



**Advanced Research Methods
FYC 6802, Section 7333 – Spring 2012**

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Consultation Policy: Office hours are Monday and Tuesday from 3 to 5 PM. I will meet with you any time that I am free. You can make an appointment, often on short notice, by e-mail. I can answer relatively simple questions via e-mail and I try to respond quickly. Please contact me about any question or concern that you have.

Course Description: This course focuses on three critical characteristics of social research instrumentation: reliability, validity and precision.

Course Goals: The goals of this course are to improve your ability to assess, apply and create science based research findings in your professional and personal life.

Course Objectives: After completing this course, you will be able to:

- Assess the degree to which research findings are based on valid, reliable, and sufficiently precise research instruments
- Judge when instrumentation is sufficiently robust to justify applying research findings in your professional work
- Select appropriate instruments for data collection, based on a thorough understanding of the nature of the data that each instrument generates
- Create your own social research instruments for research and evaluation

Approach and Expectations

My assessment of your performance in this course will rely heavily on how well you can apply the concepts that we examine in class activities and on your assignments. I expect you to develop and demonstrate analytical and critical thinking skills. Both are central to science and are prerequisites for using science to develop new knowledge and to apply effectively the knowledge generated by science. In practical terms, this means that I am **NOT** looking for rote answers to the questions I ask. Rather, I want to see that you can apply the concepts that we discuss to analyze and evaluate the instruments in research studies and to develop your own instrumentation for research or for evaluation.

I also base my evaluation of your performance on the degree to which you provide evidence that you have taken responsibility for your own learning experience and that you are actively seeking out all of the resources possible to make the learning experience as profound and meaningful as possible. I use a combination of assigned readings, self-directed exploration of the literature and classroom activities to try to create an environment in which you can gain the critical skills and knowledge you need. Taking advantage of these opportunities is your responsibility. I expect you to provide evidence in the form of citations in assignments and class participation that you have used the resources, including the texts, my lecture material, our class activities, and materials that you find for yourself, to maximize your learning experience.

Textbook Information

Bryman, Alan. (2001). *Social Research Methods, Third Ed.* Oxford University Press, London. 340 pp.

The Bryman book is basic and you should consider it a starting point for learning about specific research instruments and methods. You will need greater knowledge of specific instruments, especially those you plan to use in your own research, than that provided in Bryman. There is one fundamental flaw in this book, in my opinion. It divides research methods into quantitative and qualitative. This is confusing because there are, for example, two chapters about interviews – one that treats the interview as a “quantitative method” and one that treat it as a “qualitative method.” However, this text is inexpensive (relatively) and I try to keep course costs down for students. I therefore use it, even though I find it very flawed in this regard. Treat the textbook as an initial introduction to each of the research methods that we will discuss. Unless you have a question about something in the textbook, we will not discuss the material covered in the text in class. You should cite and reference Bryman in your assignments when you do call upon the text as a source of information. ***Note that one of the assessment criteria for your performance on the most assignments is that you provide evidence that you have extended your exploration of the research methods literature beyond the required readings. I will not consider referencing Bryman evidence of exploration of the research methods literature.***

Other Materials

I will provide you with assigned readings from other sources than the textbook. Most of the additional required readings for the course consist of research journal articles. Some are chapters of books of mine that I have placed on e-reserve. If you do not know how to get materials from e-reserve, consult the UF libraries website for instructions. I also provide a list of suggested readings for most topics. These will be useful in completing the assignments. It is appropriate to use, cite and reference these readings in your assignments. However, they should **not** be the only sources of information that you use to complete each assignment. I want you to demonstrate that your exploration of the relevant research methods literature extends beyond the required materials.

Where to Find Reference Materials

Finding reference materials in your area of interest and about research design considerations is critical to success in this course.

Most disciplines support several journals. You need to learn to use **research journals**. Many journals report research, but there are important differences between them in terms of the audience for which they are intended. A research journal means just what it says. The primary audience for the material is other researchers and advanced professionals. These are the journals that you will have to use throughout your graduate experience, and your employer after graduation will expect you to know these journals in your area of expertise and use them regularly. Relying on popular web sites is **not acceptable** in graduate school or in the professional work world. Even among research journals, the scholarly value of the material they contain varies. High caliber research journals are internationally recognized. They are always thoroughly peer reviewed. They report original research findings. In fact, most have a policy that they will not publish information that has been previously published somewhere else. They provide an in-depth description of the research design and methodology, including in-depth data analysis, and discuss the findings of the research in detail, usually including the theoretical contribution of the work. Both non-profit (professional societies mostly) and for-profit presses publish very good research journals. Most professional societies and for-profit publishers also produce journals for practitioners. They, too, are normally peer reviewed, but they are usually less

scholarly that the high caliber research journals. They often focus on the recommendations that grow out of research, but do not provide a detailed description of how the research was conducted and the contribution of the research to new knowledge and theory. Other journals are aimed at a general public audience and you should not rely on these publications.

How can you identify a research journal? First, you can always consult with me or other faculty members in your area of interest to identify appropriate journals. However, you need to develop the ability to judge the quality of journals yourself. There are several characteristics that distinguish between different kinds of journals. First, in high caliber research journals, the majority of the articles will report original research results. Opinion pieces, review and the like will be of minor importance in the overall content of any given issue. Second, the articles will be for a sophisticated reader. You can see this by the use of technical terms, for example. Perhaps most telling, research reports in these journals carefully explain, in a detailed way, how the research was conducted. They let you know exactly what steps the researcher took to collect data. They include a very meticulous analysis of the results. Again, they explain exactly how the research analyzed the data. Third, the research reports focus on the research and what was learned -- **not** on recommendations for how to apply or use the findings. Finally, the description of the journal (somewhere near the very front) will give clear clues. Look for words like scholarly, the highest standards, and international interest. In my discipline, geography, the Association of American Geographers (AAG) publishes two journals. The first, the *Annals of the American Association of Geographers*, is a research journal. Here is how the AAG describes it:

“The Annals of the Association of American Geographers publishes original, timely, and innovative articles that advance knowledge in all facets of the discipline. Papers accepted for publication must meet the highest standards of scholarship, address significant research problems and issues, interest the broad readership of the journal, and be attuned to the sensibilities of a diverse scholarly audience.”

Lower caliber journals, on the other hand, do not aim their material at such a sophisticated audience. The audience might be the family practice doctor rather than the doctor at Shands; the school camp counselor rather than the professional whose work focuses on interventions for problematic adolescent behaviors; the field staff member in a community-based organization rather than the professional who develops, implements and evaluates programs for the organizations. Articles in the lower caliber journals often provide only a very brief description of how the research was conducted. The section about data analysis is usually not very lengthy or well developed and the results themselves are often reported in a very summarized form. Often, there is little or no discussion of how the data were analyzed. These journals focus on recommendations for applying research findings, not on the research itself. They do not provide enough information for you to make an adequate evaluation of the degree to which their findings are justified or the degree to which they can be applied outside the context in which the study was conducted. *The Professional Geographer* is a fairly “low caliber” journal. Here is what AAG says: “[*The Professional Geographer*] publishes short articles on academic or applied geography, emphasizing empirical studies and methodologies, as well as book reviews. These features may range in content and approach from rigorously analytic to broadly philosophical or prescriptive.” *National Geographic* is an example of a general interest journal in geography. It’s audience is the general public, not professionals.

Grading Philosophy and Policy

I award grades not to punish poor performance, but rather to help you understand and master the material we are covering. My goal is for every student to earn an A in this course. I expect to see increased comprehension and dominance of the concepts and ideas that we discuss during the

course. I will therefore continually adjust my expectations of your performance. Expectations grow as the semester progresses and what was an acceptable or adequate response on an early assignment will most likely not be acceptable on a later assignment. I will expect to see increasing sophistication in your answers.

Most of us learn more effectively when we can discuss our ideas with others. I encourage you to engage in collaborative learning. We will have two assignments where you work in groups. However, I encourage you to work together as much as possible. Share your ideas and discuss the assignments with some of your colleagues. I want to see the product of your individual work, but I want you to maximize your learning experience by collaborating in the learning experience with others. Sharing materials about research methods is one good way to learn collaboratively.

Late Submission Policy

The assignments in this course are sequential. You therefore need to complete assignments in a timely manner and in order. I will not accept assignments submitted after the due date and I will award zero (0) points for the assignment. All due dates are given at the class web site.

