POST SECONDARY EDUCATION IN THE OKANAGAN

Purpose of this Study

Okanagan University College's external communities have been publicly debating whether the current university-college model is an effective means for delivering post-secondary education to the residents of British Columbia's Okanagan region. This study is intended to look at some of the costs and benefits - both economic and educational - for three different models that could emerge from the debate. The report discusses three options:

1. *Creating a new university* to complement the existing university college. The new university could either be on a green field site (as in the case of UNBC), or adjacent to the existing "new" North Kelowna campus.

2. *Splitting* the existing OUC into two separate and distinct parts. The North Kelowna campus would become the campus of a new university, with the remainder of Okanagan University College (OUC) reverting to a college.

3. *Continuing to evolve* the university-college model to meet the goal of research within the region while retaining and improving OUC's ability to meet the educational needs of the region.

The purpose of this study is to identify some of the likely consequences of these major options (obviously other outcomes are possible, depending primarily on funding decisions of the Provincial government). The report discusses some of the longer term, but less quantifiable, issues connected with various higher education models: the probable impact on research, on students, and on the regional economy, institutional costs and burden on the taxpayers.

This report begins by making some basic assumptions:

- *British Columbia should spend more on higher education* to provide greater opportunities to its young people to earn higher degrees.

- *The Okanagan region* can make a good claim for more Provincial spending on post-secondary and graduate education.

- A new university, or indeed any other major post-secondary institution, whether privately or publicly funded, would be a good thing for the economic development of a city and for the education of the young people of the region.

British Columbia should spend more on higher education

The issue of the level of BC's spending on higher education has been addressed frequently over the last few years. Even the "official" or semi-official publications have recognised for some years that there are good reasons for increasing spending on higher education in B.C.

A 1988 report to the Minister of Advanced Education and Job Training pointed out that B.C. ranked seventh in total post-secondary participation among the Canadian provinces, ninth in Bachelors and First Professional degrees, eighth to tenth in various funding measures. The report recommended increases in spending and expansion of degree programs, particularly in less populous regions. This report recommended creation of the university colleges in the Cariboo and Okanagan, as well as an exploration of the "University of the North" concept.[1]

A 1991 report to the Ministry of Advanced Education, Training and Technology implicitly linked Canada's declining relative per capita national income, and B.C.'s relative decline in personal income, to a level of enrolments in higher education considerably lower in Canada than in the U.S., and to a level of full time graduate level enrolments lower in B.C. than in Canada.[2]

A 1992 report to the Access Task Force of the Advanced Education Council of British Columbia repeated the themes of B.C.'s low participation rate for the relevant age groups and focussed on the need to address a mismatch of skills.[3]

A recent report by British Columbia's university presidents noted that British Columbia could report only 23 per cent of its 18- to 24-year-old residents enrolled [full-time] in universities or career/technical programs. That was the lowest in the nation.[4]

Such statistics as these can be debated. For example, while B.C. has a low proportion of full-time students, it has a high proportion of part-time students, so that in a comparison of total (rather than full-time) students enrolled B.C.'s position is more favourable. Over the past few years, too, there has been some response from B.C. universities. In the period 1992/93 to 1998/99 B.C. had an increase in full time university enrolment of 18.4 percent. This was by far the highest in the country, which averaged a 1.9 percent increase over the period.

Only B.C. and Alberta had increases in part time university student enrolment, the remainder of the country suffering double digit decreases. Nevertheless, even given this expansion, in 1998/99 B.C.'s full time enrolment exceeded Alberta's only 1 percent, and its part time enrolment by under 6 percent, on a population base 37 percent higher (all these figures exclude the B.C.'s university colleges).[5] Even if there is not an absolute need for more educated people (that is, even if many jobs have suffered "qualification creep"), at the very least it appears that young people growing up in B.C. are at a clear *competitive* disadvantage relative to their peers growing up in other provinces as a result of lack of educational opportunity.[6]

The Okanagan needs a bigger share of education spending

On a per capita basis, the Okanagan region has been allocated a disproportionately low number of the post-secondary education spaces the Province has created. While the population OUC serves accounts for about 8.95 per cent of British Columbia's 4 million people, OUC receives only about 3.33 per cent of total post-secondary funding in the province. The Okanagan's ratio of funding to population is well behind the ratio, not only of the south-west corner of the province, but of northern B.C., the Cariboo and Kootenays as well.[7]

