a bottom-up approach, and a mixed-model approach. Depending on your cognitive style (tolerance for ambiguity, lack of structure, rigidity), one or other strategy may work best for you. A top-down processing involves approaching the task by ask yourself questions about what you want to know and why. It may be possible for you to generate a tentative outline based on questions you may be able to pose about the content. This strategy would require some prior knowledge of the content. The risk involved in this strategy is that you may not be as open to seeing the breadth and scope of the actual literature because you have narrowed your options a priori. An alternative strategy is a bottom-up processing approach in which you examine what the literature includes. In pursuing this strategy, you may first conduct a computerized search of a relevant database (e.g., ERIC) and try to identify the themes in the research you located. For example, I recently conducted a literature search on the research on peer tutoring conducted since 1982. I limited my searches to ERIC and Psychological Abstracts. I retrieved over 1,000 references. The risk to this approach to identifying a topic is that you can feel easily overwhelmed and ironically, you may miss some important material because the efficacy of a computer search is highly contingent on the keywords used. The third strategy for identifying a topic is to do a little of both of the previous two strategies, come up with an initial idea, check the literature to see what has been done in this area. For example, if you were interested in writing a term paper on assessment of multi-handicapped deaf children (not a good topic for this course), you would need to check the available literature before committing too much time to this topic. What you would find with this topic is that there is very little information available. A very important aspect of finding a good topic is finding one that is doable. You might call this the “Goldilocks” strategy, not too big, not too small, but something “just right.”

### **3. Selecting Information for Inclusion in a Literature Review**

The information in a literature review should be as unbiased as possible. If, for example, you are reviewing the literature on the effects of cooperative learning on high achievers, you should include information related to many aspects of the issue, not just those which you personally support. If you believed that cooperative learning was only useful for low achievers, you might be tempted to include in your review only those studies that conform to your personal beliefs. Resist such a temptation. This would be very poor practice. You need to objectively evaluate the evidence available, which means considering ideas and *research that do not necessarily conform to your opinions or beliefs.*

### **4. The Nature of Information to be Included**

Information about a topic is gleaned from a variety of sources. Some sources are more reliable than others. Information may be gleaned from the personal opinions of others, presented in newspaper articles, a research report based on the analysis of large numbers of people, a personal narrative of an experienced event, etc. The sources differ in the degree to which we can feel confident in the results and in the degree to which we anticipate that the information can be used to analyze other behavior of a similar nature. Many good ideas begin with a personal experience or intuition. You should not ignore these and they will no doubt shape the organization of your review. For the purposes of this course, I expect you to rely on empirical research findings or reviews of such findings that can be found in the major journals of the field. Other sources will be judged to be unacceptable.

## 5. Finding the Information in the Library

Rutgers has one of the largest library systems in the country. If you are not already familiar with the library system, you should take the earliest available opportunity to acquaint yourself with the system.

### Library Resources Available.

1. Reference librarians. They are usually located at the reference desk and provide all kinds of good information. They are generally helpful and will show you how to use the computerized data base facilities if you request help.
2. IRIS Catalogue. This catalogs books and journals held by the library. It can be accessed from any computer on campus at <http://www.libraries.rutgers.edu/> or from home, using your netid.
3. Bound Journals. These contain the most up-to-date research/reports on almost any topic. Rutgers has a huge collection. A listing of all the journals held by Rutgers is available at the *reference* desks and is also available online by checking IRIS.
4. Electronic Journals. The library subscribes to a substantial number of electronic journals which can be accessed through the libraries home page.
5. Abstracts: Abstracts of various fields of study are published separately and are especially useful in tracking down information related to specific topics. Abstracts are searched by looking for key words and finding abstracts of articles that have used these key words. For example, if you were to look in the Psychological Abstracts for articles that dealt with "ability grouping" you would look up the term and locate the abstracts. This can be quite tedious as the abstracts are published yearly. The computerized version of these abstracts has some considerable advantages because of its speed.
6. Computerized Abstracts: Abstracts are also available online or on computer disk for certain subject areas. The Psychology abstracts and ERIC (the main resource on education) are available online and can be accessed as part of the INDEXES available from the RU Library homepage. The beauty of the computerized versions of these indices is that the search process is very rapid.
7. Inter-campus Materials. If the material you are looking for is located at a different campus, you can get books or journal articles using the copy express or book express. Information about these is available at the circulation desk.
8. Interlibrary Loan. If material that you need is not available at any of the Rutgers campuses, you can get the material through interlibrary loan. This can take quite some time (2-5 weeks). You shouldn't wait until the last minute to find material.
9. Finding articles using Searchlight. Searchlight is a search engine on the library homepage that allows you to search multiple databases simultaneously.
10. Searching Google.com/scholar. You can find a lot of full text material by using google to find particular authors
11. Useful Databases The most commonly used databases are ERIC and PsychInfo.

## 6. Organizing a Literature Review

In synthesizing information related to a topic, you will have to define the problem being addressed, summarize previous investigations, and identify connections, contradictions, and gaps in the literature. In order to summarize the previous investigations, you will have to decide what are the general issues addressed in the literature related to the particular topic chosen. You may want to group the literature you examine according to a set of subthemes being addressed. The organization of the subthemes should have a logical ordering.

