Motivating and Rewarding University Teachers to Improve Student Learning

A Guide for Faculty and Administrators

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The context in which we work

On being an academic

The key idea is that to motivate faculty to improve students learning, we should understand the context in which academics work.

Traditionally an academic's expected duties are primarily research, teaching and service/administration. Teaching tends to focus on undergraduate education; external motivation through performance review tends to be primarily on research (because "we can't measure effectiveness in teaching"). Carolin Kreber's research and Boyer's work offer a new perspective on academia. Teaching embraces more than undergraduate activity and should include graduate, short courses and a wide variety of clients; research/ scholarship applies to all that faculty do (and in particular should include research of teaching and of our subject discipline). Besides the traditional three skills listed above, four important skills — that are not usually considered explicitly — are enthusiasm, integrity, skill in communication, problem solving, etc. and subject expertise.

As suggested in Table 1.3 (page 11), academics apply their skills to tasks for a variety of clients in such a way as to revise our traditional perceptions of teaching, research and administration. Such a new perspective forms an exciting basis for motivating faculty, motivating them especially to improve student learning.

At the social gathering Hector queried "What do you *really* do with all that spare time you have as an academic?"

One might define a university as a place for students to learn from those who create knowledge by research, discovery and invention. The three traditional responsibilities of an academic are to teach students, do research and provide service (Boyer, 1990; OCUA, 1994a). Some might add a fourth responsibility of consulting and clinical practice. In this opening Chapter we summarize the expectations of an academic and the amount of time devoted to these three traditional roles. Four commonly-held perspectives about the relative roles of "teaching" and "research" are given, and the impact of research funding on the university culture is explored briefly. With this background we extend Boyer's model (1990) and Kreber's research to identify seven key attributes expected of academics and to suggest a framework for recognizing, nurturing and rewarding good teaching in a university.

1.1 The "job description" of an academic

Although all academics understand that they are expected to contribute to research, teaching and service, rarely is a day-to-day job description published. Conditions for "promotion" and "tenure" (P&T), are published but those criteria are applied only four times in one's career — the initial hire, the promotion to associate professor, the granting of tenure and the promotion to full professor. For all the other times, the assumption is that academics are expected to be good teachers, good researchers and provide good service. What tends to be missing are the criteria and forms of evidence that are needed to assess performance and the necessary motivational components to provide incentives for excellent performance. Without clarification of the expectations, it is not surprising that stress levels and frustration are high among academics (Boyer, 1990; Gmelch, 1986). Nor is it surprising that much frustration is associated with performance assessment. When I became departmental chairperson, my predecessor warned me, "The task you are going to hate will be the annual recommendations for merit increase!" Probably more than any other single issue, the results from the annual performance reviews had the most dramatic impact on the faculty morale. Clarity about expectations, criteria, evidence and the assessment process are needed.

High expectations of excellence in all three roles makes superhuman expectations for us (Felder, 1994, Woods and Wood, 1996). One challenge for academics is to astutely distribute their time among the tasks of teaching, research and service.

1.2 The context — Time spent in the three roles

Per week, faculty typically work between 50 and 60 hours (OCUA, 1994a). Table 1.1 illustrates how that time is distributed among the three different functions based on surveys of faculty. The percentages vary depending upon how clearly the three functions were defined in the survey questionnaire. The results suggest:

- On average 40% to 54% of the time during the semester is spent on "teaching." Considering the lack of clarity for promotion, the missing job description, and the impression that research is more valued than teaching (Gray *et al.*, 1992), these average values are higher than might be expected.
- That committee work and service takes a large portion of time, with average values between 15% and 28%.
- That considering the research productivity of colleagues, it is surprising that so much can be accomplished in average values of 20% to 35% during the semester. Of course, most of the data are reported for a nine-month period.