This disparity in spending is of course partly a result of the concentration of higher education in the south-west corner of the province. More significant is the apparent consequence, which is that the educational attainment of the population of the region is well behind that of the provincial average. Census data shows that the percentage of the population over 25 having achieved various levels of education is higher for British Columbia as a whole than for the Okanagan for every education level greater than high school. Certainly there are structural differences between the regional economy and the rest of the province that will to some extent influence the people who choose to move here or the education that young people in the region choose to aspire to: 29 percent of the working population in the region is in agriculture, resource base industries, manufacturing or construction, versus 24 percent for the province as a whole. But it is probably also true that the education available here influences where young people growing up in the region choose to live and how much education they choose to obtain, and this in turn will affect both the attractiveness of the region to new employers requiring a more highly educated workforce and the likelihood of similar new businesses being established.

A University is a good economic base for a region

No cost-benefit study is needed to demonstrate that a post-secondary institution is a good economic base for a city or a regional economy. A college or university is a generator of economic activity, as the needs of the institution, of its faculty and of its students produce jobs in a variety of fields. The university community can generally be counted on to make a contribution to the cultural life of the community. More important, economic development is likely to be restricted in communities that lack the educational capacity and research infrastructure to support the knowledge-based industries of the 21st century.[8]

The Question We Should be Asking: What is the Best Use of Limited Resources?

The desirability of an increase in the availability of higher education places in the Okanagan is not in question. The questions the provincial funders, and federal and provincial taxpayers, will be asking will be about the *effective* investment of public dollars - is a new university the best use of scarce resources, measured in terms of student access, community relevance and cost-effective education? In today's fiscal environment it is not reasonable to work on the basis that resources are unlimited.

To attempt to provide some useful comment on these subjects, this report explores some of the characteristics of post-secondary institutions as they affect costs of operation. What cost pressures have universities been under, and how have they responded?

In the discussion that follows, we contrast "universities" and "colleges" in the areas of research, teaching and administration. In practice there is often not a sharp distinction. British Columbia has traditional research universities offering graduate degrees, and two year junior colleges, but OUC, otherwise similar to a four year undergraduate college, has taken on some of the usual university research role.

A University spends money on Research

The fundamental distinguishing feature of a traditional university is research.

Research is expensive, in terms of physical infrastructure, materials and assistance, and also in terms of the time of researchers. University faculty members

are expected to spend time on research and are paid to do so. Many research funds come from outside the university, from federal or provincial governments or private sources, but the need to provide faculty with the time they need to do research is a major driver of the costs and teaching structure of a university. Research necessarily conflicts with the faculty's other primary function of teaching.

The total cost of research time is impossible to quantify exactly, but a very rough idea of the faculty time involved can be obtained using a couple of different approaches.

- A few studies have used questionnaires to try and quantify how university faculty members spend their time. Thus, for example, one U.S. study found that academic staff members in Arizona work between 50 and 60 hours per week, including 30 hours of teaching and related activities.[9] A 1992 survey found that academics in the U.S. spent a median of 18.7 hours per week in teaching (including preparation and student advising) compared with Sweden, 15.9 hours, Germany 16.4 hours, Japan 19.4, and England 21.3.[10] A survey of academics at Michigan State University showed that most academics spent 35% of their time teaching, 26% on research and the rest on other activities.[11]

- Another way to estimate the time cost of research is to compare the typical teaching course loads at a British Columbia university to the course load that would be expected of a teacher with no research load at a degree-granting college. OUC[12] itself provides a comparison because some OUC professors have no research responsibilities. These professors typically have a basic course load of four courses or 12 hours. At a university a typical course load might be two or perhaps three courses. Thus in very broad terms an average university assistant, associate or full professor will produce between 50 and 75 percent of the teaching hours of a college or university college professor without research responsibilities. This is roughly consistent with the U.S. survey results cited in the paragraph above, after some allowance is made for administrative tasks at a university.

There is also likely to be a *salary* differential between a university and a college. At OUC, for example, the teaching pay scale is about $48,000 to $65,000, but 80 percent of faculty are at the highest level and so the average is perhaps

$62,000. The average salary for full time university faculty in B.C. is about $80,000.[13]

Using this approach we could conclude that an average full time university faculty member might produce between 50 and 75 percent of the teaching "output" of a college teacher. If the university teacher is paid 30 percent more, then teaching costs have a potential to quite easily double as students move from a college teaching format to a university format, given similar teaching contact time by full time faculty members.

