Faculty Time-Budgets and Student Outcomes:

A View from the Trenches

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Outline

1. What do faculty do, in addition to classroom teaching (my example)?

2. What are the impacts of these outside-the-classroom teaching activities on student outcomes?

3. How are these activities affected by staffing levels, rates of pay?

4. Recommendations
1. What do faculty do?

(a) **teach**: 4 lecture courses or equivalent at UWW

(b) conduct **research**, often with students

(c) **innovate**: teaching, research, other areas

(d) supervise **internships**

(e) **advise**: over 30 students each, every semester
(b) My research: fish evolution

NSF-funded: $305,000 to date, $268,000 pending

Collecting fish in Alaska (top), Japan (right)
We bring fish back to laboratory for **experiments**

Sara Aurit measuring fish coloration  
(Sara now at UW in Pharmacy)

Peter Katz running experiment  
(Peter received early acceptance at MCOW)
Students analyze data, present at local, national conferences

Lisa Bowers (now in Cell Biology Ph.D. at UW-Madison)
We publish results (e.g., from Nature, May 20, 2004)

Evidence for ecology's role in speciation

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A principal challenge in testing the role of natural selection in speciation is to connect the build-up of reproductive isolation between populations to divergence of ecologically important traits. Demonstrations of parallel speciation, or assortative mating by selective environment, link ecology and isolation, but the phenotypic traits mediating isolation have not been confirmed. Here we show that the parallel build-up of mating
(c) **Innovation**: e.g. we are revising UWW first year biology curriculum with $170,000 grant from NSF

Focus is on 3-4 week laboratory research modules:  
Students design, conduct experiments in groups; present research orally, in posters, also individual write-ups

**Outstanding student-training, time-intensive for faculty**

Students collecting amphipods in field, running experiments in lab
(d) Supervise **internships**:  

In Biology at UWW, 10-15 internships/semester  

- many paid  
- provide **job, practical experience**  
- help students network  
- enhance community relationships  

Examples:  

Northland Laboratories  
University Health clinic  
Veterinary clinics
(e) Advise:

In Biological Sciences at UWW, 10-12 faculty meet with each of over **350 majors every semester**, often more than once, plus students considering Biology.

Every advising session evaluated by students.

Number of majors consistently increasing.
2. What are the **impacts** of these outside-the-classroom teaching activities?

(a) **Student retention**: students forming personal relationships with faculty stay in school; UWW retention up

(b) **Student success**: in last 10 years at UWW, with more undergraduate research, internships, innovation, advising, far more students

   --enter top graduate programs

   --gain early medical school admittance

   --find jobs in their field

   --travel for research, conferences
3. How do reduced staffing levels, non-competitive pay scales affect non-classroom activities?

(a) Reduced time for advising, research, innovation, interns

(b) Selective loss of most active faculty--who generate grants, provide best opportunities to students
Quantitative evidence:

My fall 2004 time-budget at UWW (increase of 2 contact hours per week from 2002-3):

Hours in lecture, lab: 14
Hours preparing, grading: 14
Office hours: 5
Mandatory committee meetings: 2
Research, advising, innovation, interns: 15

Total: 50

Major (over 20%, from 19 to 15 hours) reduction in time for research, advising, etc. from two years ago!

10-15 years ago teaching load was the same with less service, almost no research expected!
4. Recommendations:

Hire enough faculty to return faculty-student ratios at least to 2001-2 levels (over long term, must do better)

Pay faculty competitively, especially senior faculty and most productive individuals