General Types of Grading Criteria

I list the specific criteria that I will use to grade each assignment at the end of the assignment. Consult those criteria and ***respond to the questions in the assignment based on the specific criteria for each assignment.*** I use the following general kinds of criteria in evaluating your performance on assignments.

Ability to apply the concepts learned in class. I expect you to apply the concepts that we learn about in class. You must demonstrate that you understand the key concepts and that you can use what you have learned. Concentrate on applying the concepts, not on repeating phrases from our discussions or from the literature. Show that you understand and can apply what we have learned.

Complete answers to specific questions. I ask a number of specific questions in each assignment. I have tried to make these as clear as possible and to give you guidance about how to answer each question. Be specific and make sure that you answer each question completely. **Include a thorough justification or explanation for each answer.** I am more interested in how you arrived at a conclusion than in whether I agree with your conclusion or not.

Evidence that you are searching out and reading additional materials about social research methods and instruments, beyond the assigned readings. The assigned readings are a place to **start** your exploration of a subject. I expect you to seek out and read additional material about research methods and instruments. Cite these materials in your assignments and include them in the references. For example, when we discuss interviews, you should find published information about how to use and develop reliable, valid interview schedules. Focus on the uses and ways to improve the validity and reliability of the instrument.

Improvement. I do take your overall progress during the semester into account in determining the final grade. My concern is that you master the material over the course of the semester, not necessarily on your first attempt. Please do not become overly concerned if you receive a poor grade on an assignment.

Distribution of Grade

Component	Points
Class Preparation, Participation & Collaboration	15
Small Group Projects (define construct, 15 points; index 25 points; focus group 30 points)	70
Group Project Peer Assessment (two assessments)	10
Individual Semester Project (Part 1 theoretical framework 25 points; Part 2 initial development of variables & items, 30 points, Part 3 final test of items, 40 points)	95
Review of Research Methods Article	10
Total	200

Grading Scale

A	95 – 100%	A-	90-94%				
B+	87-89%	B	83-86%	B-	80-82%		
C+	77-79%	C	73-76%	C-	70-72%		
D+	67-69%	D	63-66%	D-	60-62%	E	<60%

Class Preparation & Participation (15 points)

Objective: Help ensure that the time we spend together in the classroom will allow you to extend your mastery of the material covered and practice your ability to apply the concepts to the evaluation and/or development of research instruments.

I assess this portion of your grade based on the degree to which you play a leadership role in class activities and can respond to questions and comments in our discussions. You need to adopt a proactive approach to class preparation and participation. I expect you to be adequately prepared to participate fully in all class activities and to answer questions in class. My comments in class and class activities assume that you already covered and understand the material in the assigned readings. Class activities and discussions will build upon and extend your competence in each topical area, not cover the basics. Therefore, adequate class preparation is a key to your success in this course. We will not normally discuss the material from Bryman in class. We will sometimes discuss a specific required reading, but since these are preparatory materials, I will assume that you have read the material and understand it. If something is not clear, please ask a question. If it is unclear to you, it probably is unclear to others as well.

Review of Research Methods Articles (10)

Objective: Facilitate your exploration of the research methods literature.

I understand that your time to spend reading material for this course is limited and that this can limit your ability to explore the research methods literature. The annotations shared among all class members will constitute a reference library that will make your exploration of the literature much more efficient. I will assign one reading for you to review and present. The annotations will provide summaries of some important aspects of methodology, often aspects that apply generally to all instruments or sometimes that deal with issues that are particularly important for a specific method of data collection. I strongly encourage you to explore the research methods literature in more detail, focusing on the instruments of most interest to you. Please note that your ability to demonstrate that you have explored the literature (beyond required readings) and used it in completing your group and individual projects is an important component in my assessment of your performance. Sharing these materials that you find on your own with your colleagues through a research methods review is an

excellent demonstration of your exploration of the literature. While only the one assigned review is required, I strongly encourage you to submit reviews when you find helpful material. The list of additional resources each week is a good starting place for your exploration. Make sure you read the research reviews as they come to you. Otherwise, you cannot use them effectively. ***I do consider the articles annotated in the research reviews valid sources of information that meet the requirement that you explore the research methods literature.***

Your objective is to provide your colleagues with a clear, concise description of the major points that you derive from the article **about research methods**. Most of the articles at the course website deal with a specific data collection method or tool. I have selected the articles because they provide insights about things like novel uses of the data collection method, ways of combining methods to enhance the overall reliability, precision and validity of the data collection process, or perhaps comparisons of the kind of data produced by different data collection methods. ***If an article deals with a specific study (example of the use) of a method, focus on what you learned about the research method, not the results of the study itself.*** For example, one article is a study that reports how data about dietary habits were collected, using two methods of data collection, a questionnaire and observation. We are not interested in the results of the study with regard to the respondents' dietary habits. We want to focus on what we can learn about the strengths and weaknesses of the two methods of data collection. See the "Research Methods Review Example" at the website.

Submit the review as a Word document. Use your last name, the last name of the first author of the article, and the word "review" to name the document you submit (e.g., Swisher DelPilar Review). The **maximum length** for the review is two pages. You will make a 10 minute presentation about your article in class. **Summarize and explain the relevant ideas or concepts that you gained from the article, making sure to emphasize how your colleagues can use these ideas in the small group and semester projects.** I will **NOT** return comments to you about the Research Methods Reviews.

The Research Method Review has five required components.

1. **Your name**
2. **Full citation** for the article in APA style
3. **Key words.** Give your own key words based on the key ideas in the article from the perspective of research methods. The author's key words may focus on the topic of the study rather than the methodological issues. We want the latter.
4. **Key Points from the Article.** List the three to five main ideas, concepts or conclusions in the article. State and explain the key points about research methodology that you gleaned from the article – what you learned about research methods from reading this article. This can be brief, but be specific and **explain** the points. This is not a list of topics, but rather a succinct explanation of what you learned. See the "Example of Research Methods Review."
5. **Relationship to Assigned Readings.** Provide an explanation of how the material or concepts covered in the article builds upon, contrasts with and/or extends the material covered in the assigned readings. Pay special attention to Adcock & Collier.

Grading Criteria for Research Reviews

Criteria (Written Report & Class Presentation)	Possible Points	Your Points
APA style, followed instructions	20	
Listed and explained the key conclusions or concepts in the article from a research methods perspective	40	

Compared and contrasted the key conclusions or concepts in the article to those in Bryman, Adcock & Collier, and other assigned readings	25	
Makes it clear how the article expands upon, contrasts with, or extends concepts about research methods beyond what we cover in the assigned readings	15	
Total	100	

Introduction to Individual Semester Project and Small Group Projects

In this course, instrument development focuses on two key processes. The first is the technical aspects of developing different instruments. This includes, for example, wording on questions, response categories, item order on questionnaires and such. Your text, to a large degree, focuses on this aspect of instrument development and I have provided additional material at the course website that build on his comments. Bryman devotes relatively little attention to the other key process in developing research instruments – validation. He discusses this in a couple of chapters, but his treatment is not particularly sophisticated and, in general, the focus on “types” of validity tends to confuse more than help, in my experience. Therefore, **we will use Adcock and Collier’s approach to validation as we develop research instruments in this course.** As you complete your project, use their ideas for establishing validity and reliability. Focus on levels 2-4 of the diagram on p. 531 of their article, but do not ignore Level 1 completely. Your project reports should describe the process you used to develop instruments, explain the decisions you made at each step, and justify your decisions. Address both the technical issues involved with each instrument and the process of validation. In reality, these two are inherently entwined and cannot really be treated as two *separate* processes. Question wording, order and response format, for example, will both affect response rate as Dillman and others discuss *and* the validity of the results you obtain. Use, cite and reference literature extensively, especially the research methods literature. Make use of the reviews of research methods literature to find this literature.