In fact, this simple comparison overstates cost differences, for several reasons. OUC itself does not represent a "pure" example of college teaching, because it has already moved part way towards the research university model. OUC funds some faculty research, in that "upper division" professors who have a basic teaching load of three courses or 9 hours per week (with some limits on number of students) are expected to spend some time on research.

More important, a typical B.C. university simply is not funded to support teaching costs twice as high as those of a college. The comparison above is based on an ideal - all teaching done by full time faculty - that does not exist here. In the real world, university teaching loads are creeping up and classes are larger (at OUC, contracts limit class sizes). In some B.C. university faculties teaching loads are three courses per term rather than two per term, or two and three courses alternating. And much teaching at universities throughout North America is done by lower paid sessional lecturers and term appointments without research responsibilities.

What has happened is that in response to the high cost (in their roles as teachers) of skilled faculty with proven ability to do research, universities have created a hierarchical structure in which much teaching is done by lower cost teachers without research responsibilities. In the U.S., for example, 78 percent of instructional faculty (ignoring graduate students) in 1970 were full-time, a figure that has declined steadily to 66 percent in 1980, 64 percent in 1989, and to only 60 percent by 1993.[14] Another study says that "Nearly 40% of faculty in the U.S.A. are part-time and on short-term contracts, and they are responsible for the majority of teaching: Full-time and tenured faculty spend a much larger proportion of their time undertaking research or managing the army of part-timers than they do teaching..." Observation suggests that much the same trend has occurred in British Columbia.[15]

A university also has graduate students available to use as instructors. At one and the same time it can provide financial assistance to its graduate students, train them as teachers, and gain cheap instruction labour. As one student-sponsored study says, this "is very cost effective for universities."[16]

It must be said, in fairness, that it is not clear that the mere fact of pushing teaching down the academic ladder is harmful. The bulk of research in the area appears to support the view that there are no significant differences between the quality of instruction, student success rates, student learning, or the decision of students to enrol, between instruction delivered by part- and full-time faculty.[17] Nevertheless, the creation of this faculty hierarchy is not without problems. One writer says

> "The trend toward temporary staffing threatens to add a class barrier .... to obstruct communication and problem solving among department faculty. Faculty on two- or three-year appointments do not have a stake, and often have no voice, in departmental matters such as hiring, promotion, and tenure decisions, curriculum reform, undergraduate major requirements, and graduate program development.... Non-tenure-line faculty are apprentices, the argument goes, training for a future position which will provide them the full rights and privileges of academic citizenship."[18]

Universities are well aware of the problem. One response of U.S. universities to budget constraints has been to pay faculty with university funds for a smaller component of research. Faculty may be paid for the winter months of teaching and be expected to attract research funding from outside sources sufficient to cover the full cost of the time they devote to research in the summer. A similar model is being used for a range of disciplines at the Technical University of B.C., and a few appointments at traditional B.C. universities explicitly carry a full teaching load and no research expectation.[19]

The overall dollar cost of university research in B.C. is difficult to estimate. The cost of "sponsored research" at the four traditional universities in B.C. is in the order of $180 million per year[20], but this does not represent the full cost of such research, only that part recovered from sponsors. A university in Canada is expected to provide research infrastructure for its faculty - offices, laboratory space, a library (we return to this below). It must also devote some effort to processing grant applications and making sure they conform to the university's

standards. At a small university such as UNBC this might initially require a staff of two or three and cost in the order of $200,000 to $300,000.

More important, though, is the cost of faculty time. Of the $180 million in sponsored research costs, about $30 million went to faculty salaries and benefits, with the remaining $150 million being spent on salaries and benefits for support staff and "other instruction and research" staff, for equipment, supplies, travel, subcontracting costs. Total spending on faculty salaries and benefits, *excluding* "other instruction and research" and support staff, and excluding these sponsored research faculty costs, by the four traditional B.C. universities is in the order of $340 million a year.[21] If indeed, as we suggested above, the salaries of research-oriented faculty in a university are 30 percent higher than those of college instructors, and if indeed because of their research they devote only 75 percent as much time to teaching, then the cost of the research function in university faculty time would be in the order of $140 million per year. Spread among full time equivalent enrolment for the four universities in the order of 58,000[22] would suggest research time costs in the order of $2,400 per student per year. A purely teaching college faculty with around 3,000 full time equivalent students (about the number of OUC students who are in programs that could also take place in a university setting) would incur additional costs of switching to a research oriented university faculty in the order of $7 million per year. OUC, of course, has already moved part way in this direction.

In fact, as we have seen, budget constraints at a university would instead see average class sizes increase and much teaching relegated to lower paid staff.

