

COURSE: Quantitative Empirical Research
PROFESSOR: Barbara B. Flynn
DEPARTAMENT: POI

FACULTY INFORMATION

Barbara B. Flynn received a D.B.A. in operations management from Indiana University, a M.B.A. from Marquette University and a B.A. in psychology from Ripon College. She is currently a visiting professor of operations management at Fundação Getúlio Vargas and the Richard M. and Myra Louise Buskirk Professor of Manufacturing Management at Indiana University. Her previous academic appointments have been at Wake Forest University, Iowa State University and Louisiana State University. She is a Fellow of the Decision Sciences Institute and recipient of the Distinguished Service Award from the Decision Sciences Institute and the Distinguished Scholar Award from the Operations Management division of the Academy of Management. Professor Flynn has received over \$1 million in research funding from the National Science Foundation, the U.S. Department of Education and the Center for Innovation Management Studies. She is director of the High Performance Manufacturing global research group, which studies the relationship between manufacturing practices and performance in various organizational and national cultures. Professor Flynn is Co-Editor-in-Chief of *Journal of Supply Chain Management*, former Editor-in-Chief and founding editor of *Decision Sciences Journal of Innovative Education*, and former Editor-in-Chief of *Quality Management Journal*. She is a past President of the Decision Sciences Institute and has held leadership positions within the Decision Sciences Institute, Academy of Management, Institute for Management Sciences (TIMS) and APICS.



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COURSE DESCRIPTION

This course will develop participants' ability to plan, develop and publish quantitative empirical research in Operations Management and related areas, with a particular focus on designing, executing and analyzing survey research. Participants will receive support and feedback for developing their own survey research study into publication quality materials. At the end of the course, each participant will present a proposal for a survey research project and receive feedback from the other participants, as well as submitting a written research project. The course will also focus on success strategies for publishing empirical research of all types in high quality academic journals, through class discussion, article critique and tutorial presentations on topics that are important to empirical researchers. Participants are encouraged to bring their own research-in-progress for discussion, advice and development.

The course is targeted at graduate students who are in the process of developing their own research projects. The typical student is developing his or her PhD. project. Advanced masters degree students with some familiarity with research methods are also encouraged to participate. Researchers that have already completed their PhDs, but would like to develop their ability to design and execute survey research to publish internationally will also benefit from this course.

TEXTBOOKS

Fink, Arlene, *The Survey Kit*, second edition. Sage Publications.

This is a set of short books related to various important aspects of survey research. In addition to serving as the primary reference materials for this class, you will find them helpful in the future, as you design and implement your own survey research studies. These books will be assigned at a rapid pace, due to the timing of this course. I strongly recommend that you begin reading them prior to the start of this class, in order to avoid getting overwhelmed.



GRADING AND EVALUATION

Class preparation and discussion	20%
Written article critiques	20%
Tutorial presentation	15%
Project presentations – parts 1 and 2	10%
Final project presentation	10%
Written project	15%
Exam	10%

• Class Discussion

Class discussion is a critical means of mastering the material covered in this class. As such, it is important that you attend every class session, arrive on time and be well prepared. During a typical class discussion, I will ask questions to move the discussion forward and ensure that the key topics are covered, however, you and your classmates will be responsible for providing the content that we discuss. Thus, it is imperative that you read and think about the assigned reading prior to class and that you come to class ready to actively contribute to the discussion.

• Article Critiques

Reviewing the work of your colleagues and serving as a reviewer is an important part of learning how to do your own research. You will be writing a written critique of each of six survey research articles. Some will be published articles, while others will be manuscripts. You should write your critique in detail, from the perspective of a journal reviewer, following the template that we will discuss during the first class session. We will spend substantial class time discussing the critique articles, emphasizing keys to effectively publishing in international journals, in order to help you develop an understanding of what will be expected of you as an author.