Concerning the commitment to teaching, an alternative view is to consider the total time expected during the semester, instead of considering the contact time. Per nine-month teaching year, one model suggests that the usual total teaching component for all undergraduate and graduate classes is 550 hours. The 550 hours/nine months excludes graduate student supervision, weekly meetings and research group seminars. The time includes preparation time (including revisions, and updating of content and methods of facilitating learning), in-class "contact time," office hours, and marking. At this 550 hours, about 60 hours are expected for the revision of at least two courses per year (Woods, 1983). These numbers are consistent with the data in Table 1.1.

1.3 The context — Models of the relationship between teaching and research

Although faculty are expected to provide all three duties, most attention is paid to the teaching and research activities. The relationship between these two represents deep-felt attitudes that affect the culture of the University. Four different models of the relationship between teaching and research have evolved that inherently underpin any discussion about academic responsibility and accountability. These four different models are:

Table 1.1
Distribution among the functions during the nine-month teaching semester
(from OCUA, 1994a; Rosenthal *et al.*, 1994; Bert, 1999; and Woods and Wood, 1996.)

Area	US Carnegie (for 9 month)	US NSOPF-88 (for 9 month)	US NCES 96 (for 9 month)	US Bert (1999) (for "typical week")	Canada CUPA/ OCGS (for 9 month)	Canada Woods and Wood (1996) (for 11 months)
Teaching	54 %	52 %	42 %	46 %	53 %	40 %
Research	27 %	20 %	30 %	35 %	23 %	30 %
Service	5 %	14 %	28 %	14 %	10 %	15 %
Administration	14 %	14 %			14 %	
Personal on-going education				5 %		
Hours per week	50	57		53.4	63.7	45–60

Footnote: These values are average. Faculty in some top-ten schools spend 50 to 75% of their time on research.

Model 1 — **Synergy**: *Teaching-research is a seamless, synergistic continuum.* In universities, the discovery of new information, interpretations, applications and procedures are central to all we do. Our function is to stimulate the intellectual growth of all our students so that each thinks critically, is curious, applies integrity in all he/she does and is scholarly.

Model 2 — **Independence**: *Teaching and research are independent endeavours.* "Promotion and tenure and hiring practices identify two distinct roles: teacher and researcher." Colleagues talk about separate endeavours. Teaching and research are assessed separately. Some institutions have separate streams, a teaching stream and a research stream. Some allow those with extensive research grants to "buy" their way out of teaching so that the researcher will be relieved of the unwanted "responsibility" of teaching a course. This idea of independence appears with different shadings: the two are different, the two compete (Model 3) and the research is valued more than teaching (Model 4).

Model 3 — **Competition**: *Research competes with teaching*. Some suggest that each person prioritizes his/her use of time between research and teaching. Since, "you can't do everything," one has to choose to be either an outstanding researcher or an outstanding teacher. This is often expressed as, "Teaching is a chore that I have to endure so that I can do the research that I really love." (OCUA, 1994b).

Model 4 — **Research superiority**: *Research is more valued than teaching*. Some make a judgment call about the merit of research compared with teaching. Bok (1990) argues that academics tend to value theory over practice; research over teaching. There tends to be more glamour, prestige, visibility and honor for outstanding research discoveries than for outstanding teaching. Research has more "Public Relations" value. Teaching is ho-hum. Teaching is a "second-class" activity.

In Chapter 2 and throughout the rest of this book we will meet President Jose, Dean Fred, Assistant Professors Nicole and Dianne and P&T Chair Dave whose actions seem directed by their belief in Models 3 or 4. In contrast, this book is based on Model 1 that teaching and research synergistically support one another. A university is an educational institution where the discovery of new knowledge and the learning and transmission of the knowledge are intimately mixed. Both are valued. Both are essential. Each supports the other.

1.4 The context — Influences of research funding and alumni contributions

Any polarization between "teaching" and "research" can also be tracked to the budget of the university. For many universities, the total budget is strongly supported from the "research" enterprise. Monies from external "research" granting agencies can — depending on the conditions of the contract or grant — be used for:

- overheads (up to 50% of the external grants may be recovered for university "overhead")
- summer salary for principal investigators (applicable for universities that hire faculty on a nine-month basis)
- buy-out salaries to allow the principal investigator to spend more time on research and less on "teaching" and "service."