A University's research may not benefit its region

If research is the "other" output of a university, it is worth asking what kind of outputs will be produced. While OUC has been successful in encouraging research related to the local economy and environment, there is no guarantee that all of the research produced at a new university would do so. The topics of that component of research that is funded through university salaries are to a very large degree selected by researchers. And while much research requires funding from outside sources, or perhaps from departmental funds controlled by the faculty members at large, as we have seen a major component of research cost, the time of the researcher, is paid for by the university.

This is true in all disciplines, but holds most strongly in fields where the researcher's time is the primary cost. Under the present system, if faculty are interested in the ethnography of Micronesia and Polynesia, Aeschylus's use of

etymologies of proper names, Athenian politics of the 5th and 4th centuries B.C., or Wagnerian Motifs in *Major Barbara* (to pick a few subjects from UBC's list of faculty interests), then that is what they research. The judgement as to whether much of university research is of value is made by others in the discipline, not by students, the local community or taxpayers.

The right of faculty to choose the subject of their research, and to have the value of that research judged by their professional peers, has long been considered fundamental to a university. The existence of tenure, a central philosophy of most universities, is designed to protect this right (among others) of faculty to research topics they deem worthy.

The consequence is that research topics cover an enormous range. The contrast between the esoteric nature of some research and the needs of the local community has not escaped academics. One writes

> "This criticism reflects a clear clash between the cultural norms of university faculty--norms that we hold almost unconsciously--and the missions that those who pay our salaries have in mind. Our customers want attention to undergraduate teaching (with some mixture of education and career preparation), expert help with all manner of societal problems, and direct contributions to technological advance and economic development. In the case of many public institutions, contributions focused on state and local needs are especially valued. These customer demands do fit the teaching-service-research scheme that public universities traditionally use to describe their missions, but the faculty interpret these missions quite differently."

> "Faculty culture in the sciences in research universities is characterised by disciplinary specialisation and by intense work on problems of our own choosing. (The public thinks we do not work very hard because they do not see or do not value much of our work.) This system is perfectly suited to encourage fragmentation and to discourage collegiality, loyalty to our institutions, interest in state or local needs, and attention to broader issues whether scientific or societal. We believe that we are entitled to society's support for research driven by the inner evolution of our specialised disciplines and are convinced (on weak evidence, and despite the Japanese counter-example) that such research does efficiently foster technological innovation, economic development, and job creation.[23]

It should be said, in fairness, that university faculty members do work hard. Numerous studies, largely based on self-reports, peg the (U.S.) national average at

54 hours per week[24], and much of the reason faculty work hard is because of their interest in their fields of research. Much academic work goes on in the "extra" hours university staff work. A recent Australian study, for example, reports as a survey result that 80 percent of academics said they were motivated almost solely by intrinsic interest in their subject. Over half of the sample of academics (53 percent) agreed that they subordinate most aspects of their lives to their work.[25]

Nevertheless, expressions of unease about research quality, perhaps arising from a concern that volume will be promoted at the expense of quality, are not hard to find. One writer reports that pressure on academics is leading to more research projects being done simply because the money is there and ever more publications produced that "are read solely by the journal editor".[26] As another puts it, "Faculty are pressured into doing research that is of no particular value to society."[27] Another says, "Much of what is published is obvious; lots of it is irrelevant, not only to the conduct of society, not only to men and women with commercial interests in the subject, but, appallingly, often also to researchers at other colleges and universities."[28] Yet another says

> "For far too long academics have operated in what is denigratingly called the ivory tower. Separated from the very real problems of their communities, too many university faculty, even in professional disciplines, engage in arcane discipline-based research and publication that is mostly incomprehensible or, worse, irrelevant to the practitioner in the field.... many faculty have become increasingly specialised, discipline-oriented, and divorced from the realities of the world that in the social sciences and professions, they are supposed to be studying."[29]

With some regularity, university leaders have called for changes in the faculty reward system, including ending quantitative standards for measuring research productivity in order to cap "the overproduction of routine scholarship."[30] Obviously, though, the problem is not an easy one to solve. It would appear, in summary, that there is likely to be a significant difference between the kinds of research activity that the public and the business community of the region expects will be undertaken at a new university and what will actually take place.

Good research may not mean good teaching

If research is not necessarily beneficial to the regional culture or economy, is it at least beneficial to students? The question of whether a concentration on research increases the quality of teaching has itself been subject to some research.