Small Group Projects

Objectives: After completing these assignments you will know how to:

1. Develop robust explanations of systematized constructs in theories
2. Identify the indicators or variables that other researchers have used to represent systematized theoretical constructs
3. Incorporate concepts of discriminate, convergent and nomological validity to select specific indicators or variables that you will use in your research to represent systematized concepts
4. Use one quantitative and one qualitative procedure for converting the responses to individual items to scores for variables or indicators
5. Use one cognitive technique to evaluate the clarity and ambiguity in a research instrument
6. Use item-total correlation to assess the reliability and validity of items in an index
7. Use the Mann Whitney U test to assess the discriminatory power of an index
8. Use rater consistency to assess the validity and reliability of a focus group protocol

You will work with two or three of your peers to develop and validate two instruments, an index and a focus group guide. You will **NOT** collect any data, but you must develop and **test** your instruments. Answer the questions listed below in a Word document. Please list the names of all group members on the first page of the document. Your responses to the questions should focus on how you applied the concepts we discuss in class. Please do not just tell me what you did, but also **why you did it.** I have identified one or two concepts or constructs for you to operationalize, and given you a place to start the literature search. This will economize your time and effort. Use the same constructs for both

projects. The first project is to develop an index. The second project is to develop a focus group protocol. Since you will operationalize the same systematized concepts in both projects, you will submit one report, prior to developing your instruments, in which you define the systematized concepts you will use in both projects and identify the variables or indicators that you will use to represent the systematized concepts. ***Use, cite and reference the research methods literature in your responses in all assignments. Draw heavily on the reviews that you and your colleagues have submitted.***

Use the following document names for the Word documents you submit and in the subject line in the e-mail forwarding those documents to me. (1) Systematized concepts and variables – last names of group members & Systematized, e.g., Swisher_Jones_Smith_Systematized. (2) Last names of group members and Index, e.g., Swisher_Jones_Smith_Index. (3) Last names of group members and Focus, e.g., Swisher_Jones_Smith_Focus.

Systematized Concepts and Variables/Indicators (15 points)

1. Specific theories or theoretical perspectives often define the same term differently. It is not that one is right and the other wrong. They are simply different, explicit definitions. Review the Adcock & Collier discussion of background concepts and systematized concepts before trying to complete this part of your small group projects. For example, Christiano (2008) discusses five theoretical meanings for the term legitimacy in political theory. "...the instrumentalist theory according to which authority is legitimate to the extent that it gets people to do what they already have a duty to do. ... the consent theory of authority according to which authority is legitimate only if the subjects have consented to it. ... the theory advanced by John Rawls that authority is legitimate if and only if it acts in accord with principles the subjects agree to. ... Ronald Dworkin's view according to which legitimate political authority is a kin to the basis of obligations to friendships, families and other associations. ... the democratic conception of authority according to which the democratic assembly has legitimate political authority within certain limits because it treats every citizen as an equal in the process of making law." [Christiano, T. "Authority." *The Stanford Encyclopedia of Philosophy* (Fall 2008 Edition), E. N. Zalta (ed.), Retrieved Jan. 5, 2010, from <http://plato.stanford.edu/archives/fall2008/entries/authority/>]. Starting with the two or three references that I provide, explore how different researchers and theoreticians have defined the systematized constructs or concepts that you need to operationalize. Use, cite and reference at least five sources of information such as research reports, research reviews, and theoretical discussions. At least two of the five must be research reports.
2. Provide the detailed definition of the systematized concept(s) that you will use in the small group projects. Your job as a researcher is to select a specific systematized definition for the key concepts (constructs) that you will use in research, based on the theory or theoretical framework you are using. Simply put, you cannot hope to create a valid, reliable instrument if you do not start with a very clear, theory-based definition of the concept you need to operationalize. In most cases, you will have to select among different definitions. I am not especially concerned about which definition you select. My concern is that you can use the research literature to develop a robust, valid definition of the construct. Explain the factors you considered in developing your definition. For example, you may find that six authors indicate that there are five components (or dimensions) in the construct, while two authors indicate that there are seven components or dimensions. Which ones will you include in your definition? Why?

Read this before you try to answer questions 3-5.

We will now begin the process of operationalizing the concepts or constructs. Operationalization means going from a concept to the actual items (questions, statements, etc.) that you put in a research instrument.

General or background constructs or concepts are mostly universal in their social scientific definition, which differs greatly in most cases from the general lay usage.

Systematized constructs differ somewhat from theory to theory, but the differences are often not great within a single theory. Once you have selected a specific systematized construct, you must not change it during your research because this is the form of the construct that you will operationalize. Social status is a construct in many theories, but we cannot observe or ask people about social status directly. Indicators are the attributes of people, places, or things that we can observe. A commonly used systematized construct is social status.

Indicators are attributes or characteristics of people that we can ask people about or observe. For example, many researchers use authority, privilege, and social recognition as indicators of social status. As you explore the constructs I have assigned for the small group project, you may find several indicators commonly associated with each construct. Some people will call these dimensions or components or factors in the construct. Whatever the term, these are attributes or characteristics that we can observe.

Variables, on the other hand, are specific to a given research context and study. You need at least one variable for each indicator, and may have several variables if an indicator is complex. For example, if you are conducting a study in the United States, you might have three variables representing social recognition – like receiving awards and honors, election to public office, and appointment to positions of authority in community-based organizations (like churches or homeowners associations). These variables would not be good ones in a study somewhere else where giving awards, electing people to public office, and assigning people to positions in community-based organizations do not constitute social recognition. In research, we analyze variables. We must state formal and/or statistical hypotheses in terms of the specific variables and we often express the more general “objectives of the study” in terms of variables as well. We often combine the scores for several variables to produce one comprehensive or summative score for an entire indicator.

Finally, **items** are the specific questions you ask or direct observations that you make. I could ask someone to check yes or no for a series of questions like: “Have you ever been elected to public office at the local level? Have you ever been elected to public office at the state level? Have you ever been elected to public office at the national level? Has anyone in your immediate family ever been elected to public office at the local level? At the state level? At the national level?” These are items and I could sum the number of yes responses to get a total score for the variable “election to public office.”

Together, a set items, variables, and indicators must capture the full meaning of the systematized concept they are supposed to represent. Most authors never refer to indicators, but rather to variables, which can be confusing. Therefore, I will emphasize variables most of the time. You will probably see this in the literature, too. However, be careful to consider contextual specificity as you decide what variables to use for your small group projects. For example, does power make sense as a variable representing the social status of graduate students?

3. For each systematized construct you will operationalize, identify, list and describe the indicators or variables that others have used to capture the meaning of the construct. Of you cannot find any mention of indicators, make sure that you check for terms like “factors” or “dimensions.” If none of

these are mentioned, you will have to focus on the specific variables in different studies. Make sure you have reviewed enough research literature to have a thorough understanding of the indicators or variables that others have used for a given construct. Consult, cite and reference at least five research reports in this process. You may need to consult more than five reports. You can cite reports used in your development of a definition of the systematized concepts. This is a critical step in the process of operationalization. Do not cut your literature review short.

4. Examine the evidence in the literature that the indicators or variables used by others demonstrate good validity. Analyze the research results. What indicators or variables worked well and what ones appear to be weak or poor? A surprising number of indicators or variables actually have relatively little evidence of good validity; income as the sole indicator of economic status, for example. Examine and discuss evidence of convergent, discriminate, and nomological validity of the indicators/variables in the research reports you consult.

5. Select and list the indicators or variables that are potentially useful in your study. Explain and justify your decisions about which ones you think you should retain, discard, change or add based on the research methods literature. Cite and reference this literature in your report. The decision to discard indicators that others have used to represent a systematized concept should not be taken lightly. However, as Adcock & Collier indicate, changing indicators, and even systematized concepts on some occasions, may be well justified both from a theoretical perspective and from a contextual perspective. Testing alternative variables or indicators is an important aspect of research. Don't be too anxious to eliminate indicators or variables at this point. It's better to keep some "not so good" ones at this point than it is to leave out critical indicators. You have two more (at least) opportunities to eliminate indicators or variables in the validation process.

Criteria Systematized Construct – Small Group Projects	Possible Points	Your Points
APA style, followed instructions	10	
Provided complete, specific answers to all questions <i>in your own words</i>	20	
Provided evidence that you reviewed literature about the theory I have indicated you should use for your group projects in order to explore how the constructs in the theory are defined and explained how you arrived at a systematized definition of the specific constructs that you will operationalize in your project	20	
Showed that you reviewed the research literature to identify indicators or variables that others have used to capture the meaning of the systematized constructs you will operationalize	20	
Demonstrated that you analyzed and evaluated the data and results in the published research literature to ascertain the evidence for convergent, discriminate, and nomological validity of the indicators/variables identified; explained the factors you considered in your analysis and evaluation	20	
Explained and justified your decisions about which of the indicators or variables you found in the literature to retain, discard, change or add	10	
Total	100	

Index (25 points)

Answer the questions below. Number your response to each question. Include an explanation or justification for each answer. Be specific in your answers. *Use, cite and reference the research methods literature in your responses.*

The next step in operationalization is to create the **items** that, taken together, constitute the measurements for a variable. Think of it this way. Volume is an attribute of any three-dimensional object, like a box. However, to know the volume of a box, we have to make three measurements – height, width, and depth. We have to multiply these three values to produce a single value -- the volume. Height, width and depth are like items. Volume is the variable.

