

Strategies for People Analytics 15.S74

Spring 2017 – H2 (6 units)
Section A: Thursdays 4:00 – 7:00pm in E62-223

Professor Emilio J. Castilla
Massachusetts Institute of Technology
Sloan School of Management
100 Main Street, Room E62-332
Cambridge, MA 02142

Office: E62-332
Phone: (617) 253-0286
Fax: (617) 253-7696
E-mail: ecastilla@mit.edu

Office Hours: By appointment

Teaching Assistant:
Melissa Staha
Office: E62-368
E-mail: staha@mit.edu

Faculty Bio

Emilio J. Castilla is the NTU Professor of Management at the MIT Sloan School of Management. Castilla joined the MIT Sloan faculty in 2005, after being a faculty member in the Management Department of the Wharton School at the University of Pennsylvania. He is a member of the Institute for Work and Employment Research at MIT, as well as a Research Fellow at the Wharton Financial Institutions Center and at the Center for Human Resources at the Wharton School. He received his post-graduate degree in Business Analysis from the Lancaster University Management School (UK) and his PhD and MA in Sociology from Stanford University.

Professor Castilla studies how social and organizational processes influence key employment outcomes over time. He tackles his research questions by examining different empirical settings with longitudinal datasets, both at the individual and company levels. His focus is on the recruitment, hiring, development, and job mobility of employees within and across organizations and locations, as well as on the impact of teamwork and social relations on performance and innovation. His work has been published in top academic journals and edited volumes, including *Administrative Science Quarterly*, *Organization Science*, *American Journal of Sociology*, and *American Sociological Review*. He has also written a book on the use of longitudinal methods in social science research (Elsevier/Academic Press).

Professor Castilla has taught in various degree programs at MIT Sloan, the Wharton School, and a number of other international universities. His teaching interests include Strategic Human Resource Management, Leading Effective Organizations, Talent Management, and Organizational Behavior. In addition to teaching full-time MBA and executive courses, he has taught several PhD-level seminars.

Course Overview

People analytics is a data-driven approach to improving people-related decisions for the purpose of advancing both individual and organizational success. While people have always been critical to the success of organizations, many business leaders still make key decisions about their workforce based on intuition, experience, advice, and guesswork. However, today leaders can improve their people decision-making based on the collection and systematic analysis of data. In this new course, we will explore a number of strategies used to attract and retain top talent, and illustrate how these strategies are being designed and used at cutting-edge companies. In doing so, we will examine and discuss examples of organizations and company projects addressing key people-related issues, such as recruiting and hiring, performance evaluation, promotion and training opportunities, compensation, and organizational change. By the end of this course, you will understand how and when “big data” can be used to make key employee decisions so that you can position yourself as a strategic partner in your company’s talent management.

Our focus in this course is on the *strategies* that can be used to successfully design and implement people analytics in your organization. We will draw on the latest company practices, research projects, and cases studies—all with the goal of helping you deepen your understanding of how people analytics can be applied in the real world. In so doing, we will cover the most important aspects of human resource management. We will begin by covering basic tools and principles to help you learn about human resource management and people analytics. Next, we will focus on how to apply those basic tools and principles when hiring, evaluating and rewarding performance, managing careers, and implementing organizational change. By learning about strategies for people analytics, you will not only advance your company’s business objectives through the strategic management of people, but also your own career.

We will take the perspective of the general manager when examining how emerging “big data” analytical approaches applied to human resource management can be used to advance business objectives. We will cover HR theory/practice and statistical methods as they pertain to addressing people-related issues at real organizations. This course is not intended to teach you statistics or programming. Nor will this course cover the issues involved when gathering (and analyzing) data. Instead, it is intended to acquaint you with key strategies for the design and implementation of people analytics in your organization.

Course Pre-Requisite(s): Organizational Processes (15.311) or a similar course in organizational behavior/theory that provides key tools needed to understand, manage, and lead organizations. While a good background in basic statistics and/or analytics will be helpful, it is not required for this course.

This course could be complemented with other courses in advanced statistics and/or business/operations analytics (though not required).