One can certainly identify some reasons why a research orientation should help teaching. Asking students for their views, one investigator found, for example, that research shows students that their courses were up to date, and research-oriented staff demonstrated interest in what they were studying.[31] However, many students were also critical of subjects in which a teacher's individual research and research interests were seen to dominate, particularly at the expense of the aims of the course.[32]

Some studies that do show a strong relationship between research and teaching 'quality' may simply result from the fact that in countries where there are some dominant universities the wealthier, established institutions tend to score highly in both research and teaching.[33]

The preponderance of views seems *not* to be in support of the idea that a research orientation improves teaching. Much of the research literature questions the positive impact of staff research on quality teaching. Thus, one review of the extensive research literature in this field[34] concludes that the idea that good teachers are good researchers is a myth and that, at best, "the association between ratings of undergraduate instruction and scholarly productivity is a small positive one..."[35] However, the authors do go on to point out that "if the evidence does not support the good teacher equals good researcher argument, neither does it support claims that doing research detracts from being an effective teacher."[36]

In contrast, a study of over 200 U.S. institutions concluded that "a college whose faculty is research-orientated increases student dissatisfaction and impacts negatively on most measures of cognitive and affective development."[37]

Another review of the research on the relationship between teaching and research concludes that "no empirical support is found for the view that a necessary link, tight coupling or 'nexus' exists between undergraduate teaching and discovery research in the university". It cites twenty nine studies completed prior to 1987 and four more recent studies leading to the broad conclusion that there is little functional interaction between undergraduate teaching and discovery research.[38]

In conclusion, it seems fairly clear that on balance a dedication to research is at best not of *major* benefit to the quality of teaching at a university, and at worst may have a negative effect.

It is difficult for a University to make good teaching a priority

Part of the reason that good research seems not to imply good teaching is that there has long been a perception that while good research is rewarded, good teaching is not.

A typical observation is that

> "Nearly everyone, including the great majority of faculty at our most prestigious universities, agrees that teaching is undervalued and that the status of teaching should be elevated."[39]

A survey of 900 faculty from a large American university found that while 97 percent rated being a teacher as very important, only 7 percent stated that their university faculty were rewarded for good teaching.[40]

A 1987-88 survey of 11,000 faculty found that research performance was the key differentiating factor in faculty salaries, even at institutions that were not primarily research-oriented universities. Time spent on teaching was either a neutral or a negative factor.[41]

One task force commented, "Although advancement through promotion and tenure may be delayed by poor teaching, advancement is only marginally enhanced by excellence in teaching."[42]

Similarly, an Australian study [43] reports that respondents consider that the undervaluing of teaching in comparison with research persists. "Teaching is arguably the most important task of the university ..... However, 'it is research which is seen to define a "real academic".'"[44] As one writer observes, "the extrinsic rewards of research remain much greater--domestic and international travel opportunities, enhanced promotion prospects, recognition by professional societies and, perhaps, the chance of an exemption from teaching. Greater access to study leave and equipment, and better prospects for career advancement elsewhere, could be added to this list. The notion that staff can buy themselves out of teaching in favour of research does little to increase the status of teaching."[45]

Universities have been have been struggling with this problem for years. Campus leaders (especially leaders of research universities, at which much of the criticism is aimed) have called on their colleagues to pay more attention to undergraduate education and to look for ways to nudge their campuses into responding to the needs of their surrounding communities. With regularity university leaders have called for a recommitment to teaching, for changes in the

faculty reward system, peer review of teaching effectiveness, and more flexible approaches to faculty careers.[46]

When a problem has been identified as a priority by university leaders and faculty surveys over so many years, it is safe to conclude there is no easy solution, and that inherent in a research university competing for recognition and research dollars under funding pressure there will always be some potential to neglect teaching excellence. Thus a distinguished panel of American educators concerned with the issue of educating undergraduates at a research university (the Boyer Commission) reported in 1998 that "a typical department in a research university will assert that it does place a high value on effective teaching...however, discussions concerning tenure and promotion are likely to focus almost entirely on research or creative productivity. The department head when making salary recommendations may look almost exclusively at the grants or publication record...if interest is shown in experimental or interdisciplinary courses at the baccalaureate level, movement toward tenure or promotion may be stalled." The panel then went on to admit that although judging the quality of research is difficult, "for passing judgement on peers, research productivity is a much more manageable criterion than teaching effectiveness. Faculty gossip, student evaluations, and alumni testimonials have all been notoriously weak reeds, and reliable self-evaluation is all but impossible...at this point promotion and tenure committees still find teaching effectiveness difficult to measure... Evaluating good teaching will always be difficult..."[47]