Some illustrative data of the amount of research funds relative to the other sources of funds are given in Table 1.2 for a typical research-intensive, provincially-funded Canadian University.

Hence, one way a university can generate more operating budget is to encourage faculty to bring in more "contract research funds," more external grants that allow overhead and faculty stipends to be charged as an expense and to increase the gifts by alumni. Noll (1996) suggests that alumni and wealthy donors are more willing to support prestigious universities — prestige that comes mainly from the research enterprise.

Table 1.2
Illustrative income for a typical research-intensive Canadian University

Source of funds	1993/94	1999/00	2003/04
1. Provincial government grants (including overheads from research and contracts when permissible)	40%	34%	29%
2. Tuition (undergraduate and graduate fees)	20.3%	21%	22.5%
3. Other: investment, alumni donations	6.5%	12%	14%
4. *Total operating funds*	*66.8%*	*67.0%*	*65.5%*
External research funds			
5. Government grants for research	22.7%		
6. Government contracts (that allow for overheads as expenses)	2.8%		
8. Industrial grants	4.3%		
9. Industrial contracts (that allow overhead as expenses)	0.9%		
10. Foreign grants/contracts	2.2%		
11. *Total*	*32.9%*	*33%*	*34.5%*
12. *Overall Total*, millions Canadian dollars	*$231*	*$300*	*$476*

In some of the faculties of Health Sciences, the "educational enterprise" is supported by clinical income. Pressures in such faculties are for the academics to spend more time on the wards and less time "teaching."

If the state and government subsidies for "education" are taken as fixed and for granted, then one attractive way to increase university income is to increase (and value) research and, in the case of Health Sciences, clinical practice. This increases the financial pressure into the teaching — research dilemma. Financial pressure intuitively supports Model 4: Research superiority.

1.5 The context — Seven attributes and a framework to encourage and reward good teaching: Extending Boyer's model

The foregoing discussion gives a simplistic view of academic responsibilities that creates boundaries and gulfs between the responsibilities and generates more questions

than answers. For example, if a university's role is education, why is undergraduate education called "teaching" and graduate education called "research?" Where does a teacher's personal research fit into this classification? Is something called "research" only if it receives an external grant?

In an attempt to "break out of the tired old teaching versus research debate," Boyer (1990) suggested that faculty bring "research" to all that they do. Boyer suggested we redefine an academic's activities to be:

- scholarship of teaching (what was referred to above as "teaching")
- scholarship of discovery (what we referred to above as "research")
- scholarship of integration
- scholarship of application (what we referred to above as "service").

In other words, Boyer suggested that faculty bring "scholarship" to teaching, to the discovery of new information, to the integration of different ideas and concepts, and to the application of knowledge to solve problems.

His innovative views have prompted others to elaborate on these four views of scholarship. Rice (1992) and Paulsen and Feldman (1995) extended Boyer's view to include:

- scholarship of academic citizenship (what was referred to above as service)
- scholarship of service (again referred to above as service).

These classifications focus on the products that result from the scholarship of an academic. Kreber (1999) noted that whereas some academic activities produce products (grants, papers, skilled students, committee reports), other academic activities are process activities (mentoring colleagues, preparing for class, marking, keeping up to date) where direct products are more difficult to identify. She surveyed 58 experienced faculty who had received teaching awards. In a detailed study of 17 major process and product activities of academics she found that five significant factors clustered the typical activities in interesting combinations. These factors, Kf, with the activities listed in decreasing order of significance, were:

Kf 1 — "Learning and scholarship:" informal conversations with colleagues; networking with colleagues; learning about new developments in one's discipline; advising, mentoring and assisting colleagues; and learning about one's teaching.

Kf 2 — "Teaching:" advising students about assignments, projects and theses; formal instruction; counseling students on program and career issues; departmental and university committee work, and preparing and conducting evaluations of student's work.

Kf 3 — "Service beyond the university:" being a member/participant in professional associations, public talks, consulting and community service and off campus lectures, and conferences to professional societies.

