



UNIVERSITÄT  
BAYREUTH

## Advanced Experimental Methods in Marketing

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This summer semester 2020 the Chair of Business Administration III – Marketing and Consumer Behavior offers the master course “Advanced Experimental Methods in Marketing” with Prof. Laurence Ashworth. The course will take place in June/July and the exact dates will be planned in consultation with the participants of the course. For upcoming information, please join the course on the E-Learning platform (Password: AdvExp+20):

<https://elearning.uni-bayreuth.de/course/view.php?id=25726&notifieditingon=1>

**A mandatory kick-off meeting will take place via Zoom on 24<sup>th</sup> of June 2020 (exact time will be announced shortly).**

### Course Objectives:

There are two primary objectives of this course. First, it aims to help students transition from theory to theory testing using experiments. This is often a difficult process that involves a number of tricky questions, including choosing appropriate conceptual manipulations (i.e., identifying the factors that are important based on the theoretical framework), choosing appropriate factors to cross with the primary causal variables and appropriately operationalizing those factors. Second, this course aims to familiarize students with the current standards used in experimental marketing research and with some of the issues surrounding the use of the most common techniques. Examples of this include the appropriate analysis of experimental data, techniques for assessing moderation and mediation, issues surrounding the reliability of measures, etc. At the end of this course students should be able to develop their own experiments to test aspects of a theoretical framework, appropriately analyze the experimental data, and understand some of the issues surrounding various types of analysis and conclusion.

### Readings and Class Time

For each topic, I have assigned a series of readings that are relevant to the topics that we will discuss. I expect you to read each of these papers *thoroughly*. If there are parts of the paper you do not understand, please make a note so that we can make sure we devote some time to discussing those parts in class.

Class time will be spent both discussing the readings and developing and practicing our own experimental tests of theory. I expect you to bring some of your own ideas to class, as you will spend time thinking about ways you would test these ideas. I will also present you with some theoretical ideas

that you will use to develop your own tests. Between classes, you will be given datasets to practice different techniques and the interpretation of your analyses.

## Registration

Please register for the course via e-mail to Jonas Föhr ([jonas.foehr@uni-bayreuth.de](mailto:jonas.foehr@uni-bayreuth.de)). **Registration is possible until Sunday, 21<sup>st</sup> of June 2020.**

## Course Schedule

Topic	Date	Topic and Readings
1	TBA	Experiments and Theory
<p><b>Goals:</b></p> <ol style="list-style-type: none"> <li>1) Find out where you are all at</li> <li>2) Your ideas (that you might want to test)</li> <li>3) Practice: develop an experiment</li> <li>4) General discussion (see next)</li> </ol> <p><b>Discussion points</b></p> <p>Good theory; why experimental tests?; manipulating the proposed cause; maximizing variance in cause; minimizing noise and confounds; measuring possible confounds; operationalization; testing and retesting.</p> <p><b>Readings:</b></p> <p>Leary, Mark R. (2012). <i>Introduction to Behavioral Research Methods</i>. Boston, MA: Pearson. Chapters 9, 10.</p>		
2	TBA	Experiment Fundamentals
<p><b>Topics:</b></p> <ol style="list-style-type: none"> <li>1) Factorial designs, interactions, and moderation</li> <li>2) Manipulation checks</li> <li>3) Messy data</li> <li>4) Sample size decisions, power analysis, and effect sizes (also relevant to “drawing conclusions”)</li> </ol> <p><b>In-Class Exercise:</b> ANOVA basics, testing interactions with ANOVA and regression</p> <p><b>Readings:</b></p> <p>Faul, Franz, Edgar Erdfelder, Albert-Georg Lang, and Axel Buchner (2007). G*Power 3: A Flexible Statistical Power Analysis Program for the Social, Behavioral, and Biomedical Sciences. <i>Behavior Research Methods</i>, 39(2), 175-191. <b>PAGES 175-177</b> and also G*Power 3 Manual, <b>PAGES 26-30</b>.</p> <p>Gelman, Andrew and Hal Stern (2006). The Difference Between “Significant” and “Not Significant” is not Itself Statistically Significant. <i>American Statistician</i>, 60(4), 328-331.</p> <p>Leary, Mark R. (2012). <i>Introduction to Behavioral Research Methods</i>. Boston, MA: Pearson. Chapters 11, 12.</p>		