Teaching methods are slow to change

Perhaps because of the lower priority actually given to teaching, universities have been slow to adopt changes to a method of teaching essentially unchanged since the middle ages. As one university writer says

> "University faculty are, like most privileged elites, conservative... Our lecturing has been largely unaffected by waves of technology and of educational reform. .... Higher education possesses a strong internal culture that has changed little in the past 40 years, but is now under such intense pressure that rapid and uncomfortable change is likely. ... it may be useful to put aside our convictions about the special nature of higher education and look at ourselves as a high-cost, labour-intensive service industry that, like so many other industries, is about to be restructured.[48]

One can speculate an institution that focuses on, and values, teaching as the primary role of its faculty will be more willing to explore new teaching methods. Universities are conscious of the issue and aware of the need to move forward.

But one senses a certain caution, exemplified by the 1998 comments of the Boyer commission about new technology: "Used creatively, electronic communication techniques can also be uniquely effective for certain kinds of courses, for example, some of those that have been taught in large lecture sections... It is also increasingly providing a channel of asynchronous communication between faculty members and students. ...At the same time, technology cannot be a substitute for direct interactions between human minds."[49]

University administration is costly

One of the longest traditions of universities is the high degree of control over decision-making exercised by employees of the university itself (as opposed to those who provide its funding). I have already noted the high degree (compared with almost any other publicly-funded institution) to which individual faculty members control the use of the time that taxpayers are paying them for. This local control does not come without a price, and it is clear that some faculty time is spent in the making of decisions through consensus or democratic process that in other educational institutions would be made by a single administrator.

The University Act lays out complex structures for UBC, SFU, and UVic, with power divided among the Senate, Board and faculties.[50] The existing universities, and the certifying organisations, will probably cling tightly to this traditional model, which is seen as protecting faculty powers. These traditional structures are not typical of colleges or vocational training institutions, and contrast with the much simpler and more centrally controlled structures laid out for the new specialised universities of Royal Roads and the Technical University of B.C.

UNBC presents figures for the costs of "governance" and administration. The cost of "governance" is given by UNBC as $69,000, of which only $7,000 is salaries, so the bulk of this amount will represent expenses of Board meetings and Board members.[51] The greater part of the costs of university government is borne by the university administration function. UNBC indicates that $6.0 million of a budget of $27.4 million, or 22 percent of its expenditure, goes to administration.[52]

The other universities do not use this breakdown, and indeed it is difficult to estimate the cost of the administration of a university, because so much of the function is carried out by faculty whose primary roles are teaching and research. Not just department heads, whose administrative role is clear and whose time commitment can at least be estimated,[53] but other faculty members who sit on committees or attend faculty meetings to discuss tenure, promotions and teaching assignments can be seen as devoting time to administration. Thus the total cost of

administration is undoubtedly a significant part of the costs of a university, and the impact of different administrative systems deserves some thought. Administrators are likely to differ from faculty members in their attitudes, so that the type of administration that is chosen will affect not just costs, but also the way a university interacts with its region.[54]

Libraries are changing with new technology

A university must provide its faculty and graduate students with an adequate research library, which means a library well in excess of the needs of undergraduate teaching requirements. Library spending at OUC has been far behind the level at B.C. research universities. The direction university expansion takes in the region will affect the value obtained from new spending.

Technology is changing libraries, but the rate of change differs between subjects.

In the rapidly evolving fields of science, technology and medicine ("STM") the availability of on-line full-text publications best accessed by computer from remote servers means that small universities can provide good service. Suppliers usually set prices according to the number of users, so a small university can provide similar service to a larger one for an equal per-student cost. No archiving of past journals by the subscribing institution is usually possible (that is, the computer data bases are maintained by the supplier). Thus a new university will obtain exactly the same service as a long-subscribing older university. Clearly as time goes on and a larger fraction of new literature in these fields is available on-line, the advantage of a large old university library over a small new university library will decrease further. (Adequate funding is still required in each case, though, because the cost of these services is significant. Even with the advance of distribution technology, the prestigious journals will still provide a filtering and evaluation function that they will be able to charge for.)

In fields where the rate of change of knowledge is slower and the body of useful material extends farther back in time - examples are English literature, history or anthropology - the situation is markedly different. Journals and other print material are not continuously available, and a library in these fields cannot be built in a day. A sufficient budget must be provided over a period of years to build up a good collection.