To keep this assignment simple, I require that all of your items use a scalar response format. Your items can either be in the form of statements or questions. For example, you might ask people to indicate how often they do something with response categories of never, rarely, sometimes, often and always. You could also ask them how important something is to them with response categories of not important at all, of little importance, somewhat important, and very important. You could also ask them to indicate how much they agree with a statement with response categories of disagree completely, disagree, neither agree nor disagree, agree, agree completely. You may find some items in the literature that you think you can use if you change them to a scalar response format. For example, the literature might have an item that uses a ranking response format: “Rank the following five reasons for going to graduate school in terms of their importance, where 1 is the most important reason and 5 is the least important reason.” You could easily change this to a scalar response format by simply asking people to indicate how important each reason is and providing four or five scalar responses.

Keep contextual specificity in mind. It is always useful to try to “adapt and adopt” items from the literature than to start from scratch. If items have proven valid measures in other studies, they may well work in your study, too. However, context becomes very important at this stage in operationalization. Unlike indicators or variables, items are usually very specific to the context in which you conduct your research. You may be able to “adapt and adopt” some items that others have used, but you will probably need to develop your own items in many cases. Adcock & Collier discuss context-specific indicators and adjusted common indicators. Think of items the same way. You may decide that an indicator or variable is valid in your research context (e.g., power), but need to create context-specific items to measure that variable. For example, items like occupation and educational achievement are good measures of prestige in many societies. However, in a setting where there is little occupational distinction among research participants, occupation may not be a good item to measure prestige. Even slight changes in wording may be very important contextually. You may also find items that researchers have used in different contexts that you can adapt for your use. For example, you might find an item asking people how important salary is their decision to accept a job offer. Perhaps you could change this to “How important are the typical salaries offered to people in your field in your choice of a degree program for graduate study?”

I also want you to gain expertise in developing items yourself. Therefore, **it is a requirement that you develop some items yourself.**

1. **Your index must be self-completed.** This means that the respondent has to have clear instructions. Include the instructions in the instrument. Make sure you remember to evaluate the quality of your instructions in the cognitive testing process.
2. Provide a list of potential items that you will test for each variable listed in the previous assignment. Cite and reference the source for each item that you draw from the literature, including those items that you will adapt to the context for your study. You should have a comprehensive list of potential items for each indicator or variable at this point. You will eliminate many of the items in the validation process. Redundancy is also valuable in and of itself. If an indicator or variable is critical to your research, **use multiple measures.** There are two reasons for this. The first is that one measure, despite all your effort to validate, may fail. I have seen this

happen many times. One of my students kept three “versions” of the same variable in her instrumentation – an index, a single multiple-choice item, and an open response question. Two of the three failed – but she did not lose that critical indicator or variable because she had redundancy. Second, convergent and discriminate validation are extremely important. Redundancy allows you to use these forms of validation with your own data. While you may be able to compare your results to results reported in the literature, the best way to use this critical form of validation is to use it on a single data set. You cannot do that if you have single measures of key variables.

3. Discuss your decisions in terms of contextual specificity. This is critical for you because your research population consists of graduate students. Make sure you draw upon the remarks of Adcock and Collier about context specificity in your decision-making.
4. We analyze **variables**, not items, in research. I can think of few occasions when we use a single item as the sole measure of a variable. For example, indices commonly use 10 to 12 items as measures for a single variable. Describe how you will combine the responses to different items to create a single score for each variable in your index. Think about ways of making your measurements as reliable, valid and precise as possible. For example, you might decide that using a weighting procedure for the items on the index would increase precision. You might decide that a mean score rather than a cumulative raw score would be a more reliable way to combine individual responses into a score. Justify your decisions. Use, cite and reference the research methods literature in your response

Your next task in this assignment is to perform two tests of a **draft** index. You should start this process with redundant items. In many cases, you will want to evaluate several versions of an item and select the most reliable measures for your final index. You will probably want redundant measures for some variables as well. There are many procedures that you could use for this part of the validation process. However, to avoid confusion and provide you with as clear-cut a task as possible, I will require that you complete two procedures. Test your index with graduate students.

Your first testing procedure will be to use cognitive techniques to evaluate your index. Your objective at this step in testing is to ensure that **your instructions and the items in the index** are clear and consistently interpreted by the tester. Fundamentally, you want to know whether people understand what you want them to do and how they interpret the individual items. You also want to know whether your items are faulty in some way (double-barreled, for example). You are **not** concerned with the responses to the items at this point. You are concerned with reducing ambiguity and confusion in the instrument. Use a variety of techniques in the test to garner input about your instrument. Too often, people simply ask someone to “see if you can complete this questionnaire.” This does not provide much feedback. I recommend that you **always** use at least four procedures in a cognitive review with each tester. Explain ahead of time that this is a **test** of the instrument and make sure the testers understand that you are **NOT** collecting data – just testing the instrument. (A) Watch people as they participate in the trail of a focus group or test of a questionnaire. Body language, expressions, and hesitation can help you identify problematic areas in your protocol or instrument. (B) Get their feedback about clarity of instructions, wording, and other technical details. Have a set of questions ready for the cognitive debriefing. For example, you might ask “What items were confusing to you? Were the instructions clear?” (C) Then focus on whether they **interpreted** your questions they way you mean. For example, I might have a focus group question like “Do you think the economy is improving?” This sounds straightforward, but is not. One person might have a family member who just lost his/her job off and be thinking about that. Another person might be thinking about the Dow Jones Index and stock performance. In short, make sure that your question leads people to think about what you want them to consider. (D) Review the responses they provided to the items immediately. If there

are blank responses, responses that are marked out and changed, answers that seem illogical to you based on the person's responses to other items (congruence), ask why.

4. Describe and justify the procedures that you used. Use, cite and reference the research methods literature in your response.
5. How did you decide when to end the cognitive testing procedure? In general, "enough" cognitive testing has occurred when you are not learning anything new about your instrument. This is why it's so important to examine what you learn in each test immediately. If your fourth and fifth testers do not tell you anything that the first three testers did, you probably will not learn much more from a sixth and seventh tester. Use, cite and reference the research methods literature in your response.
6. What changes to your index did you make as a result of the cognitive testing? Explain your reasoning. Use, cite and reference the research methods literature in your response.

The second procedure you will use is a test of the revised index with a broader set of testers. I realize that some instruments require a large number of testers and that some techniques for analyzing responses require a fairly large number of testers. For example, you would probably need 40 or 50 testers for a good test using item-total correlation. However, I know that your time in this course is limited. My concern is that you know what procedures to use and how to use them. I will therefore accept fewer than optimal numbers of testers. For example, I would accept your use of item-total correlation for reliability or the Mann Whitney U test for discriminatory power with as few as 20 testers. The objective of this procedure is to allow you to analyze the responses or scores that you get to see if they "make sense" with regard to the systematized concept you are using. Unlike in the first test, you **are** concerned about the answers that your testers provide. This test allows you to gain insights into the congruent, discriminate and ontological validity of your instrument as well as the discriminatory power of your instrument. Adcock & Collier cover these topics in some detail when they discuss using your data as a final step in validation. If you have a relatively small number of testers, you will need to be cautious about drawing conclusions. However, the response patterns from even a small group of testers will often be very useful.

7. Use appropriate quantitative and qualitative techniques to test for validity. You must use some test of the reliability of the items in your index. Cronbach's alpha combined with Item-total correlation may be a good choice in this case. These are simple procedures, easy to interpret and available on SPSS in the computer labs on campus and should be a good choice for the scalar response format. However, there are other tests you can use and you should feel free to do so. Describe and justify the procedures that you used. Explain how you **interpreted the results of the test**. Use, cite and reference the research methods literature in your response.
8. You must also use some test of discriminatory power. I suggest the Mann Whitney U test using the quartile comparison discussed in class. However, there are other options and you are free to use them. Describe and justify the procedures that you used. Explain how you **interpreted the results of the test**. Use, cite and reference the research methods literature in your response.
9. What changes to your instrument did you make as a result of the test? Explain your reasoning. Discuss what you learned about the discriminate, congruent and ontological validity of the instrument. Discuss what you learned about the discriminatory power of the instrument. If you feel that you should be cautious about your conclusions, possibly because you have a limited number of testers, be cautious in the changes you make. For example, if three items are candidates for exclusion based on the item-total correlation, you may decide to keep two of them as long as

doing so does not make your instrument too long. You can always delete them later. Use, cite and reference the research methods literature in your response.

