PA 552: Designing Applied Research

Bruce Perlman

Managing the Research Project

Goals of Conducting Research

- Improve Research Skills
- Advance Knowledge (New)
- Enhance Evidence- Based Decision Making
- Increase *Action* Experiences (Learning)
- Improve Academic Qualifications

Requirements of Conducting Research

- Meeting Deadlines
- Observing Format Guidelines
- Observing Word Limits
- Following Ethical Research Protocols
- Making Original Contribution
- Managing the Research Process

Why Manage Research Projects?

- Research is a Complex Task
  - Has little prescribed structure
- Everyone has their Own Research Project
  - Manage to Meet Goals
  - Manage to Fulfil Requirements
- Develop a Plan
  - Helps to estimate and allocate time
  - Once don't need to remember
  - Time management
  - Contributes to thinking through the research process

PADM 552

PLANNING

Method of Rationales

INPUTS	ACTIVITIES	OUTPUTS

Plan Activities First

- Start with Activities…..
  - "Verb" statements.
  - Actions that must occur

Example: Activities

INPUTS	*ACTIVITIES*	OUTPUTS
	Find office location Rent office location Contact QWEST for phone	
	Draft add for receptionist Place add for receptionist Interview applicants Hire receptionist	
	Draft add for counselors Place add for counselors Interview applicants Hire counselors	
	Design orientation session Schedule orientation Hold orientation	
	Price vans Buy a van	

Plan Outputs Second

- "Noun" statements:
  - person, place, or thing
  - tangible
- Occurs due to activity - linked
- Product achieved
- Should be quantifiable

Outputs

INPUTS	ACTIVITIES	*OUTPUTS*
	Find office location Rent office location Contact QWEST for phone	1 office location (address and phone number)
	Draft add for receptionist Place add for receptionist Interview applicants Hire receptionist	1 receptionist (1 job description w/ competencies, 10 applicants, 5 interviews)
	Draft add for counselors Place add for counselors Interview applicants Hire counselors	6 counselors (1 job description w/ competencies, 50 applicants, 24 interviews)
	Design orientation session Schedule orientation Hold/evaluate orientation	1 staff orientation (1 outline of activities, 1list staff data, 7 evaluations)
	Price vans Buy a van	1 VAN

Plan Inputs Last

- "Noun" statements:
  - person, place, or thing
  - tangible, but often "financial"
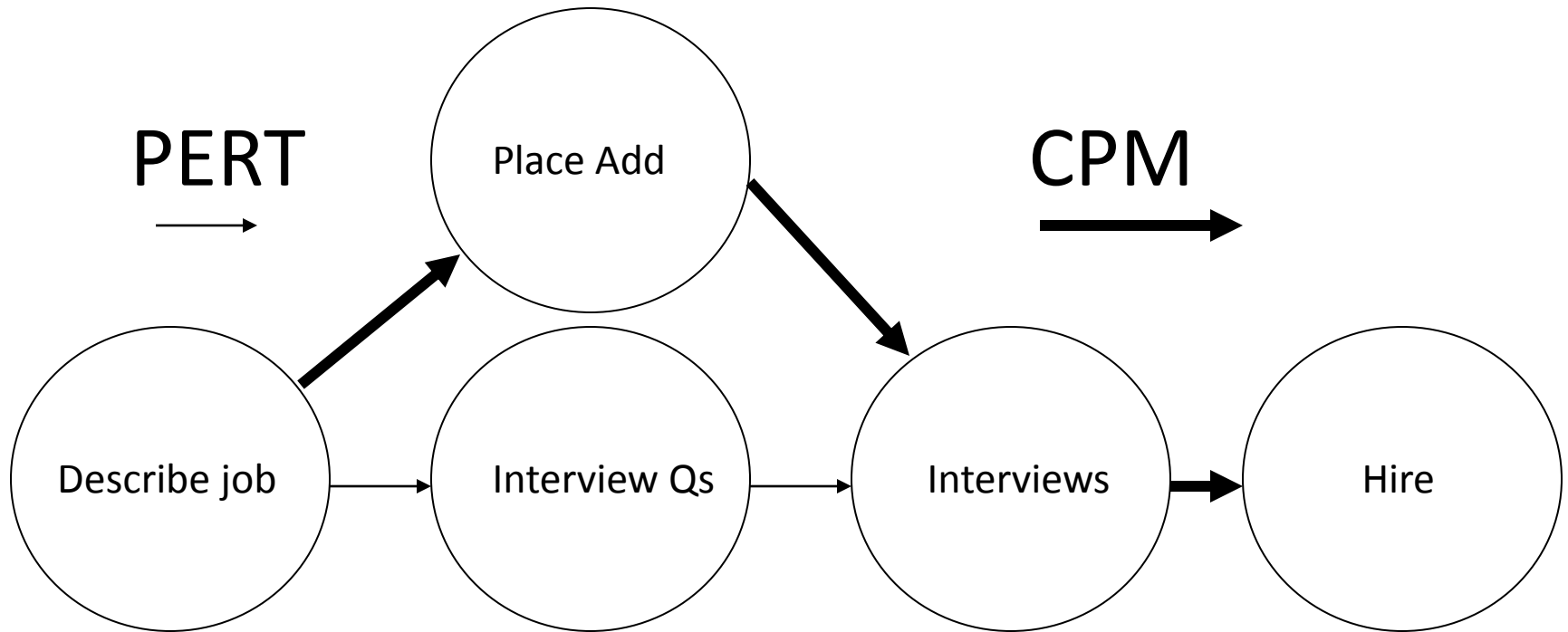- Used in Activity
- Should be quantifiable

