**RAStaff**

**Sample Only**

This document was submitted by students in a previous class. Their requirements were different from yours. We offer it only as a sample of what a project was for that class. Copying this document, in whole or in part, and submitting the result as your own work, would be a violation of the honor code.

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1. **Overview**

The team project (named “RAStaff”) will be about a human resources question at a local university where one of the team members works. The model would be aimed at two groups of users: the department that hires/manages research staff and higher-level University administrators involved in financial planning of research activities. The model will help the University with quantifying factors in long-term research staff planning / hiring, in pricing the true cost of turnover/learning, and deciding on any alternatives to the current employment system.

**Background**

The University employs a large number of research assistants (“RAs”), who support the research and teaching activities of the professors. Most of the RAs are employed on an academic appointments (contracts) usually 12 months long, starting in July and ending in June. These are professional salaried, benefits-eligible positions that are overtime- exempt; the RAs are appointed to work with one or more faculty members for a maximum of a year at a time, because research funding is allocated annually. A typical RA might have a full-time position but two faculty supervisors (i.e., a half-time appointments with each professor), though some regular RAs work half-time. Most RAs receive office space on campus; some telecommute. At present, RAs are hired based on individual faculty requests, not on an overall staff research capacity.

The diversity of the RA pool makes them a challenging group of employees to recruit, train, manage and retain. Regular RAs have many different degrees/work experience (from BA to MBA to PhD/JD/MD) and work on a wide variety of faculty projects that require different types of skills (writing course materials or books; conducting field interviews; statistical analysis; websites).

Despite the fact that RAs who have been at the University for several years generally[[1]](#footnote-1) produce more and / or better quality work, the structure of the employment system creates an ongoing turnover issue. Regular RA appointments may be renewed beyond the initial year, depending on a number of factors, so some regular RAs want to and do work at the University for several years. Because it is not a permanent staff position, however, most regular RAs tend to leave their RA positions by their third employment year as an RA. The high RA turnover has various economic costs to the University (admin time for recruiting/training, allocated office space, etc.) which are not fully charged to faculty research budgets.

**Model Function and Design**

The model will help determine the ideal level of RA staffing for the University by research product, based on the quantity of annual research publications of the University and a certain level of output of an ideal RA (numbers of books, databases). Because educational background influences productivity, turnover, skill level of an RA job description, and salary, it will also be factored in.

**9 Named Input Parameters** (Fixed Assumptions)

-Number of university faculty (by tenure level)

-Average faculty publication output (by tenure level and publication type)

- Quantity of research a fully productive RA can produce (by publication type)

-Ratio of RAs needed by educational level (by publication type)

-Percentage of capacity met by other centralized research services on campus

-Starting number of RAs on staff

-RA salary

-RA benefits costs

-RA overhead costs (recruiting/training, office space)

**24 Variable Input Data Streams (over 12 quarters)**

-RA productivity curve (can produce increasing % of output the longer stay)

-Number of RAs leaving University (there is a seasonality to this at certain times of year)

(Both categories will be split out by 4 research product types: articles, books, field research, analysis and 3 degree types: BA, MBA, and PhD, so there will be 12 streams for each category)

**26 Output Data Streams (over 12 quarters)**

-Total needed research staff capacity (full time equivalents of article writers, etc.): (Will be split out into 12 streams: 4 research product types: papers, books, field research, analysis and 3 degree types: BA, MBA, and PhD in each)

-Number of new RAs to hire (per quarter per year): (Will be split out into 12 streams: 4 research product types: papers, books, field research, analysis and 3 degree types: BA, MBA, and PhD in each)

-Total cost that is charged to faculty for staff pool (salaries)

-Total economic cost to University for staff pool (including overhead)

**Scenario 1:**

This will look at current staff situation (high turnover, low productivity).

**Scenario 2:**

This will look at what happens if can lower turnover, increase productivity.

1. **Budget** (Hours)

1. **Team** The RAStaff project team will have four members: <deleted>
2. **Schedule and Milestones**

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| --- | --- | --- | --- | --- |
| **WEEK**  | **DATE (DEADLINE)**  | **CLASS SESSION** | **DELIVERABLE****(CLASS)** | **DELIVERABLE(INTERNAL)** |
| **Week 1** | **Oct 23**  | **Session 5** | **PROJECT PROPOSAL** | **Allocate team roles Define formulas; Model capacity**  |
| **Week 2** | **Oct 30**  | **Session 7** |  | **Model productivity** |
| **Week 3** | **Nov 6**  | **Session 8** |  | **Model costs; write progress report** |
| **Week 4** | **Nov 13**  | **Session 9** | **PROGRESS REPORT** | **Refine total model** |
| **Week 5** | **Nov 20** | **Session 10** |  | **Generate charts** |
| **Week 6** | **Nov 27** | **(Holiday)** |  |  |
| **Week 7** | **Dec 4** | **Session 11** |  | **Test scenarios** |
| **Week 8** | **Dec 11** | **Session 12** |  | **Write guides** |
| **Week 9** | **Dec 18** | **Session 13** |  | **Write final report**  |
| **Week 10** | **Dec 25** | **(Holiday)** |  |  |
| **Week 11** | **Jan 1** | **(Holiday)** |  |  |
| **Week 12** | **Jan 8** | **Session 14** |  | **Prepare presentation** |
| **Week 13** | **Jan 15** | **Session 15** | **PRESENTATION**  |  |

1. RA productivity is also influence d by factors such as exploratory research dead-ends, supervisor availability, working conditions, etc., but we will assume that these are otherwise equal. [↑](#footnote-ref-1)