10. Attach a copy of the research instrument at each stage: (1) prior to cognitive testing, (2) after cognitive testing, (3) after the final test.

Criteria Index	Possible Points	Your Points
APA style, followed instructions	5	
Provided complete answers to all questions; stated the answers in your own words; provided answers that deal with the specific components or attributes of your instrument, not general statements true of instruments "in general"	15	
Explained the procedures you used at each step in the development of the index – including (A) identification and development of potential items, (B) cognitive testing, (C) creating a rubric for variable scores, (D) assessment of convergent, discriminate and nomological validity of the scores generated by the instrument and (E) tests of discriminatory power	20	
Applied the concepts discussed in class and covered in the required readings; demonstrated that you understand how to apply these concepts to the development of a scaled instrument	30	
Drew on the required and other readings about research methods to explain and justify your decisions about how to improve the instrument based on the information gained during each step of instrument development and testing; used, cited and referenced extensive research methods literature to justify your decisions	30	
Total	100	

Focus Group Protocol (30 points)

Answer the questions below. Number your response to each question. Include an explanation or justification for each answer. Be specific in your answers. **Use, cite and reference the research methods literature in your responses.**

The items (questions) for a focus group are just one part of the protocol. The validation process therefore necessarily includes validation of the process as a whole. Address the following aspects of focus group design

1. **Decide whether you want to use a process designed to focus on achieving consensus or on one that focuses on eliciting divergent ideas.** As we discussed in class, focus groups are directed discussions among the participants. One of the responsibilities of the researcher is to decide whether the objective is to ascertain which of the several ideas that emerge are dominant or, on the contrary, to encourage the widest diversity of ideas to emerge. Clearly indicate which one of the two is your objective. Explain your decision.
2. **Make sure you include an ice breaker or introductory activity.** This is not just an introduction. The ice breaker activity should set the stage and prepare your respondents to participate fully and freely in the focus group. Describe the activity that you use and explain its relevance to your objectives for the focus group.

3. **You must use at least one activity that extends beyond simply asking questions.** For example, in a focus group that I conducted with Hispanic recreational fishers, we provided pictures of several different species of fish. We asked the members of the focus groups to identify the fish that they most commonly catch. We had three reasons for including this exercise. (1) It makes the focus group process much more dynamic for the participants. (2) It provides unambiguous identification of the species caught since each species may have several common names. (3) We included some species that are not present where these people fish. This provided a check on the accuracy of their identification of the species that they catch. Describe the activities that you will use to ensure a dynamic process and facilitate full participation in the focus group. Explain and justify your choices.
4. **You must have at least two recorders or observers of the focus group.** One should be someone who is **not** on your team. Agree ahead of time about what you will observe and record. Develop an instrument (form) for your observations and memos. Include this form with your report.
5. **One of you must serve as the focus group facilitator.** The facilitator must have a plan for his/her interventions in the process. Include a copy of the facilitator's guide with your report.
6. One strength of the focus group is that it allows us to gain an in-depth understanding of the respondents' logic, ideas, and thought processes. A focus group can give us insights into not only what people think, but why they arrive at given conclusions. However, this in-depth understanding comes at the cost of breadth. Your focus group should not take more than two hours to complete. You may not be able to include every variable that was in your index in the focus group. Indicate the variables that you will include. Draw on what you learned from the test of the index to inform your decisions about the variables to include in the focus group protocol. The point of the focus group is to deepen and build upon the information that an instrument like the index provides, not replicate the same information. For example, if you found confusing patterns of responses for a variable in the index, use the focus group to try to understand why these patterns emerged. Adcock and Collier provide some examples of comparing and contrasting information gained from two different sources (or in two different studies) in validation. Review that material and apply it to your work on this project. Explain your decisions.
7. Provide a list of potential questions that you will use as measures for each variable you will include. **Use a variety of types of questions.** You will need to use leading topical questions. However, make sure that you include and use other appropriate types of questions, depending on your objective for the focus group. For example, if you decide to focus on a consensus building approach, you will need to use confirmatory questions. Clearly indicate the nature of each question in the facilitator's guide. Explain your decisions about what kinds of questions to use in your report. Include both items that you "adapt/adopt" from the published literature and items that you develop yourself. Remember that item order is important for the focus group.

After you have a draft protocol, conduct a cognitive test of the potential questions and a test of the entire protocol.

8. Use cognitive techniques to evaluate the actual questions you propose for the focus group. For example, you may want to ask people if they think that some questions cover topics that will be sensitive to people in a group format. You may want to offer two or three ways of asking questions about sensitive topics and ask people to indicate which one is the least threatening. For example, in the focus group with Hispanic recreational fishers, we had a series of questions that dealt with compliance with regulations. We started those focus groups by explaining that we were not

interested in the participants' individual behavior, but rather in their knowledge of what Hispanic fishers *in general* do. Testers told us that they thought this would not be sufficient. Therefore, when we posed sensitive questions, we asked questions like "Do you think *most* Hispanic fishers release fish that are undersize?" Similarly, we asked "Do you think most of the Hispanic fishers you know have a fishing license?" In our cognitive testing, several testers told us that they were not sure that our participants, who were locally very active fishers, knew the regulations themselves. This would obviously lead to erroneous information. As a result of this suggestion, we tailored our questions to each group. If they identified Species X as a common catch in their area, we gave them a copy of the regulations about minimum and/or maximum catch size for that species. *Then* we asked them if they thought most Hispanic fishers followed that regulation. You should start this process with redundant items. However, you cannot depend on redundancy as much as you did in your initial test of the index. You might have two or three versions of key questions, for example. Describe and justify the procedures that you used. Use, cite and reference the research methods literature in your response.

9. How did you decide when to end the cognitive testing procedure? In general, "enough" cognitive testing has occurred when you are not learning anything new about your instrument. This is why it is so important to examine what you learn in each test immediately. If your fourth and fifth testers do not tell you anything that the first three testers did, you probably will not learn much more from a sixth and seventh tester. Use, cite and reference the research methods literature in your response.
10. What changes to your questions did you make as a result of the cognitive testing? Explain your reasoning. Use, cite and reference the research methods literature in your response.

After completing the cognitive test, conduct a test focus group, using the entire protocol. You need **at least six participants**.

11. Each observer should **individually** complete the two steps described below. However, you should agree as a group ahead of time about the specific procedures that each observer will follow. I provide some suggestions below, but you need to identify specific procedures for your group. Explain and justify your procedures. Use, cite and reference the research methods literature.
 - a. The first is to organize your observations about the focus group process, activities and question. For example, did all members of the focus group seem to be answering the same question, or was there evidence that different members of the focus group interpreted your questions differently? Did you observe reticence in responding to sensitive questions? Did the facilitator allow one individual to dominate the discussion? Were the procedures for drawing out contrasting ideas adequate? Develop your suggestions for changes in your protocol based on your observations
 - b. The second is to examine the responses of the participants. Examine the responses and organize them by variable. Develop a summary of the responses of the group for each variable. Examine the degree to which the responses provide the information that you needed. If your objective was a consensus process, for example, you may want to note dominant and minority ideas. If your objective was to generate a wide range of ideas, you may want to examine the responses to identify the different ideas that emerged. ? Develop your suggestions for changes in your protocol based on your analysis of the responses.

12. After each recorder completes his/her analysis of the test, the group as a whole should decide what changes to the protocol are needed. Describe the changes to your protocol that you will make as a result of the test. Explain your reasoning. Discuss what you learned about the discriminate, congruent and ontological validity of the instrument. Discuss what you learned about the discriminatory power of the instrument. Use, cite and reference the research methods literature in your response.
13. Attach a copy of the protocol at each stage: (1) prior to cognitive testing, (2) after cognitive testing, (3) after the test focus group. Remember to attach the other required documents.