Inputs

INPUTS	ACTIVITIES	OUTPUTS
1 real estate broker 1 city map 1 phone	Find office location Rent office location Contact QWEST for phone	1 office location (address and phone number)
1 word processor 1 sample job description 1 check for add 1 employment contract	Draft add for receptionist Place add for receptionist Interview applicants Hire receptionist	1 receptionist (1 job description w/ competencies, 10 applicants, 5 interviews)
1 word processor 1 sample job description 1 check for add 6 employment contracts	Draft add for counselors Place add for counselors Interview applicants Hire counselors	6 counselors (1 job description w/ competencies, 50 applicants, 24 interviews)
1 icebreaker; 8 lunches 1 calendar 1 participant evaluation	Design orientation session Schedule orientation Hold/evaluate orientation	1 staff orientation (1 outline of activities, 1list staff data, 7 evaluations)
1 Sunday paper 1 check	Price vans Buy a van	1 VAN

Operationalizing Method of Rationales

INPUTS	ACTIVITIES	OUTPUTS
Creates Budget	Creates Schedule	Production Obj.
1 office x 12 x $?/mos.	1. Open account	1 1600 sq.ft. office
1 receptionist x $?	2. Buy map	1 JC staff
6 counselors x $?	3. Buy agenda	6 BA Psychology staff

Scheduling

Hiring

PERT

CPM

Place Add

Describe job → Interview Qs → Interviews → Hire

PERT - Project Evaluation and Review Technique

CPM – Critical Path Method

Using GANTT charts

- Named after Henry Gantt (1861–1919)
- Visual representation of tasks/basic
  - Shows dependence
  - Shows parallel activities and overlaps
  - Shows milestones
  - Builds in constraints
  - Other project management features can be added
    - Costs
    - Resource conflict

Full GANTT Chart Examle

Alternative Simple GANTT Project Plan

Project task	Project Months											
	1	2	3	4	5	6	7	8	9	10	11	12
Identify problem area												
Attend workshops	X	X	X		X			X				
...												
...												
Primary data collection							X	X		X		
...												
...												
Submission deadline												X

Pro Paper GANTT Chart

ACTIVITY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Select Topic	XXXX							
Refine Topic & Question		XX						
Lit. Review		XX						
Research Design		X						
Develop Questionnaire			XX					
Sample Frame			X					
Draw Sample			X					
Administer Questionnaire				XXXX				
Clean & Enter Data					X			
Analyze Data					XX			
Write 1st Draft			XXXX	XXXX	XXXX	XXXX		
Correct Draft							XXXX	
Finalize Draft								XX

PADM 552

WORKING

UNM Research Resources

- UNM Libraries
- UNM Computer Laboratories
- UNM Graduate Student and Professional Association
- UNM Graduate Student Funding Initiative
- UNM Certificate Programs
  1. Grant-writing and Proposal Development
  2. Principal Investigator (PI) Eligibility
  3. Responsible Conduct of Research (RCR)
  4. Research Compliance
     http://research.unm.edu/graduatefunding/
- UNM Workshops
  - Thesis Writing Boot Camps

Getting Supervision

- Expectation Setting & Negotiation
- Approvals and Input
  - Everything?
  - Little?
  - Editing?
- Drafts
  - Partial?
  - Whole?
- Feedback
  - Written
  - Verbal
  - Mark up
  - Print or Electronic
  - Regular or Occasional Meetings?

Keeping a Research Journal

- Journal is Useful
  - Research Activities
  - Ideas
  - Speculations
  - Interesting problems and possible solutions
  - References to look up
  - Notes on papers and articles and books
  - Interesting quotes
- Read back through it periodically
- Random thoughts come together form a pattern
  - Topic
  - Questions

Managing the Workload

- Matrix Transformation Charts (MOR)
- Gannt Chart
  - Map Out from Start to Finish
  - Discipline Needed to Follow
  - Not most Flexible Instrument
- Network Charts
  - PERT
  - CPM

Managing the Reading

- Before reading a paper, make sure it's worth it
    - Scan the title
    - Scan the abstract
    - If interested glance at introduction and conclusions
- If it seems worthwhile and relevant, read it
- Taking Notes
    - Can review them later rather than whole paper
    - If not, still helps to focus attention and summarize

Time Management

- Distinguish Urgent from Important
- Block out I-Time
- Make a *daily* to-do List
- Set Priorities A, B, C
- Get a Box, Drawer, or File for "C" Items
- Use the Swiss Cheese Method
- Don't Let the Perfect be the Enemy of the Good
    - "Okay, Ready to Write!"

Navigating Crises

- Motivation
  - Inspiration Strikes While Working
  - Enjoy yourself
- Confidence
  - Feeling Like a Fake, Fraud, Imposter
  - Go Fishing (for Supportive Words)
- Direction
  - Getting Lost While Exploring
  - Go Back to the Question and KISS
- Organization
  - Physical Organization can be Mental Organization
  - Blueprint (Outline) or Clay (Pages)

Staying Motivated

- At times hard to maintain positive attitude; stay motivated
  - Normal feelings:
    - Insecurity
    - Anxiety
    - Boredom
- Give yourself positive feedback for tasks that you *do* complete
  - Not negative feedback for those you don't
- Set Daily, Weekly, and Monthly Goals
- Break down project into smaller pieces for planning
  - Works on a day-to-day level as well
  - Focus on the goal of writing an outline, paragraph, page or section
  - Identify tasks that you can do in an hour or less
    - This gives a realistic daily schedule
- Organize time and try to do something every day
  - Be realistic about what you can accomplish in a day or period
- Take it one day at a time
  - Don't let doubts stop you from accomplishing something each day
  - Every task you complete gets you closer to finishing

Things to Remember

- How to tell a good paper from a bad one?
  - Ideas vs. signatures
- Last student project not greatest work
- Just another paper, but a little bigger
- It is a *writing* project NOT a *talking* project
- Write every day