Fields such as commerce, economics and sociology are intermediate cases where both current literature and some body of older holdings are likely to be important.

It is apparent that holdings per student is not an adequate measure of the adequacy of a library. A small school with average holdings per student will have an absolute number of holdings that will be too small to be useful for research. Depending on the range of subjects that the library is attempting to cover, the level of current spending and spending per student (as a measure of completeness of coverage of current journals and new literature) may be as important.

It would appear fairly clear that:

1. Adequate coverage in slowly evolving fields that are more dependent on older print materials is more likely to be achieved in a long-established university.

2. Adequate library coverage for new print materials, given equal per student spending and an equal range of subjects, is easier in a larger university (because acquiring an adequate basic selection of material will be costly).

3. Adequate coverage of rapidly evolving subjects with most current material available in machine readable form on computer-accessible data bases may be almost as economical (per student) in a small new university as in a large older university.

If these observations are correct, then the cost and adequacy of a university library will depend very largely on the number and type of fields it elects to cover. A university attempting to cover the entire range of traditional university subjects, including those still depending on print material, will need vastly more funding than a library attempting to cover a limited range of subjects in rapidly evolving fields, or with the same funding will do a far less satisfactory job.

A research University has a competitive culture

The quality of a university's teaching staff is important to the inherent value of the training students receive, but the perceived "quality" or "reputation" of a university, both among the general public and among its academic peers, is also important to the marketability of that training. That is why students are so concerned about the reputation of their university - that reputation affects the value of their degrees in obtaining employment or admission to a graduate school. A university education is not just a set of technical training but also a signal of competence to potential employers, and students thus have a vested interest in the

quality of their fellow students. The weight put on the annual *McLean's* magazine ratings gives some idea of the importance of reputation.[55]

The perceived quality of the university also affects faculty members' access to research funds and their ability to work elsewhere if they desire. It affects the ability of the university to attract good faculty.

Building and maintaining the reputation of a university necessarily implies a degree of competitiveness. There is competition among students for entry, for grades, for entry to classes needed for majors or honours programs or for graduate school. There is competition among faculty for jobs, for advancement, for tenure, for research funds and for time for research (although as we have seen, sometimes the effort to produce research that meets the standards of peer evaluation results in research that is of very narrow application and which is not particularly responsive to the needs of the university's region).

The competitiveness of a university is very different from the traditions of a teaching college or of a university college such as OUC, although in some ways OUC is beginning to reflect the university traditions.

At present, OUC students are eligible for admission if they meet a fixed grade standard. The principle of open admissions is consistent with the traditions of a regional college, but with budget restrictions and increasing demand, the number of applicants meeting the standard now greatly exceeds the number of places available for popular courses of study, and selection is made in order of application. Thus until recently it has been possible for a highly qualified applicant not even to be considered, even if he or she applies by the published application deadline. This system has obvious disadvantages both to potential students and to the institution as it is now evolving, and it is under pressure to change. Twenty percent of places in academic courses are now set aside for highly qualified students, and further movement in this direction has been proposed.

Among faculty, there appears to be some movement away from, rather than towards, greater competitiveness. OUC permanent faculty within the academic stream (that is, leaving aside instructors in vocational courses) are all one rank, called "college professor." This is considered to be a full time and permanent job. The pay scale is about $48,000 to $65,000, but four-fifths of faculty are at the highest level and so the pay spread is small. There is a two year probation period but it is in practice not used as part of the normal hiring evaluation process. Thus

the crucial decision about "tenure" is in effect made at the hiring date by the hiring panel.

At a university some differences in effective pay are expressed in different teaching loads, with lower teaching loads and thus more time for research being characteristic of more desirable positions. At OUC, the distinction between upper division professors (teaching three courses) versus lower division (four courses) professors has the potential to create a "promotion" opportunity within the department, in the sense of awarding a chance to spend more time on each course and on research. In fact, however, most staff appear to teach or have taught at both levels, and in some departments the upper and lower division teaching load is shared equally by agreement.

Under the new "regularisation" agreement, most sessional lecturers and part time staff at OUC will be converted to regular staff. Thus a distinction among faculty members that now exists will be erased in the future.

Thus there is clearly a marked contrast between OUC's egalitarian ethic and the powerful incentive system at a hierarchical university, where a junior professor might easily spend seven years carrying out research in an effort to achieve a tenured position, facing the necessity of moving to another institution if unsuccessful, and where many instructional staff are not even in tenure-track positions.