3	TBA	Mediation, Moderation, and Moderated-Mediation
<p><b>Topics:</b></p> <ol style="list-style-type: none"> <li>1) Mediation and moderated-mediation</li> <li>2) Methods of testing mediated models</li> <li>3) Spotlight analysis</li> </ol> <p><b>In-Class Exercise:</b> Mediation</p> <p><b>Readings:</b></p> <p>Jin, Liyin, Yanqun He, and Ying Zhang (2014). How Power States Influence Consumers' Perceptions of Price Unfairness. <i>Journal of Consumer Research</i>, 40(5), 818-833. <b>MEDIATED-MODERATION ANALYSIS ONLY, 827-828.</b></p> <p>Spencer, Steven J., Mark P. Zanna, and Geoffrey Fong (2005). Establishing a Causal Chain: Why Experiments are Often More Effective than Mediational Analyses in Examining Psychological Processes. <i>Journal of Personality and Social Psychology</i>, 89 (6), 845-851.</p> <p>Spiller, Stephen A., Gavan J. Fitzsimons, John G. Lynch Jr., and Garry H. McClelland (2013). Spotlights, Floodlights, and the magic Number Zero: Simple Effects Tests in Moderated Regression. <i>Journal of Marketing Research</i>, 50(2), 277-288.</p> <p>Zhao, Xinshu, John G. Lynch Jr., and Qimei Chen (2010). Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. <i>Journal of Consumer Research</i>, 37 (August), 197-206.</p>		
4	TBA	Dependent Variables
<p><b>Topics:</b></p> <ol style="list-style-type: none"> <li>1) What to measure, published measures</li> <li>2) Measurement issues – reliability, discriminant validity</li> <li>3) Factor analysis – when to use it and how to report it</li> </ol> <p><b>In-Class Exercise:</b> Exploratory factor analysis</p> <p><b>Readings:</b></p> <p>John, Oliver P. and Veronica Benet-Martínez (2014). Measurement: Reliability, Construct Validation, and Scale Construction. In Harry T. Reis and Charles M. Judd (Eds.), <i>Handbook of Research Methods in Social and Personality Psychology, Second Edition</i> (pp. 473-503). New York, NY: Cambridge University Press.</p> <p>Sigall, Harold and Judson Mills (1998). Measures of Independent Variables and Mediators Are Useful in Social Psychology Experiments: But Are They Necessary? <i>Journal of Personality and Social Psychology</i>, 2(3), 218-226.</p>		

5	TBA	Drawing Conclusions
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**Topics:**

- 1) Generalizability
- 2) Statistical significance and effect size
- 3) Acceptable and unacceptable practices

**Readings:**

- Chow, Siu L. (1988). Significance Test or Effect Size. *Psychological Bulletin*, 103 (1), 105-110.
- Highhouse, Scott (2009). Designing Experiments that Generalize. *Organizational Research Methods*, 12, 554-566.
- Simonsohn, Uri, Leif D. Nelson, and Joseph P. Simmons (2014). P-Curve: A Key to the File-Drawer. *Journal of Experimental Psychology: General*, 143(2), 534-547.

6	Useful Additional Readings	
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**NOTE: Not necessary to read for the course**

- Baron, Ruben M. and David A. Kenny (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182. **PAGES 1173-1178.**
- Cortina, Jose M. (1993). What Is Coefficient Alpha? An Examination of Theory and Applications. *Journal of Applied Psychology*, 78(1), 98-104.
- Dawson, Jeremy F. (2014). Moderation in Management Research: What, Why, When, and How. *Journal of Business Psychology*, 29, 1-19.
- Fabrigar, Lee, Duane T. Wegener, Robert C. MacCallum, and Erin J. Strahan (1999). Evaluating the Use of Exploratory Factor Analysis in Psychological Research. *Psychological Methods*, 4(3), 272-299.
- Fitzsimons, Gavan J. (2008). Death to Dichotomizing. *Journal of Consumer Research*, 35(1), 5-8.
- Gawronski, Bertram and Galen V. Bodenhausen (2015). Theory Evaluation. In Bertram Gawronski and Galen V. Bodenhausen (Eds.), *Theory and Explanation in Social Psychology* (pp 3-23). New York, NY: Guilford Press.
- Hayes, Andrew F. (2009). Beyond Baron and Kenny: Statistical Mediation Analysis in the New Millennium. *Communication Monographs*, 76 (4), 408-420.
- Henrich, Joseph, Steven J. Heine, and Ara Norenzayan (2010). The Weirdest People in the World? *Behavioral and Brain Sciences*, 33, 61-135. **PAGES 61-82.**
- Irwin, Julie R. and Gary H. McClelland (2001). Misleading Heuristics and Moderated Multiple Regression Models. *Journal of Marketing Research*, 38(1), 100-109.
- Jaccard, James and Jacob Jacoby (2010). *Theory Construction and Model-Building Skills: A Practical Guide for Social Scientists*. New York, NY: Guilford Press. Chp. 7.
- Leys, Christophe, Christophe Ley, Olivier Klein, Philippe Bernard, and Laurent Licata (2013). Detecting Outliers: Do Not Use Standard Deviation around the Mean, Use Absolute Deviation around the Median. *Journal of Experimental Psychology*, 49(4), 764-766.
- Lynch, John G. (1982). On the External Validity of Experiments in Consumer Research. *Journal of Consumer Research*, 9, 225-239.

- MacKinnon, David P. and Angela G. Pirlott (2015). Statistical Approaches for Enhancing Causal Interpretation of the M to Y Relation in Mediation Analysis. *Personality and Social Psychology Review*, 19(1), 30-43.
- Nickerson, Raymond S. (2000). Null Hypothesis Significance Testing: A Review of an Old and Continuing Controversy. *Psychological Methods*, 5(2), 241-301. **PAGES 241-263.**
- Preacher, Kristopher J. and Andrew F. Hayes (2008). Asymptotic and Resampling Strategies for Assessing and Comparing Indirect Effects in Multiple Mediator Models. *Behavior Research Methods*, 40 (3), 879-891.
- Rosnow, Ralph L. and Robert Rosenthal (1996). Contrasts and Interactions Redux: Five Easy Pieces. *Psychological Science*, 7(4), 253-257.
- Simmons, Joseph P., Leif D. Nelson, and Uri Simonsohn (2011). False-Positive Psychology: Undisclosed Flexibility in Data Collection and Analysis Allows Presenting Anything as Significant. *Psychological Science*, 22 (11), 1359-1366.