## 7. **Concluding the Literature Review**

You should conclude the review by *identifying* the issues related to the chosen *topic* that *remains* unresolved or unstudied. You should point the way to those subtopics that require further study. It is not enough to conclude, "Further research is needed *in* this area." You will need to say why and in what specific area. Your conclusion is not limited to a single paragraph. You might consider checking that you have done the following:

- You have sufficiently focused the topic so that you addressed issues in some depth.
- You provided sufficient detail of reported experiments so that your reader could understand why you were providing criticism.
- You kept the audience in mind and considered what might need to be explained.
- You made your assumptions clear and made a case for them, rather than simply making assertions.
- You provided evidence that was sound.
- Your conclusions could be reasonably drawn from the work you presented.
- Your organization was clear and there were no major "cognitive leaps" needed by your reader.

## 8. **What the Reader Should Know by Reading Your Review.**

A reader of *your* review should have a very good idea of the current knowledge related to a particular topic based on the available research. The writer of the review will have assisted the reader by organizing the information *according* to the important themes of research on the topic. The reader should also know what are the major unresolved issues related to the topic and what are important areas of future research.

## 9. **A Very Abbreviated Example of a Literature Review**

The following example is included as a rough outline of what you might expect to do when writing a literature review. **NORMALLY, THE TEXT OF A PAPER IS DOUBLE-SPACED. HOWEVER, I HAVE USED SINGLE-SPACING HERE TO SAVE PAPER.** This material is based on the example used in the APA manual (3<sup>rd</sup> edition) to illustrate preparation of a manuscript. I have added material to that example.

### Analytical Cognitive Style as a Factor in Memory for Text

Cognitive or personality style differences have traditionally been ignored in the field of human learning and memory (Eysenck, 1977). This situation is surprising given the growing body of literature showing that individuals differ in how they encode and retrieve simple and complex verbal information (for summaries, see Eysenck, 1977, and Goodenough, 1976). The present review has two purposes: (a) to demonstrate that when the popular personality and cognitive constructs - locus of

control (Rotter, 1966) and field dependency (Witkin, Dyk, Faterson, Goodenough, & Karp, 1962) are used as factors in semantic recall studies, similar results are obtained; and (b) to suggest that this similarity occurs because both constructs overlap with the analytical/holistic cognitive style dimension.

### Locus of control

Rotter (1966) suggested that people with an internal, as opposed to external, locus of control believe that events are contingent on their own actions and abilities rather than chance or other people .  
...(section continues).

#### Research on Learning Word Lists

A widely held belief in verbal learning is that participants use cognitive categories while learning word lists and use these categories as the basis for retrieval (Bousfield, 1977). ... (section continues).

#### Research on Text Recall

The argument that externals and internals use different strategies to encode and retrieve simple word lists can be made when complex material serves as the stimulus material... (section continues).

### Field Dependency

A field-dependent person, in contrast to a field-independent person, cannot overcome an embedding context and cannot deal with a perceptual field analytically... (section continues).

#### Research on Learning Word Lists

Researchers obtain similar results to those found in the locus of control literature when they use field dependency as the individual-difference construct in studies employing simple verbal materials .... (section continues).

#### Research on Text Recall

Annis (1979) has found individual differences in field dependency and test recall that parallel those found in a study of locus of control by Wolk and DuCette (1974)... (section continues).

### Relationship of Locus of Control and Field Dependency with Analytical Processing

The constructs of locus of control, field dependency, and analytical processing style are related to a certain extent because the definitions of the constructs overlap. However, the overlap in the constructs occurs because.... (section continues).

#### Conclusions

Although the constructs of locus of control and field dependency generally measure different aspects of personality and cognitive functioning, they appear to measure the same processes in terms of text encoding. That process appears to be individual differences in analytic and holistic processing... (section continues).

## 10. Brief Comments on the Literature Review Above

**\*\* Defines and clarifies the problem:** The author first notes the problem which is the fact that cognitive and personality factors have been ignored in the field of human learning, despite the fact that individuals have been shown to differ in how they encode verbal information. The purpose of the review is two-fold. First the author wishes to demonstrate that individual differences on a cognitive factor (field dependency) and a personality factor (locus of control) are recalled to text recall. Second, the author wishes to propose an explanation of why these two characteristics overlap in their relationship to text recall.

**\*\* Summarizes previous investigations in order to inform the reader of the state of current research:** The author introduced the two important constructs he or she wishes to discuss in the

opening paragraphs. The author takes each of the constructs separately, defines it, and reviews literature, which show that it relates to simple and complex verbal information processing (word lists and text recall). "Locus of control" is discussed first. The author briefly defines and then reviews the literature-relating locus of control to verbal information processing. The author follows the same procedure with the second construct (field dependency).

**\*\* Identifies relations, contradictions, gaps, and inconsistencies in the literature:** Having addressed the same aspects of the two constructs, the author then moves on to the second purpose of the literature review which was to offer an explanation for the overlap of the two constructs and their relationship to verbal information processing. In this part of the review, the author proposes that field dependency and locus of control both share the same component, that is, an analytical vs. holistic cognitive style dimension. In this example, there was no need to identify inconsistencies in the previous literature, as the relationship between these two constructs had not previously been addressed.

**\*\* Suggests the next step or steps in solving the problem:**

This kind of information is usually found in the conclusion section of a review.

I suggest that you read a number of literature reviews critically in order to get a good sense of what constitutes a well written literature review.