Course Goals

The goal of this course is to prepare you to wisely collect and use data to manage people at work. Upon successful completion of this course, you will have:

1. Become familiar with the most relevant topics general managers face concerning the management of people.
2. Learnt a set of frameworks and theoretical models to help you make key employee decisions.
3. Been exposed to some of the most cutting edge techniques used by companies to analyze data about their employees in order to make their organizations and their individual employees more successful.
4. An understanding of how to apply “big data” analytics to identify, evaluate, and resolve a variety of challenges and issues relating to your workforce; also the ability to interpret (and present) the results of your analyses to make strategic people-related decisions.

Teaching Approach

While this course will include lectures, a major component of it will be classroom discussion. Interacting with me and with your peers is a vital part of your learning experience and is important for your grade (see below). You should come to class prepared to discuss the day’s readings and cases, to participate in class exercises, and to respond constructively to the ideas and comments of others. I will facilitate a dynamic dialogue and have every expectation that your interactions will be well-informed and well-reasoned. Effective discussion depends on your willingness to share your ideas and experiences and, as importantly, to be supportive of and responsive to others.

Required Readings

All course readings will be available on Stellar/study.net. The readings are drawn from a number of sources, including academic research articles, excerpts from longer works in management, short articles from both popular and business presses, and case studies. Additional handouts may be distributed throughout the course.

Not all class materials will be discussed to the same extent. Most classes include a case/exercise, which will typically serve as the basis for class discussion.

Course Requirement and Grading

There are three basic requirements to help you meet your learning goals in this class:

1. Class participation. This course depends heavily on class participation, and so it is integral to receiving a satisfactory grade. Participation includes class attendance, informed involvement/active participation in class discussions and group exercises, and timely completion of readings/short assignments/exercises. Participation counts for **40%** of your grade and will be evaluated on an ongoing basis throughout the semester. While regular participation in class discussion is expected, the quality of student comments is key. Quality is judged based on your ability to contribute

substantively to class discussion and to consider others' comments in advancing the discussion. I will occasionally call on students but will rely mostly on voluntary participation. I welcome all relevant perspectives and expect that all students will take advantage of the opportunity to actively participate in the course.

Please prepare for each session by doing the required reading. Assignments listed as “due” should be brought to class that day to be turned in and graded.

2. **People Analytics Plan: 20%.** The third week of the semester (following session 5), an individual one-page essay will be due in which you a) briefly describe a people-related challenge to address in a real organization you are familiar with, and b) propose how you might address this issue analytically. More details will be given in class.
3. **People Analytics Mini-Project.** This group project involves helping an organization address an important people challenge. The goal of this mini-project is to give you some first-hand experience in thinking about how to design and implement people analytics in the real world. This mini-project will involve two deliverables: 1) A Power Point project proposal, and 2) A final report. This project will count toward **40%** of your final grade. More details will be given in class.

Contact Information

I am usually in my office (at MIT Sloan) before and after class. I am available at other times by appointment. I can also be reached by phone at 617-253-0286 and by e-mail at ecastilla@mit.edu (preferred). I encourage you to talk to me about any questions or concerns you might have about the course.

Course Schedule and Assignment Due Dates

Date	Part	Session	Description of Part	Deliverables
6-Apr.-2017	I	1	Introduction to People Analytics	
		2		
13-Apr.-2017	II	3	Motivation and Work	
		4		
20-Apr.-2017	III	5	Staffing your Organization	People Analytics Plan
		6		
27-Apr.-2017	IV	7	Managing Performance	
		8		
4-May-2017			In-Class Project Coaching (Optional)	Power Point Project Proposal due May 9 th
11-May-2017	V	9	Compensating and Developing Talent	
		10		
18-May-2017	VI	11	Future of People Analytics	People Analytics Project Report
		12		

Class Schedule and Reading Assignments

Part I. Introduction to People Analytics

Session 1. What is People Analytics?

1. In-Class Reading:
Steward (2013): "Looking for a Lesson in Google's Perks" *New York Times*,
March Issue. (Link on Stellar)

Session 2. Why People Analytics?

