Tools for New and Transitioning Faculty

and Well-Worn Tips to help our students

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Why Me and Why Now

- I agreed to present a seminar, based on papers and speeches at the conference.
- I have added some personal data & observations.
- I wanted to prime the pump for the next generation… hence “Tools to help our Students” at the end.
- I have much to learn, up for tenure this spring.
Case Study – Promotion to Associate in College of Engineering

2003 – Promotion Denied

- Criteria not well-defined as new faculty in 1999.
- Encouraged to apply at 4 years… perhaps early?
- Good Teaching Reviews.
- Lots of service & supporting activities, 10+ proposals, 2 Summer Fellowships.
- High Ranking in University Promotion Committee, Positive Recommendation by Provost.
- Publications met minimum criteria.
- Only 1 advisee completed MS.
  - Reapplied in 2004 after being pestered….
Case Study – Promotion to Associate in College of Engineering

2004 – Promotion Approved

- Criteria defined, but implementation uncertain.
- Re-applied at 5 years.
- Good Teaching Reviews.
- Lots of Service, 13+ proposals, 2 Summer Fellowships.
- Rankings on Committees satisfactory.
- Publications increased by 2 or 3, exceeded new criteria.
- Three advisees completed MS, others in pipeline.
  - More pubs, more MS students, mostly same application, *Tenure application in Spring 05.*
Agree with your Department Chair and Dean, the requirements for tenure/promotion, \textit{get in writing}.

- Develop 2 or 3 mentors and spend time with them.

- Remember quantifiable measures such as publications, grants, books are looked at much heavier than teaching (even though that’s why we want to be here in the first place).

- Stay positive and don’t try to make enemies.

- Speak a little and listen a lot.
Do quality work, but don’t be a perfectionist (see next), shoot for reasonable goals.

Remember 80/20 Rule: The last 20% of a project / proposal / paper takes 80% of the time.

Block out time for writing every week.

Get work reviewed early.

What type of proposals should you write?
Research and Publications [1]

- Make use of the resources that you have on campus. (Internet, software, renowned researchers, library subscriptions, etc ... What resources do you use?)

- Ask Anyway! If you need equipment, software, etc, get price quotes, write a proposal for it, even if there is no current monies. You will be ready when there is, new faculty may have higher priority over older members.

Example: Composites Fabrication Lab
Stress Relief

- Take time for exercise. At least go walking 3 times a week.
- Say no to non-critical items.
- Stay positive... it's not perfect any place.
- Guard your time, but do those things most important to you!
- Balance your life, take a vacation once in a while, have personal time.
- You will get promoted & tenure!
Teaching Styles and Techniques

- Set rules in syllabus, go over them, stick to them.
- Be firm then give them a break once in a while. “Students don’t care how much you know until they know how much you care”
- *Are you excited about what you are teaching?*
- It takes 3 times to get a course right. “3 times rule” – Peel.
Teach fundamentals but use technology (email, web page, projectors, software).

Put as much as possible on web page (syllabus, lecture notes, reviews, sample exams) to save yourself time in the long run.

Be nice, but guard time. Encourage students to come during office hours.

Conduct your own satisfaction surveys and save individual exam question scores.
Engineering Ethics and “Empathetic Engineering” [2,3]

- Exercise empathetic engineering – design good products.
- Ethics start with small things such as on your syllabus – set and maintain good standards on cheating, plagiarism, copying. You must follow and enforce your standards.
- Treat students and other faculty with respect.
- Engineering faculty should be good role models.
- Keep university politics out of the classroom.
- Hold mock public meetings.
- Use real ethics stories from practicing engineers.
Student Grading and Student Evaluation of Faculty [4]

- SRI scores are not a function of student workload (*878 courses over 5 years at Tulane University*).
- SRI scores are a function of instructor performance, i.e. organization, delivery, examples.
- SRI scores are a function of average course grade but level out with experience. See next…
- High SRI scores result from good instruction and by challenging good students - Peel.
Notice the slope is decreasing each year…
Tools to prepare and help Students

- Pre-K students and the Home Environment
- K-12th Grades
- Freshmen & Undergraduates
- US Graduate Students
- International Graduate Students
Pre-K students & the Home

Personal Case Study [5]

- 9 kids: 5 boys, 4 girls, 2 parents
- Rural environment, farming, heavy work load, finances always tight, one girl died at 9 yrs old.
- College education not emphasized in community,
- Mother – teacher & homemaker, Father – farmer ,
- No TV, Reading encouraged, Encyclopedias bought.
- Oldest son led way, middle son told he’d fail in life,
- Some taught to read early, Encouraged to save for college,
- Most served LDS missions, paid own way in college,
- Mixed academic success in Jr High & High School,
- 20 years later …..
Pre-K students & the Home….

Case Study Continued….

- 5 Associate degrees.
- 7 Bachelor’s degrees.
- 4 Master of Science degrees.
- 1 Master of Fine Arts (Terminal Degree).
- 3 Doctorate of Philosophy degrees.
- 2 studied in Russia for a year.
- 1 Post-doc in Switzerland.
- Eldest son defended MS in Plant Science after losing eyesight.
- Supported through work, fellowships, scholarships, persistence.
- All but one married, no divorces, all financially stable.
Pre-K students & the Home

- A two-parent home gives the children a huge boost.
- Single-parent families can make adjustments.
- Read to children and encourage them to look at books,
- Good academic achievement doesn’t have to be a function of income,
- Spend time with children,
- Turn the TV off,
- Get away from computer games,
- Children will watch and mimic parents.
Priority: Parents must help and encourage children.

Develop work ethic & self discipline in children.

Encourage reading for fun.

Science Kits, encourage math and science classes.

Don’t overload children.

Good role models.

Some children will change greatly between high school and college.
Freshmen & Undergraduates

- Not all are ready for college. (work, Peace Corps, religious volunteer work will help many to “grow up”)
- Must have basic desires, willing to put in effort.
- Study habits from high school will continue, but can be improved.
- Continually repeating classes doesn’t help.
- What have you noticed?
Graduate Students

- There are many opportunities for funding.
- Hard work is just as important as innate intelligence.
- Not many undergrads going on from TAMUK.

International Graduate Students

- Cultural, health, religious, educational differences.
- Concerns about finances may consume much time.
- Work on writing skills early.
- Dedicated workers.
Useful Web sites

- **Iowa State New Faculty Tips**
- Univ of Washington Pre-Tenure Helps
- Faculty Teaching Tips – San Francisco State
- Tenure Track Lunches
- Common Sense Tips from an Ag Dean
- Penn State Promotion & Tenure Resources
References