Kf 4 — "Pre and post teaching activities:" reviewing and evaluating the work of colleagues (manuscripts, grant proposals), preparing for teaching, preparing and conducting evaluations of student's work.

Kf 5 — "Research:" conducting research; and writing books, articles, monographs and grant proposals. There is a difference between Kf 1 (Kreber's scholarship as learning about one's teaching) and Kf 5 (research as measuring the effectiveness of one's teaching).

Some noteworthy results from Kreber's research are:

- in factor 1, includes a set of "process" activities all related to keeping up-to-date. Such activities rarely are included in the traditional sense of "teaching," "research" and "service" nor are they included explicitly in Boyer's view of the four "scholarships."
- in factor 1, keeping up-to-date in both subject discipline and in teaching are related activities.
- in factor 2, activities related to both undergraduate and graduate student education are in the same factor.
- in factor 4, an interesting cluster of activities related to "teaching" and to "service" are juxtaposed.
- "preparing and conducting evaluations of student work" appears as a loading factor in both factors 2 and 4.

From the work of Boyer and Kreber a performance model can be created to establish policies and procedures to nurture and reward academics to perform their tasks well. Such a model is based on the following seven key skills expected of academics:

1. Enthusiasm about their profession. They have a sparkle in their eye for what they do.
2. Integrity and ethics; honesty and concern for students at all levels. No plagiarism, manipulation of the data, no deception, and no shirking or shortchanging their commitments. Building trust.
3. Skill in problem solving, teamwork, communication and self assessment that they use in solving problems in all contexts and for all clients.
4. Expertise in subject knowledge, and, for some situations, expertise about the culture, traditions, practices and policies of their university or professional association.

5. Skill in teaching with a focus on student learning. They are knowledgeable about what research says about learning and try to use that understanding to create effective learning environments for students at all levels and in all contexts.

6. Skill in research. Research is defined as the curiosity, perseverance, initiative, originality, critical appraisal and integrity one uses to create new understanding and practices and for self learning. As a sidenote, Boye and many others have helped us to see new facets to research by using the word scholarship. However, this has prompted a semantical jungle with the use of such terms as the scholarship of teaching and learning, SoTL, teaching as research, TAR. In this book the operative term I will use is research. Perhaps this is because my experience has been in a research-intensive university, because we have Vice-Presidents of research and because we have departments such as research services. Whether I apply my curiosity to questions related to student learning or to engineering, I use the same rigor, disseminate the findings through refereed journals, receive "research grants" and use the research services. Hence, I use the term research in this book. Also, I distinguish between "problem solving" and "research." The difference is subtle but important.

   > *For example, a teacher, Karen, might wish to solve the problem of "improving student ratings." Karen solves the problem by using active learning, learning the student's names, promptly returning marked assignments and getting frequent feedback from the students. She used problem solving. The result was 'The students liked it.' and 'I liked it.' Her student ratings improved. Problem solved! However, Karen did not take the extra steps to gather before and after data to measure which of the interventions was most effective. She was not curious. She tried something and it worked but she did not discover how well it worked or why it worked. She did not bring her skills in research to her teaching.*

7. Skill in planning and administration as exemplified by high standards of performance and conduct, being accountable, being aware of the context, challenging the conventional, anticipating the future, creating short and long term goals and developing plans to achieve these, skill in making decisions, interpersonal skill, skill in participating in and chairing meetings, enabling others to act and being trustworthy.

All activities done by academics use the first three skills. Solving problems for different clients draws on the remaining four skills to different extents. This is illustrated in Table 1.3.