2. Thomas H. Davenport, Jeanne Harris, and Jeremy Shapiro (2010): "Competing on Talent Analytics." *Harvard Business Review*, October: 6pp. (PDF on Stellar)

Further optional readings:

- Brian E. Becker and Mark A. Huselid (2001): "The Strategic Impact of Human Resources, Part I." *Harvard Business School Article* No. B0105B: 5pp. (On study.net)
- Edward E. Lawler (2015): "Talent Analytics: Old Wine in New Bottles?" *Forbes / Leadership*, May 20. (PDF on Stellar)

Part II. Motivation and Work

Session 3. The Employment Relationship: Some Theoretical Perspectives

3. In-Class Exercise: Reflecting on how you engage employees in the workplace.
4. James N. Baron and David M. Kreps (1999): "Employment as a Social Relation." From Chapter 5 in *Strategic Human Resources: Frameworks for General Managers*. John Wiley & Sons, Inc.: pp. 95-117. (On study.net)

Session 4. Strategic Execution of People Practices

5. Case:
Charles Heckscher (1989): "The Portman Hotel Company." *Harvard Business School Case* 9-489-104: 13pp. (On study.net)
6. Jeffrey Pfeffer (1995): "Producing Sustainable Competitive Advantage through the Effective Management of People." *Academy of Management Executive* 9 (1): pp. 55-72. (PDF on Stellar)

Further optional readings:

- Baron, James N. and Michael T. Hannan (2002): "Organizational Blueprints for Success in High-Tech Start-Ups: Lessons from the Stanford Project on Emerging Companies." *California Management Review* 44: 8-35. (PDF on Stellar)

- V. Kumar and Anita Pansari (2015): “Measuring the Benefits for Employee Engagement.” *MIT Sloan Management Review*, June 16. (PDF on Stellar)
- Joseph Bersin (2015): “Becoming Irresistible: A New Model for Employee Engagement.” *Deloitte Review* 16: 145-163. (PDF on Stellar)

Part III. Staffing Your Organization

Session 5. Recruiting and Selecting Talent

7. Case:
 Thomas DeLong and Vineeta Vijayaraghavan (2006): “S.G. Cowen: New Recruits.” *Harvard Business School Case No. 9-402-028*: 15pp. (On study.net)

Session 6. Analyzing Promotions

8. Bidwell, Matthew. 2011. “Paying More to Get Less: The Effects of External Hiring versus Internal Mobility.” *Administrative Science Quarterly* 56 (3): 369-407. (PDF on Stellar)

Further optional readings:

- Emilio J. Castilla (2005): “Social Networks and Employee Performance in a Call Center.” *American Journal of Sociology* 110 (5): 1243-1283. (PDF on Stellar)
- Jack Zenger (2014): “Who to Promote? 10 Keys to Identifying People with High Potential.” *Forbes / Leadership*, Sept. 18. (PDF on Stellar)

Part IV. Managing Performance

Session 7. Performance Evaluation

9. Case:
 Robert Simons and Antonio Davila (1999): “Citibank: Performance Evaluation.” *Harvard Business School Case No. 9-198-048*: 9pp. (On study.net)
10. John J. Gabarro and Linda A. Hill, “Managing Performance,” *Harvard Business School* 9-496-022: 6pp. (On study.net)

Session 8. Rewarding Performance

11. Case:
 Brian Hall, Edward Lazear, and Carleen Madigan (2000): “Performance Pay at Safelite Auto Glass (A).” *Harvard Business School Case No. 9-800-291*: 11pp. (On study.net)

Further optional readings:

- Edward Lazear (2000): “Performance Pay and Productivity.” *American Economic Review* 90: 1346-1361. (PDF on Stellar)
- Oriana Bandiera, Iwan Barankay, Imran Rasul (2005): “Social Preferences and the Response to Incentives: Evidence from Personnel Data.” *Quarterly Journal of Economics* 120: 917-962. (PDF on Stellar)
- Dan Ariely, Uri Gneezy, George Lowenstein, and Nina Mazar (2009): “Large Stakes and Big Mistakes.” *The Review of Economic Studies* 76: 451-469. (PDF on Stellar)