Criteria Focus Group	Possible Points	Your Points
APA style, followed instructions	5	
Provided complete answers to all questions; stated the answers in your own words; provided answers that deal with the specific components or attributes of your instrument, not general statements true of instruments "in general"	15	
Explained the procedures you used and decisions you made at each step in the development of the focus group protocol – including (A) decisions about which variables or topics to include in the focus group, based on your assessment of what you learned from the index, (B) development and testing of questions and procedures, including inter-rater reliability; (C) creating a rubric for analyzing the information from the focus group, and (D) decisions about how you would use information (data) from the focus group and information from the index to help establish convergent, discriminate and nomological validity for your study	20	
Applied the concepts discussed in class and covered in the required readings; demonstrated that you understand how to apply these concepts to the development of procedures, instruments like observer forms, and processes like the role of the facilitator needed to conduct a focus group	30	
Drew on the required and other readings about research methods to explain and justify your decisions about how to improve the procedures, instrumentation and processes for the focus group; <i>used, cited and referenced extensive research methods literature to justify your decisions</i>	30	
Total	100	

Small Group Project Peer Assessments

Submit an assessment of each of your team members' contribution to the small group projects **immediately after you turn in the assignment**. You will submit **two** assessments, one after each project is completed. Follow the instructions in the document "Team Member Assessment Procedure" at the course home page. Submit the assessment by e-mail. List each partner and indicate the number of points (out of 10) that you want to award to each individual. No other information is needed. Title the e-mail **yourlastname_partner assessment**

Individual Semester Project

You will create at least one set of instruments, protocols and procedures for data collection. You may use any method of data collection that you want (questionnaire, scale, index, focus group, interview, etc.). You must operationalize at least one systematized concept and you may operationalize more

than one. You should select a topic of interest to you **and** a theoretical framework that is appropriate for your topic and of interest to you. There are three parts to this project.

Part I. Theoretical Framework (25 Points)

Objectives: After completing this assignment, you will know how to:

1. Identify mid-range theories to serve as a basis for your research
2. Assess how other researchers have used different theories to investigate the phenomenon of interest
3. Evaluate the strengths and weaknesses of different mid-range theories
4. Develop robust explanations of systematized constructs in theories of interest

You need a background in the major theoretical frameworks in social science to be able to identify a mid-range social theory of use for your work. If you feel that your background is weak, consult this book. It provides a succinct, easy-to-understand summary of major theoretical frameworks.

Allan, K. (2007). *The Social Lens: An Invitation to Social and Sociological Theory*. Thousand Oaks, CA, Sage Publications.

Allan provides an overview of the key concepts and processes in each of ten contemporary theoretical frameworks. Each of these ten perspectives has generated an array of mid-range theories. The theories described in Allan are very broad in scope. They are the “big picture” theories. This makes it difficult to use them to develop systematized constructs and indicators. Mid-range theories are more specific than the theoretical frameworks on which they are based. Researchers and practitioners usually work with mid-range theories rather than the broader theoretical frameworks described in Allan. Social learning theory is a mid-range theory based on the exchange theory framework. It deals with a specific kind of behavior, how people learn. This is a typical example of the relationship between a mid-range theory and the broader theoretical framework. Exchange theory provides an explanation of human behavior in general. Social learning theory applies that explanation to a specific aspect or type of human behavior.

You need to work with a mid-range theory for your project. The website for FYC 6330 (Theories of Community Development) will provide a good place to start. First, it provides links to many on-line resources. For example, the Stanford Encyclopedia of Philosophy will let you search for terms like “social class” or “self-completion.” **Please** use this, not “Wikipedia”. Other links, like The SocioWeb, give you places to learn about many theories. Second, if you look at the table at the course website, you will see that the major social theoretical perspectives, like conflict theory or constructivism, are listed. If you use those links, you will find many articles in which the theories indicated are used in research and practice. This is an excellent place to start your search.

Do **not** pick a topic (like child abuse or community-based conservation). Theories help us understand and explain classes or types of behavior – like individual decision-making. Social theories are not about topics. They are about classes or kinds of human behaviors and the same theory will provide a basis for understanding a given class of human behavior as it relates to many different settings, topics, or groups of people. For example, the theory of planned behavior can be used to understand individual decision-making about health (to lose weight or not), education (whether to go to college or not), or work behaviors (to change jobs or stay with the one you have). You do want to find theories that others have used to explore the research topic of interest to you. However, do not narrow your search too rapidly. You may find very helpful information that helps you understand the theory and

how others have operationalized the constructs in the theory in articles that apply the theory to topics very different than your topic.

Use published research articles, textbooks, “think pieces,” research reviews and other academic sources to learn about theories relevant to your research interest. Research reviews will be especially useful. I strongly encourage you to use the “Guide to Reading Research Reviews” at the web site to help you complete this assignment. Learning to read research literature efficiently and effectively is important to your success in graduate school, and in this course. This is a learned skill. Most of the time, you do not need to read every paragraph in detail. Rather, your objective is to extract key information efficiently. I have provided three guides for reading research literature at the home web page, one for reading research reviews, one for reading research reports that use quantitative data analysis, and one for reading research reports that use qualitative data analysis. Please use those if you find them helpful.

Answer the questions below. Number your response to each question. Include an explanation or justification for each answer. Be specific in your answers. For those of you who participated in FYC 6801, you can use much of your material from the assignment about theory in that class for this assignment.

1. Most research, including theory-based research, grows out of the researcher’s desire to solve a problem or provide knowledge needed by practitioners. What problem or need for knowledge do you want to address? For example, one of my students was concerned with how we can get people to behave in more environmentally responsible ways. Provide justification that the problem is a significant one that merits attention. Use the *published literature to document the extent and seriousness of the problem*. **Page limit: one single-spaced page.**
2. Identify and list at least three mid-range theories that other researchers and practitioners have used to address this problem. Provide examples from the scholarly literature of how other researchers have used each theory to inform research and practice relevant to the need or problem you have identified. Consult, use, cite and reference **at least five** sources of information that you consulted for each theory. **At least two of the five** must be research reports. Summarize the key points from each of the five references. **Page limit: one single-spaced page per theory, three pages total.**
3. Select one of the three theories to use as the basis for your semester project. Indicate which of the three theories you have selected and briefly explain your decision. **Page limit: one-half page.**
4. Discuss the general or “background” social scientific meaning of the constructs or concepts in the theory you have selected. Level 1 in Adcock and Collier, the “background concept,” refers to the general usage of a term across a number of disciplines, fields, or theoretical perspectives. These background concepts are usually, but not always, defined in the broad theoretical perspectives described in the Allan book. For example, the term legitimacy is a general or background concept in many disciplines, ranging from political science to psychology. These disciplines, however, use the term differently. Political scientists are typically more concerned with legitimacy as it applies to the use of authority while psychologists use the term to explore the subordination of the will of one person to those of another. Most research is not concerned with resolving these differences in usage. However, as a social scientist you do need to have an understanding of the general social science meaning associated with key concepts or constructs. Focus on the scientific use of the term and pay attention to how this usage differs from that of general public or “lay” use of the term. That is, a “wave,” for physical scientists, is NOT something you do with your hand. When someone asks, “Who is the legitimate heir to Ghandi’s legacy?” he/she is using the term

“legitimate” in a lay sense, not the social scientific sense. Cite and reference literature that you consult to gain this understanding of the general social scientific meaning of each construct.