Your ratings may differ from mine. Furthermore, for one particular client, the ratings will vary with the problem. For example, as an expert witness in one law case, you may need to do no research. You just share what you know. In another case, you need to do additional research about the application in this particular case. Hence,

Table 1.3
How academics use their skills when doing tasks for different "clients"

"Client"	Tasks academics do	Extent of application of skill in traditional areas of			Kf	Usual category
		teaching	research	service		
General public	explain discipline or research to the public	**	**	*	3	service
Community	committee work	—	*	**	3	service?
Advocacy groups	advise group	—	*	—		service
Local government	advise group	—	*	—		service
Law courts	serve as expert witness	—	*	—		service
Students	prepare to teach	***	***	**	4	teaching
Community students	give non-credit courses	***	*	*	teaching? †	
Undergraduate students	develop knowledge and intellectual skills; train professionals	***	*	*	2	teaching
Graduate students		***	***	*	2, 5	research
Post doctoral students		*	***	*	?	
Industry	give short courses	***	—	*		teaching? †
	consult	—	*	3	service ?	
	do contract research	—	—	***	*	research, †
Professional organizations	present papers	*	***	*	3	research ?
	chair a session	—	**	***	3	service? †
	provide leadership as president, executive committee	—	*	***	3	service
	review grants and papers	—	***	*	4	research? †
	serve as editor	—	***	***	research?	
	set exams for profession, serve on accreditation team, select scholarship winners	***	*	***		service?
Self	learn, keep up-to-date	***	***	*	1	
	attract potential graduate students, apply for grants in subject discipline	***	***	**	research?	
	do research	***	*	1, 5	research	
	apply for grants, write papers in teaching, do research	***	***	*	1	research?
	research in administration	—	***	***		research ?
Colleagues	be a mentor, network	***	***	***	1	
University	serve on committees	**	**	***	2	service

*** means the skill is used extensively

* means the skill is used a small amount

— means the skill is not used.

Kf. means the Kreber factor described earlier in this section.

† means that this has been identified as a "service" role by OCUA (1999a).

different skills will be used to different degrees depending on the task. Also shown in the Table is the traditional coding according to teaching, research and service and, in column 7, the Kreber factor, Kf. Many of the activities could be in different categories and some are unclear. What is shown is that "research skill" is required in many different tasks; "teaching skill" is required in many.

In this book, we consider all of the **skills** of academics. In Chapter 3, factors 1 to 4 are explored. However, the major emphasis is on the traditional factors 4 to 7; these are shown in the vertical columns in Table 1.3. As suggested in this table, skill in teaching (column three) can be demonstrated in many different contexts. Evidence from all of these "clients" can, and we suggest should, be used to show excellence. Similarly, skill in research (column four) is used with a wide range of "clients." Traditionally, "research" has been considered only in the context of graduate education. We propose that this is too narrow a viewpoint. Evidence from all these activities could be used when assessing the performance of faculty. Indeed, until we use a model such as given in Table 1.3, the evidence used to support claims about excellence in teaching will be drawn from too limited a segment of our experience. We shortchange ourselves.

If we are to encourage and reward good teaching we need to include the full spectrum of our use of that skill in teaching. We need to provide evidence from all the tasks. Table 1.3 provides a model.

1.6 The context and culture are important

As described in this Chapter, the context in which we work includes attitudes about research in contrast with teaching, the role of research funding, models describing the role of academics and the relative times spend fulfilling each of the three traditional roles of teaching, research and service. The context is part of the culture which I describe as the environment determined by the collected actions, attitudes, standards, beliefs, decisions and practices about what is really important about the institution.

1.7 Outline of this book

If you try only one thing from this Chapter, Carolin Kreber's research provides neat insight about what we do as academics. Chapter 2 provides more about the context/culture in which university faculty function. Ten myths about universities are considered, especially in the context of improving student learning. The rest of the book is built around the framework suggested in Table 1.3, Kreber's research and the ten myths.

Then we consider, in turn, the seven Kreber factors that have been shown to be important in the life of an academic. In Chapter 3 we consider the first four factors (enthusiasm, integrity and trust building, higher order skills and keeping expertise up-to-date) and add an additional fifth factor — contribution to the vitality of the department. Usually these are not considered explicitly. Rather, the universities tend to consider teaching, research and administrative activities as the only measures of importance for assessing the performance of faculty.