In-Class Project Coaching (Optional Class)

Part V. Compensating and Developing Talent

Session 9. Compensation

12. Case:

Jeffrey Pfeffer (1998): “The SAS Institute: A Different Approach to Incentives and People Management Practices in the Software Industry.” *Graduate School of Business Stanford University Case* No. HR-6: 17pp. (On study.net)

13. Jeffrey Pfeffer (1998): “Six Dangerous Myths about Pay.” *Harvard Business Review Article* No. 98309: 106-120. (PDF on Stellar)

Session 10. Training and Development

14. Case:

Robert Kelley and Janet Caplan (1993): "How Bell Labs Creates Star Performers." *Harvard Business Review Article* No. 93405: pp. 128-140 (PDF on Stellar)

Further optional readings:

- Oriana Bandiera, Iwan Barankay, and Imran Rasul (2007): “Incentives for Managers and Inequality among Workers: Evidence from a Firm-Level Experiment.” *Quarterly Journal of Economics* 122: 729-773. (PDF on Stellar)
- Jeffrey Pfeffer and Robert I. Sutton (2007): "Do Financial Incentives Drive Company Performance? An Evidence-Based Approach to Motivation and Rewards." *Harvard Business School Press*: 28pp. (PDF on Stellar)

Part VI. Current Issues in People Analytics

Sessions 11 and 12.

Required Reading(s) to be decided

Optional readings to learn about Networks and Collaboration:

- Ronald S. Burt (2004): "Structural Holes and Good Ideas." *American Journal of Sociology* 110: 349-399. (PDF on Stellar)
- Margaret Schweer, Dimitris Assimakopoulos, Rob Cross, and R. Thomas (2012): "Building a Well-Networked Organization." *Sloan Management Review*, Winter. (PDF on Stellar)

Optional readings to learn about Future Opportunities in People Analytics:

- Jeffrey Pfeffer (1998): "People, Profits, and Perspective." From Chapter 10 in *The Human Equation: Building Profits by Putting People First*. Harvard University School Press: pp. 292-306. (PDF on Stellar)
- Berkeley Dietvorst, Joseph Simmons, Cade Massey (2015): "Algorithm Aversion: People Erroneously Avoid Algorithms After Seeing Them Err." *Journal of Experimental Psychology* 144: 114 - 126. (PDF on Stellar)
- Ben Dattner (2013): "The Bias Undermining Your People Analytics." *Harvard Business Review Article*, December 19. (PDF on Stellar)

Readings may change as we go along. Additional readings may be assigned by the instructor.

Additional Optional Readings

There are several other books/articles that you may find useful. They are not required, but should you desire to pursue a topic in greater depth, they might provide a useful starting point for further research. I list these only for your future information.

Books

James N. Baron and David M. Kreps. 1999. *Strategic Human Resources: Frameworks for General Managers* (New York: John Wiley & Sons)

Edward Lazear. 2009. *Personnel Economics in Practice* (New York: Wiley)

Robert S. Kaplan and David P. Norton. 1996. *The Balanced Scorecard* (Boston: Harvard Business School Press)

Jeffrey Pfeffer. 1998. *The Human Equation: Building Profits by Putting People First* (Boston: Harvard Business School Press)

Frederick Reichheld (with Thomas Teal). 2001. *The Loyalty Effect: The Hidden Force Behind Growth, Profits, and Lasting Value* (Boston: Harvard Business School Press)

Ben Waber, 2013. *People Analytics: How Sensing Technology Will Transform Business and What It Tells Us about the Future of Work* (Upper Saddle River, NJ: Pearson Education, Inc)

John Boudreau and Peter Ramstad. 2007. *Beyond HR: The New Science of Human Capital* (Boston: Harvard Business School Press)

Jeffrey Pfeffer and Robert Sutton. 2006. *Hard Facts, Dangerous Half-Truths and Total Nonsense: Profiting from Evidence-based Management* (Boston: Harvard Business School Press)