5. Discuss and explain how other researchers have defined each construct. Use the published research literature to gain a thorough understanding of how each systematized concept is defined in the theoretical framework you have chosen. Cite and reference research reports and other published literature to provide evidence that you have examined differences in how the constructs are defined. You may find quite different systematized definitions of these constructs, in which case you must decide which of them you will use. Justify your decision. I discussed how different political theories define the construct of legitimacy in the instructions for Part 1 of the Small Group Projects. If legitimacy were a construct in your theory, you would have to decide which of these five definitions to use, based largely on the degree to which a specific systematized definition has been used by others and is likely to prove adequate in your research. To refresh your memory, I will repeat the five definitions: “...the instrumentalist theory according to which authority is legitimate to the extent that it gets people to do what they already have a duty to do. ... the consent theory of authority according to which authority is legitimate only if the subjects have consented to it. ... the theory advanced by John Rawls that authority is legitimate if and only if it acts in accord with principles the subjects agree to. ... Ronald Dworkin's view according to which legitimate political authority is a kin to the basis of obligations to friendships, families and other associations. ... the democratic conception of authority according to which the democratic assembly has legitimate political authority within certain limits because it treats every citizen as an equal in the process of making law.”
6. Provide a summarized definition of each construct or concept in a table like the one below. **State the definition in your own words.**

Theory of Planned Behavior

Summative Constructs	Dimensions or Components often Treated as Separate Constructs	Definition
Attitude toward behavior		Overall evaluation of the behavior
	Behavioral belief	Belief that behavioral performance is associated with certain attributes or outcomes
	Evaluation	Value attached to a behavioral outcome or attribute
Subjective norm		Belief about whether most people approve or disapprove of the behavior
	Normative belief	Belief about whether each referent approves or disapproves of the behavior
	Motivation to comply	Motivation to do what each referent thinks
Perceived behavioral control		Overall measure of perceived control over the behavior
	Control Beliefs	Perceived likelihood of occurrence of each facilitating or constraining condition
	Perceived Power	Perceived effect of each condition in making behavioral performance difficult or easy
Behavioral intention		Perceived likelihood of performing the behavior

Criteria Part 1 Semester Project	Possible Points	Your Points
APA style, followed instructions	5	
Identified three mid-range theories that other researchers have used to study the problem, issue or need of interest to you; demonstrated that you understand how the three theories differ in terms of how they explain the phenomenon of interest, drawing on the published literature	15	
Selected at least one of the three theories to serve as the basis of your work for the individual semester project and explained the general or “background” social scientific definition of the key concepts or constructs in the theory	15	
Compared and contrasted how the key constructs in the theory are defined in the literature; showed that you examined specific definitions in the literature to develop your definitions, using, citing and referencing published research reports	30	
Provided a systematized definition of each key construct or concept in the theory in your own words	15	
Demonstrated that you can apply key concepts about the reliability and validity of research instruments; used, cited and referenced the research methods literature (literature about research methods, not the theory or topic of your research) in your responses	20	
Total	100	

Part 2: Identification of Indicators, Variables and Potential Items (30 Points)

Objectives: After completing this assignment, you will know how to:

1. Identify the indicators or variables that other researchers have used to represent systematized theoretical constructs
2. Incorporate concepts of discriminate, convergent and nomological validity to select specific indicators or variables that you will use in your research to represent systematized concepts
3. Select and develop an initial slate of potential items for scoring variables
4. Use expert panel review to eliminate and/or modify an initial slate or inventory of potential items

Answer the questions below. Number your response to each question. Include an explanation or justification for each answer. Be specific in your answers. **Use, cite and reference the research methods literature in your responses.**

Read this before you try to answer questions 1-3. The first part is repeated from the instructions for the Small Group Projects, Part 1.

General or background constructs or concepts are mostly universal in their social scientific definition, which differs greatly in most cases from the general lay usage.

Systematized constructs differ somewhat from theory to theory, but the differences are often not great within a single theory. Once you have selected a specific systematized construct, you must not change it during your research because this is the form of the construct that you will operationalize. Social status is a construct in many theories, but we cannot observe or ask people about social status directly. Indicators are the attributes of people, places, or things that we can observe. A commonly used systematized construct is social status.

Indicators are attributes or characteristics of people that we can ask people about or observe. For example, many researchers use authority, privilege, and social recognition as indicators of social status. As you explore the constructs I have assigned for the small group project, you may find several indicators commonly associated with each construct. Some people will call these dimensions or components or factors in the construct. Whatever the term, these are attributes or characteristics that we can observe.

Variables, on the other hand, are specific to a given research context and study. You need at least one variable for each indicator, and may have several variables if an indicator is complex. For example, if you are conducting a study in the United States, you might have three variables representing social recognition – like receiving awards and honors, election to public office, and appointment to positions of authority in community-based organizations (like churches or homeowners associations). These variables would not be good ones in a study somewhere else where giving awards, electing people to public office, and assigning people to positions in community-based organizations do not constitute social recognition. In research, we analyze variables. We must state formal and/or statistical hypotheses in terms of the specific variables and we often express the more general “objectives of the study” in terms of variables as well. We often combine the scores for several variables to produce one comprehensive or summative score for an entire indicator.

Finally, **items** are the specific questions you ask or direct observations that you make. I could ask someone to check yes or no for a series of questions like: “Have you ever been elected to public office at the local level? Have you ever been elected to public office at the state level? Have you ever been elected to public office at the national level? Has anyone in your immediate family ever been elected to public office at the local level? At the state level? At the national level?” These are items and I could sum the number of yes responses to get a total score for the variable “election to public office.”

Together, a set items, variables, and indicators must capture the full meaning of the systematized concept they are supposed to represent. Most authors never refer to indicators, but rather to variables, which can be confusing. Therefore, I will emphasize variables most of the time. You will probably see this in the literature, too. However, be careful to consider contextual specificity as you decide what variables to use for your project.

1. Select at least one systematized construct to operationalize. Do **NOT** select something very simple like income, or educational level.
2. For each systematized construct that you will operationalize, identify, list and describe the indicators and variables that others have used to capture the meaning of the construct. Look hard for indicators (factors, components, dimensions) of the construct in the literature, but if you cannot find any discussion of these “sub-pieces” of the construct, you will have to focus solely on the variables. Make sure you have reviewed enough research literature to have a thorough understanding of the indicators or variables that others have used for a given construct. Consult, cite and reference at least five research reports in this process. You may need to consult more than five reports. This is a critical step in the process of operationalization. Do not cut your literature review short.
3. Examine the evidence in the literature that the indicators and variables used by others demonstrate good validity. Analyze the research results. What indicators or variables worked well and what ones appear to be weak or poor? A surprising number of indicators or variables actually have relatively little evidence of good validity. Income as the sole indicator of economic status is

an example. Examine and discuss evidence of convergent, discriminate, and nomological validity of the indicators/variables in the research reports you consult.

4. Select and list the indicators or variables that are potentially useful in your study. Explain and justify your decisions about which ones you think you should retain, discard, change or add based on the research methods literature. Cite and reference this literature in your report. The decision to discard indicators that others have used to represent a systematized concept should not be taken lightly. However, as Adcock & Collier indicate, changing indicators, and even systematized concepts on some occasions, may be well justified both from a theoretical perspective and from a contextual perspective. Testing alternative variables or indicators is an important aspect of research. Don't be too anxious to eliminate indicators or variables at this point. It's better to keep some "not so good" ones at this point than it is to leave out critical indicators. You have two more (at least) opportunities to eliminate indicators or variables in the validation process.

Read this before you try to answer questions 4 and 5.

As we have discussed, items are often very specific to the context in which you conduct your research. You may be able to "adapt and adopt" some items that others have used, but you will probably need to develop your own items in many cases. Adcock & Collier discuss context-specific indicators and adjusted common indicators. Think of items the same way. You may decide that an indicator or variable is valid in your research context (e.g., power), but need to create context-specific items to measure that variable. For example, items like occupation and educational achievement are good measures of social status in many societies. However, in a place where there is little occupational distinction among research participants, occupation may not be a good item to measure social status. I have worked in many small, rural communities, for example, conducting research that focuses on small landholders. Using occupation to measure social status would not be useful in these settings. Similarly, in some places "caste" remains an important item to measure social status, even if the traditional association of caste with specific professions no longer exists. In this case, you would probably need to use both caste and occupation as items to measure social status.

5. Provide a list of potential items that you will test for each variable listed in your response to question 3. Include both items that you "adapt/adopt" from the published literature and items that you develop yourself. It is always useful to try to "adapt and adopt" items from the literature than to start from scratch. If items have proven valid measures in other studies, they may well work in your study, too. However, context is so important in item construction that you will find that you must at least alter items in many research projects. Slight changes in wording, for example, can be critical. I also want you to gain expertise in developing items yourself. Therefore, **it is a requirement that you develop some items yourself**. Cite and reference the source for each item that you draw from the literature, including those items that you will adapt to the context for your study. You should have a comprehensive list of potential items for each indicator or variable at this time. The point of the validation process is to test the items to make sure that they produce valid scores for each systematized construct. You will eliminate many of the items in the validation process. Remember, as we have discussed, that redundancy may be valuable in and of itself, especially to test congruency.
6. Discuss your decisions about retaining, adapting and adding items in terms of contextual specificity. Explain the specific characteristics of the context in which you will conduct your study that you took into account. These may include characteristics of the population, setting, or place in which the research will occur. Make sure you draw upon the remarks of Adcock and Collier about context specificity in your decision-making.