• Tutorial Presentations

You will be responsible for becoming an expert on an important topic related to survey research. The primary source for developing your expertise will be published articles related to your topic. I will provide you with a list of articles to help you get started, however, you are expected to do additional research on your own. You will present your findings to the class as a tutorial, in order to help everyone in the class understand important issues and controversies in survey research. Potential topics include:

- Single respondent bias
- Endogeneity
- Measurement equivalence/invariance
- Translation of survey items
- Common method bias/variance
- Partial least squares
- mTurk and Qualtrics samples
- Discontinuous growth models
- Mixed models
- Self-reported measures of sensitive constructs
- Multilevel modelling
- Cronbach's coefficient alpha
- Mediation and moderation
- Missing data
- Outliers
- Longitudinal survey research

Your presentation should focus on the following items, related to your topic:

1. What is it? How does it work?
2. Why is it important?
3. Why is it controversial?

4. Issues to watch for
5. Ways to address issues

In addition to your oral presentation, please print copies of your slides and a suggested reading list to distribute during class. The references will be helpful to your classmates as they address these issues in the future, so it is important to develop a good reading list for them. Keeping these handouts will provide you with a useful reference on important and controversial topics in survey research that you will need to deal with as a researcher.

• Project

You will be designing and implementing a survey research project on the topic of your choice. More advanced students may want to use the project that will become your thesis, however, it is fine to use any project that you would like. If you use a project that you are already working on, you will need to be flexible to incorporating class feedback to make modifications to it, for the purposes of this class. The project will be presented to the class in several parts, allowing you to receive feedback on each of the parts from your classmates.

Part 1 (October 30)

- Revised draft of your own scale
- Survey plan

Following the first presentation, you should develop the set of measurement scales that you will use to test your hypotheses, set up online administration of your survey in Qualtrics and use it to collect data. It is important that you do this in a timely fashion, so that you will have received the data and be able to analyze it prior to the final project presentation on December 6.

Part 2 (November 14)

- Data analysis plan
- Expected findings and implications

Final Project Presentation (December 6)

- Introduction
- Literature review and hypotheses
- Method
- Analysis
- Results
- Discussion
- Conclusions

You will receive feedback on your presentation from your classmates and me on December 6. You should make note of the important points and address them as you prepare the final written project, which is due on December 31.

Final Written Project (December 31)

- Written paper, including each of the sections listed above. The paper should be formatted according to the submission guidelines for a journal that you would like to publish your research in some day.
- A copy of the submission guidelines that you followed.
- A list of the key feedback items from your December 6 presentation and a description of how you addressed each of these points as you prepared your written project paper.

• Exam



There will be a final exam given during class on December 7. It will cover material from the assigned reading, class discussion and tutorial presentations. Taking good notes during the class discussion and tutorial presentations will be very helpful to you as you prepare for the exam.

Date	Topic	Preparation	Class
10/24	Why do survey research?	<i>The Survey Handbook</i>	Please bring a survey research article that you find interesting to class.
10/25	Measurement scale development	<i>How to Ask Survey Questions</i> <i>How to Assess and Interpret Survey Psychometrics</i>	Please bring a published measurement scale with you to class, with enough copies to distribute to the class. Critique article #1
10/26	Survey research design	<i>How to Design Survey Studies</i> <i>How to Sample in Surveys</i>	Please develop one measurement scale on a topic of interest to you. Bring enough copies to distribute to the class. Critique article #2
10/30		<i>How to Conduct Self-Administered and Mail Surveys</i>	Project presentation #1 Critique article #3 Tutorial Presentations
11/14	Survey data analysis	<i>How to Manage, Analyze and Interpret Survey Data</i>	Presentation #2 Critique article #4 Tutorial Presentations
11/16	Survey results and discussion	<i>How to Report on Surveys</i>	Critique article #5 Tutorial Presentations
12/5	Other types of quantitative empirical research		Critique article #6 Tutorial Presentations
12/6	Project presentations		
12/7	Exam		
12/31	Written project paper due		