Thomas Davenport, Roberto Morison, and Jeanne Harris. 2010. *Analytics at Work: Smarter Decisions, Better Results* (Boston: Harvard Business School Press)

Jac Fitz-Enz. 2010. *The New HR Analytics: Predicting the Economic Value of Your Company's Human Capital Investments* (American Management Association)

Wayne Cascio and John Boudreau. 2008. *Investing in People: Financial Impact of Human Resource Initiatives* (FT Press)

Brian Becker, Mark A. Huselid, and David Ulrich, D. 2001. *The HR Scorecard: Linking People, Strategy, and Performance* (Boston: Harvard Business School Press)

Articles about People Analytics

Salvatore Falletta (2008): "HR Intelligence: Advancing People Research and Analytics." *IHRIM Journal* 12: pp. 21-31.

Laurie Bassi and Daniel McMurrer (2010): "Does Engagement Really Drive Results?" *Talent Management Magazine* (March Issue): pp. 42-48.

Nancy R. Lockwood (2006): "Maximizing Human Capital: Demonstrating HR Value with Key Performance Indicators." *SHRM Research Quarterly*: 12pp.

Academic Examples of People Analytics Studies

- Ariely, Dan, Uri Gneezy, George Lowenstein, and Nina Mazar (2009): "Large Stakes and Big Mistakes." *The Review of Economic Studies* 76: 451-469.
- Arthur, Jeffrey (1992): "The Link between Business Strategy and Industrial Relations Systems in American Steel Minimills," *Industrial and Labor Relations Review*. 45: 488-505.
- Ashraf, Nava, Oriana Bandiera, and B. Kelsey Jack (2014): "No Margin, No Mission? A Field Experiment on Incentives for Public Services Delivery." *Journal of Public Economics* 120: 1-17.
- Baker, Ted (1999): "High Performance Work Practices." From Chapter 1 in *Doing Well by Doing Good*. Economic Policy Institute: pp. 3-32.
- Bandiera, Oriana, Iwan Barankay, and Imran Rasul (2005): "Social Preferences and the Response to Incentives: Evidence from Personnel Data." *Quarterly Journal of Economics* 120: 917-962.
- Bandiera, Oriana, Iwan Barankay, and Imran Rasul (2007): "Incentives for Managers and Inequality among Workers: Evidence from a Firm-Level Experiment." *Quarterly Journal of Economics* 122: 729-773.
- Baron, James N., Michael T. Hannan, and M. Diane Burton (2001): "Labor Pains: Change in Organizational Models and Employee Turnover in Young, High-Tech Firms." *American Journal of Sociology* 106: 960-1012.
- Becker, Brian and Barry Gerhart (1996): "The Impact of Human Resource Management on Organizational Performance: Progress and Prospects," *Academy of Management Journal* 39: 779-801.
- Bidwell, Matthew and Ethan Mollick (2015): "Shifts and Ladders: Comparing the Role of Internal and External Mobility in Executive Careers." *Organization Science* 26: 1629-1645.
- Bidwell, Matthew and Fernandez-Mateo (2010). "Relationship Duration and Returns to Brokerage in the Staffing Sector." *Organization Science* 21: 1141-1158.
- Bidwell, Matthew and JR Keller (2014): "Within or Without? How Firms Combine Internal and External Labor Markets to Fill Jobs." *Academy of Management Journal* 57: 1035-1055.
- Burt, Ronald S. (2004): "Structural Holes and Good Ideas." *American Journal of Sociology* 110: pp. 349-399.
- Campero, Santiago (2016): "Does Firm Status Confer a Recruiting Advantage? Evidence from High-Tech Entrepreneurial Firms" *MIT Sloan School of Management Working Paper*.
- Campero, Santiago (2016): "Skills Not Schools? The Role of Educational Backgrounds in Accessing Jobs in High-Tech" *MIT Sloan School of Management Working Paper*.
- Castilla, Emilio J. (2015): "Accounting for the Gap: A Firm Study Manipulating Organizational Accountability in Pay Decisions." *Organization Science* 26 (2): 311-333.
- Castilla, Emilio J. 2011. "Bringing Managers Back In: Managerial Influences on Workplace Inequality." *American Sociological Review* 76 (5): 667-694.