Read this before you try to answer question 6.

Once you have what you think is a “pretty good” set of variables and items, peer or expert review is very valuable. Make **sure** your peer or expert reviewers have your definition of the systematized construct with them when they review your items! Otherwise, they may have no idea or a different idea from yours of what you are trying to operationalize. You may also need to provide them with information about the context in which you will conduct your research. Getting expert help is more than simply asking someone to “look over” your instrument. Except for some blatant problems, most of us cannot provide much useful insight when given such a broad and vague task. Be specific and think carefully about what you need from each peer or expert reviewer. Give the reviewers guidance about the kind of input that you want. Focus on the issues involved in validation.

- Describe the peer review process that you used. What instructions did you give your peer reviewers? What recommendations did they make? Which of their recommendations did you accept and which did you reject? Use, cite and consult the research methods literature to make your decisions. Explain and justify the decisions that you made. Error on the side of redundancy at this point. You will complete two more tests of your items. At this point, if in doubt, keep the item for further testing.

Criteria Part 2 Semester Project	Possible Points	Your Points
APA style, followed instructions	5	
Provided evidence of a thorough review of the research literature used to identify the indicators or variables that others have used to capture the meaning of the systematized construct that will be operationalized	20	
Demonstrated that you analyzed and evaluated the data and results in the published research literature to ascertain the evidence for convergent, discriminate, and nomological validity of the indicators/variables identified; showed that you have a thorough understanding of how to apply the concepts we have discussed in class to your own research instrument (did not just make general statements); explained the factors you considered in your analysis and evaluation	25	
Identified potential items in the literature and developed your own items; justified your decisions about the items you will retain, adapt, or develop from the perspective of contextual specificity; demonstrated a good command of key concepts in the research methods literature and used, cited and referenced extensive research methods literature to justify your decisions	25	
Explained the peer review process you used; showed that you can apply evaluative procedures to the selection and revision of items in your instrument; used, cited and referenced extensive research methods literature to justify your decisions	25	
Total	100	

Part 3: Validation of Draft Instrument (40 Points)

Objectives: After completing this assignment, you will know how to:

- Create quantitative and qualitative procedures for converting the responses to individual items to scores for variables or indicators
- Use cognitive techniques to evaluate the clarity and ambiguity in a research instrument
- Use quantitative and qualitative techniques to assess the validity and reliability of the instrument

4. Use quantitative and qualitative techniques to assess the discriminatory power of the instrument

Your overall task in this assignment is to perform two tests of a **draft** instrument. Start with the items from Part 1 of the Individual Semester Project. Use some kind of peer or expert review procedure and some test with a wider group of “participant like” testers to creating a “near final” instrument that has the most reliable and valid items you can develop. There are many procedures you can use in the validation process. Unlike the small group project, I will leave the decision about what procedures to use up to you. Be thorough and specific in your answers. Demonstrate that you understand the various procedures open to you. Do **not just repeat exactly what you did on the small group projects**. Be innovative. Learn from what you did in those projects. Look at alternative techniques and procedures in the literature. Include an explanation or justification for each decision you make. **Use, cite and reference the research methods literature in your responses. Draw heavily on the reviews that you and your colleagues have submitted.**

1. How will you create **variable scores**?
2. Your first testing procedure will be to use **cognitive techniques** to evaluate your draft instrument. Describe and justify the procedures that you used. Provide a comprehensive answer. Use, cite and reference the research methods literature in your response. Make sure you consider and discuss the following aspects of cognitive testing.
 - a. How did you decide who to use as testers? Think about contextual specificity. Some sources will insist that you must test the instrument with a subset of the actual research population. This is preferable, but not always possible. If you will conduct your research at a distant location, for example, you may not be able to contact a subset of the research population. In these cases, a reasonably similar group of testers in terms of key attributes of the research participants may be used. What does “reasonably similar” mean? You have to determine this. For example, if you are using a self-completion questionnaire and your ultimate study population has limited literacy, you need to test the instrument with other people who share that attribute. If your instrument uses technical terms that are readily understood by those in a profession, but unfamiliar to others, make sure the testers have the technical vocabulary needed. If your study population consists of people between the ages of 10 and 15, you probably need to test with people of the same age due to differences in cognitive ability, language and such. These are fairly obvious attributes. Others are more subtle. Think about Adcock and Collier’s comments about “response differences” between groups of people. You may need to take these kinds of differences into account as well. Use, cite and reference the research methods literature in your response.
 - b. How did you decide when to end the cognitive testing procedure? Use, cite and reference the research methods literature in your response.
3. What changes to your instrument did you make as a result of the cognitive testing? Explain your reasoning. Use, cite and reference the research methods literature in your response.
4. The second procedure you will use is a test of the revised instrument with a broader set of testers. The objective of this procedure is to allow you to analyze the responses or scores that you get to see if they “make sense” with regard to the systematized concept you are using. Unlike in the first test, you **are** concerned about the answers that your testers provide. This test allows you to gain insights into the congruent, discriminate and ontological validity of your instrument as well as the discriminatory power of your instrument. Use the appropriate quantitative and qualitative

techniques. Describe and justify the procedures that you used. Use, cite and reference the research methods literature in your response. Make sure you consider and discuss the following aspects of cognitive testing.

- a. How did you decide who to use as testers? Use, cite and reference the research methods literature in your response.
 - b. How did you decide how many testers you needed? I realize that some instruments require a large number of testers and that some techniques for analyzing responses require a large number of testers. For example, you would probably need 40 or 50 testers for a good test using item-total correlation. However, I know that your time in this course is limited. My concern is that you know what procedures to use and how to use them. I will therefore accept fewer than optimal numbers of testers, as long as you indicate that you are aware of any limitations in your procedures.
5. What changes to your instrument did you make as a result of the test? Explain your reasoning. Discuss what you learned about the discriminate, congruent and ontological validity of the instrument. Discuss what you learned about the discriminatory power of the instrument. If you feel that you should be cautious about your conclusions, possibly because you have a limited number of testers, be cautious in the changes you make. For example, if three items are candidates for exclusion based on the item-total correlation, you may decide to keep two of them as long as doing so does not make your instrument too long. You can always delete them later. Use, cite and reference the research methods literature in your response.
6. Attach a copy of the research instrument at each stage: (1) prior to cognitive testing, (2) after cognitive testing, (3) after the final test.

Criteria Part 3 Semester Project	Possible Points	Your Points
APA style, followed instructions	5	
Explained and justified the procedures you will use to create variable scores; used, cited and referenced the research methods literature in the response	10	
Demonstrated that you know how to select and use appropriate qualitative and quantitative techniques to test your draft instrument; demonstrated a good command of the issues and complexities assessing the validity and reliability of your specific type of instrument in your research context	20	
Justified your decisions about how to improve the instrument based on the information gained from each procedure	15	
Showed that you can apply the techniques and concepts that we have discussed to a your specific research instrument; did not just repeat generalities	30	
Used, cited and referenced the research methods literature in your responses, especially the literature that is relevant to your specific type of research instrument and the contextual and topical considerations specific to your problem, issue or need of interest	20	
Total	100	

Semester Project Peer Assessments

Submit an assessment of each of the two colleagues who are serving as the peer partners for your semester project after you turn in your semester project. Follow the instructions in the document "Peer Partner Assessment Procedure" at the course home page.

Class Schedule

See the course web site for a weekly guide to our class. Click on the topics listed in the table for each week. The web pages for each week include the required readings, any specific instructions for class preparation, additional resources, and a link to a detailed description of any assignment that is due.

Academic Honesty: All students are expected to be honest in all their academic work. Failure to uphold the standards of honesty will result in the appropriate disciplinary action by the University of Florida. As a result of completing the registration form at the University of Florida, every student has signed the following statement: "I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the university." **UF**

Counseling Services: Resources are available on campus for students having personal problems or lacking clear career and academic goals which interfere with their academic performance. These resources include: (1) University Counseling Center, 301 Peabody Hall, 392-1575, personal and career counseling; (2) Student Mental Health, Student Health Care Center, 392-1171, personal counseling; (3) Sexual Assault Recovery Services (SARS), Student Health Care Center, 392-1161, sexual counseling; and (4) Career Resource Center, Reitz Union, 392- 1601, career development assistance and counseling.

Software Use: All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are against university policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. **Classroom**

Accommodation: Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.