Chapters 4, 5 and 6 define teaching, research and service, list criteria to measure excellence and list forms of evidence that might be used for assessing performance. In Chapter 5, the overall research process is detailed with elaboration for those interested in research-in-teaching. Clarification is given in Section 5.7 on what is research-in-teaching, why it is important, and the difference between excellence in teaching and excellence in research-in-teaching. Ideas are given as to why research-in-teaching rarely is recognized or rewarded.

The strongest motivation for faculty to improve their teaching is intrinsic motivation. That is, faculty work to improve teaching because they want to and because they get excited about the opportunity. Chapter 7 provides a seven-step process for intrinsic motivation. The follow-up Chapter 8 guides an individual through the seven-step process of intrinsic motivation. Chapter 9 suggests the actions administrators can take to nurture intrinsic motivation.

Chapter 10 describes options for extrinsic motivation for faculty to improve student learning.

One of the strongest extrinsic motivators is the criteria for promotion, tenure and annual performance review. One of the greatest challenge is to determine how to effectively credit, value and reward "research-in-teaching" (the discovery scholarship of teaching). Suggestions are given in Chapter 11 about Promotion and Tenure policy, P&T, and annual performance review.

Chapter 12 suggest actions that administrators can take to create the culture to motivate and reward faculty to improve student learning. Chapter 13 gives ideas for individuals. Chapter 14 considers suggestions for administrators for coping with faculty who underperform.

1.8 Reflection and self-rating of ideas

Most books end each chapter with a summary. I do not. Research has shown that reflection about what we have just heard or read, placing the ideas in the context of our past experience and discovering interesting connections improves our

comprehension and performance (Kimbell *et al.*, 1991; Brookfield, 1990). Therefore, I encourage you to reflect on the ideas in this Chapter and create your own summary by reflecting and rating some of the ideas. Table 1.4 provides a place for such written reflection. Some already believe and are practicing some of these ideas. Some ideas may not suit your style. Some ideas deserve more investigation. To gain the most from this book, please reflect and rate the ideas in this Chapter.

Table 1.4
Reflection and self-rating of ideas about being an academic

Reflection: Some guiding questions to start your reflections might be "What interested you most in this Chapter?" "What ideas confused you the most?" "If you were writing this Chapter, what other issues might you include?"

Rate the ideas presented in this Chapter

P&T means promotion and tenure	All published	P&T plus annual review	Only P&T	not available
Is a job description describing teaching, research, service available for your position?	○	○	○	○
Hours spent/week in all activities during teaching semesters	>60	50	40	<30
	○	○	○	○
During teaching semesters percent of time spent on	70%	50%	30%	10%
"teaching classes undergraduate and graduate"	○	○	○	○
"research including personal research"	○	○	○	○
"consulting, committees, grant reviews"	○	○	○	○
Total hours per two semesters dedicated to course preparation and delivery excluding graduate supervision	>1000	800	600	<400
	○	○	○	○
T means teaching; R means research	T and R seamless	T is separate from R	T vs R	R is better than T
My idea of the relationship between teaching and research	○	○	○	○
The University culture about teaching and research	○	○	○	○
	Agree	Somewhat agree	disagree	Disagree
Research contracts and funding are influential forces to the detriment of good teaching	○	○	○	○
	Agree	Somewhat agree	disagree	Disagree
Skills of an academic demonstrate:				
enthusiasm	○	○	○	○
integrity	○	○	○	○
skill in problem solving, communication, self-assessment	○	○	○	○
expertise in subject knowledge	○	○	○	○
vitality	○	○	○	○
skill in teaching at any level in any context	○	○	○	○
skill in research at any level in any context	○	○	○	○
skill in planning and administration	○	○	○	○

Adjustments to the scoring in Table 1.3. In Table 1.3 I used an *** rating to mean "used extensively." Reflect on the skills you use for different tasks and different clients and adjust the *-rating to better match your situation.

Other _____

My conclusion from these responses is _____

Some terminologies and acronyms used in this book

Administration — form of service involving administration over a unit, program faculty or university. This draws primarily on skills of planning, leadership, teamwork and administration.