- Chevalier, Judith and Glenn Ellison (1999): "Career Concerns of Mutual Fund Managers." *Quarterly Journal of Economics* 114: 389-432.
- Fernandez, Roberto M., Emilio J. Castilla, and Paul Moore (2000): "Social Capital at Work: Networks and Employment at a Phone Center." *American Journal of Sociology* 105: 1288-1356.
- Fernandez-Mateo, I. (2007): "Who Pays the Price of Brokerage? Transferring Constraint through Price Setting in the Staffing Sector." *American Sociological Review* 72: 291-317.
- Fernandez-Mateo, I. (2009): "Cumulative Gender Disadvantage in Contract Employment." *American Journal of Sociology* 114: 871-923.
- Huselid, Mark A. (1995): "The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance," *Academy of Management Journal* 38: 635-672.
- Ichniowski, Casey and Kathryn Shaw (1999): "The Effects of Human Resource Management Systems on Economic Performance: An International Comparison of U.S. and Japanese Plants," *Management Science* 45: 704-721.
- Ichniowski, Casey, Kathryn Shaw, and Giovanna Prennushi (1997): "The Effects of Human Resource Management Practices on Productivity: A Study of Steel Finishing Lines." *American Economic Review* 87: 291-313.
- Ichniowski, Casey, Thomas Kochan, David Levine, Craig Olson, and George Strauss (1996): "What Works at Work: Overview and Assessment," *Industrial Relations* 35: 299-333.
- Knez, Marc and Duncan Simester (2001): "Firm-Wide Incentives and Mutual Monitoring at Continental Airlines." *Journal of Labor Economics* 19: 743-772.
- Larkin, Ian (2007): "The Cost of High-Powered Incentives: Employee Gaming in Enterprise Software Sales." Unpublished Manuscript, Harvard Business School.
- Lazear, Edward (2000): "Performance Pay and Productivity." *American Economic Review* 90: 1346-1361.
- Lerner, Josh and Ulrike Malmendier (2013): "With a Little Help from My (Random) Friends: Success and Failure in Post-Business School Entrepreneurship." *Review of Financial Studies* 26: 2411-2452.
- John Paul MacDuffie (1995): "Human Resource Bundles and Manufacturing Performance: Organizational Logic and Flexible Production Systems in the World Auto Industry." *Industrial and Labor Relations Review* 48: 197-221.
- Mas, Alexandre and Enrico Moretti (2009): "Peers at Work." *American Economic Review* 91: 112-145.
- Pil, Frits and John Paul MacDuffie (1996): "The Adoption of High-Involvement Work Practices," *Industrial Relations* 35: 423-455.
- Rissing, Ben A. and Emilio J. Castilla (2014): "House of Green Cards: Statistical or Preference-Based Inequality in the Employment of Foreign Nationals." *American Sociological Review* 79 (6): 1226-1255.
- Sacerdote, Bruce (2001): "Peer Effects with Random Assignment: Results for Dartmouth Roommates." *Quarterly Journal of Economics* 116: 681-704.
- Shearer, Bruce (2004): "Piece Rates, Fixed Wages and Incentives: Evidence from a Field Experiment." *Review of Economic Studies* 71: 513-534.

- Srivastava, Sameer B. 2015. "Intraorganizational Network Dynamics in Times of Ambiguity." *Organization Science* 26: 1365-1380.
- Srivastava, Sameer B. 2015. "Network Intervention: A Field Experiment to Assess the Effects of Formal Mentoring on Workplace Networks." *Social Forces* 94: 427-452.
- Srivastava, Sameer B. and Eliot Sherman. 2015. "Agents of Change or Cogs in the Machine? Reexamining the Influence of Female Managers on the Gender Wage Gap." *American Journal of Sociology* 120: 1778-1808.