ASQ — Approaches to Study Questionnaire, instrument for students to self-rate their approaches to learning; developed by Ramsden and Entwistle described in Section 4.5. Dr.Chris Knapper, Queen's University, altered the terminology to reflect North American practice. Instrument and scoring in Appendix B.

Basic skills of an academic — enthusiasm, integrity, ethics, trustworthy, has process skills and positively contributes to the vitality of the University.

BRI — Bridging Research Interests Questionnaire, instrument for students to rate the extent to which faculty integrate teaching and research in the classroom. Table 4.4, p. 92.

CPQ — Course Perceptions Questionnaire, instrument for students to rate the learning environment; the elements in the inventory were developed based on Ramsden and Entwistle's research on what promotes deep learning. Dr. Chris Knapper, Queen's University, altered the terminology to reflect North American practice. Example data in Section 4.3, p. 84. Instrument and scoring in Appendix A.

Culture/system — the environment determined by the collected actions, attitudes, standards, beliefs, decisions and practices about what is really important about the institution.

Dossier — a collection of papers giving detailed information about a particular person or subject. As in **Teaching Dossier** and **Private Teaching Dossier**. Related term — **Performance summary.**

Higher order skills — see Process skills.

Kreber factor — related to Carolin Kreber's research described in Section 1.5.

M&V — Mission and Vision statements of the University.

MRIQ — My Role Is questionnaire, instrument for teachers to self-rate their perception of their role in the educational process. Appendix E.

NSSE — National Survey of Student Engagement, available from the www.nsse.iub.edu.

P&T — Promotion and tenure.

PEEP — Peer Evaluation of Educational Programs, instrument for peers to rate and teacher's plans for a course. Instrument given in Appendix D; and described in Section 4.7.

Perry — attitude toward learning, described in Section 4.5. Instrument and scoring given in Appendix C.

Performance summary — Annual documentation of evidence of contributions to research, teaching and administration, for the purpose of annual performance assessment.

Portfolio — a set of pieces of creative work collected to be shown to potential customers or employers. Prefer to use the term "**Dossier.**"

Private Teaching Dossier — document to help us personally improve our teaching, p. 182; compared with *Teaching Dossier*.

Process skills — skills needed to function well. These skills include skill in problem solving, communication, listening, team work, self assessment, and lifelong learning. (Also referred to sometimes as "soft skills" or "higher order skills.")

Professional Dossier — document to help others assess our performance in teaching, research and service, see Performance summary.

Queen's exit survey, extracts from the exit survey developed by Queen's University, Kingston Ontario Canada Appendix F.

Scholarship — see Research.

Research — an organized and systematic way of finding answers to questions and thus discover new knowledge, skills or attitudes.

Service — activities that use primarily the academic's expertise. These include consulting, presenting seminars and workshops, serving on professional and/or community organizations, interfacing with industry, government and the community, open houses, events to improve relationships with high school, activities to improve recruitments of undergraduates, graduates and faculty.

Soft skills — see Process skills.

Syllabus — sometimes referred to as a course outline. Published material developed by the instructor and usually presented to the students at the first class. Usually includes the name of the course, details about the instructor, the major learning objectives, the required texts and statements about policy and assessment.

System — see Culture.

Teaching — facilitating learning of any subject or skill or attitude by any client.

Teaching Dossier — document to help others assess our performance in teaching; contrast with Private Teaching Dossier.

Many excellent books have been written for administrators about motivating faculty. Some books have been written about being an academic. Books have been written about the reward system. Others have been written on improving student learning. Some books have been written on measuring effective teaching. Some books are written only for administrators; others, only for individual faculty. None have been written so as to integrate all of these and address them as a whole.

This volume provides a timely discussion on the issues pondering in the minds of many newly recruited faculty and administrators — to uncover the real culture and offer suggestions on how to create a culture to nurture student learning; and to explore the issue of what is research-in-teaching. With improving student learning as the ultimate goal, the author suggests many concrete ways to change the teaching practice and, more importantly, the culture of a university.

Readers will appreciate the eight inventories provided for improving and monitoring student's learning. Checklists and end-of-chapter reflections are also of great practical help.

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