These differences between OUC's hiring methods and pay levels appear to be consistent with a fairly fundamental difference between the faculty of research universities on the one hand and faculty of (2-year) community colleges and four year liberal arts colleges (and universities with an undergraduate liberal arts teaching orientation) on the other.

Two U.S. surveys document these fundamental differences.[56] These studies found "community college" (two year college) faculty to have the clearest sense of purpose of any sector of higher education, indicating that their interests lie primarily in teaching, rather than research. "They agreed teaching effectiveness should be the primary criterion for promotion of faculty. Most two-year institutions in the U.S. have open admissions, and teaching in the community colleges is not a simple task. In spite of this concern, these faculty do not lower their expectations regarding the content of the educational process."[57]

Faculty attitudes at four year liberal arts colleges with a teaching rather than a research focus seem to be generally similar to those at two-year colleges. Liberal

arts faculty "seem to have closer ties to their students and to their institution. In significantly larger numbers, they see their relationships with undergraduates as being 'very important' ... In short, liberal arts faculty seem to care more for their students, their professional colleagues, and the college as a whole, than do their research-oriented brethren." Most fundamentally, liberal arts faculty are more interested in teaching than are undergraduate faculty of research universities, who are more likely to report that they are primarily interested in, or lean toward, research as compared to teaching. "... [T]hey spend more hours in research or similar scholarly activity."[58]

When the two-year college faculty members were asked to rate the quality of life and the sense of community at their colleges, "they tended to be more positive than colleagues at several types of four-year institutions.... Although there are many factors involved in job satisfaction, we believe that this clarity of purpose--this lack of tension over values and expectations--helps explain the higher personal satisfaction displayed by community college faculty members. This same good feeling seems to extend to their institutions."[59]

Liberal arts faculty are also more positive about their profession. "In larger numbers, they report being more enthusiastic about their work now than when they began their academic careers.... There seems to be a better match at liberal arts colleges between what the faculty wants and expects from the institution and what, in fact, exists. These professors have a wide range of more positive feelings and assessments of their college than do those in research universities. When asked how they feel about their college, they are more likely to say that it is 'a very good place to be'." They rate the "quality of life" and the "sense of community" as "excellent" or "good" in significantly larger numbers.[60]

Incidentally, there is no appreciable difference reported between the estimated total hours per week spent on these activities by liberal arts vs. research faculties. Liberal arts faculty spend more time in teaching undergraduates and preparing to teach, while their counterparts spend more time in research and other scholarly activity. The weekly totals do not differ, however.[61]

Some Conclusions about Traditional Universities

Good universities have proved to be enormously successful institutions. There will continue to be a demand for the outputs they produce, and there will continue to be good reasons for putting resources into the Okanagan region. It is nevertheless useful to recognise some of the problems universities face in a time of

increasing enrolment and diminishing funding. As we have seen, some of the major cost issues that have emerged in discussions within the university community over the last few years are:

- the high cost of providing time to faculty with research responsibilities
- the enormous range and degree of specialization of research topics, and the frequent lack of relevance of much research to the region and to those paying for it
- the transfer of teaching loads to lower-paid staff without research expectations
- the difficulty of recognizing and rewarding teaching skills
- the slow adoption of new teaching methods and technologies.

The fundamental question facing the province and the region is how as many as possible of the benefits hoped for from a university can be achieved, either within the present institution or in a second publicly funded degree granting institution, while minimising some of the problems we can predict would be associated with a university.

The Options - Which Way to Go?

In the light of the discussion above we return to the original task of evaluating three of the possible routes facing OUC.

Option 1: Create a completely new University

The obvious precedent for the creation of a new university is UNBC (leaving aside private sector proposals such as that put forth by David Strangway). The northern community's desire for more local higher education is shared in the Okanagan, but to a greater extent than in Prince George the creation of a new university would have major impacts on current staff and students.

The immediate consequences for staff at OUC would depend on the future of OUC itself. Prince George had no university college, so the division of responsibility between the two institutions was clear, and Caledonia College staff had the option of remaining at an institution whose primary mission was unchanged. In the Kelowna case, it seems unlikely the province would wish to continue to fund the partial research role of a university college so close to a

university. It is even possible that OUC would revert to the status of a two-year college.

In either case, present faculty are likely to find themselves in a position that some will find unattractive. Whether or not the residual "Okanagan College" loses its degree granting status it is likely to become the second choice for able students, for researchers, and for those wishing to fund research in the region. It may also suffer some impact on enrolment, although there is probably sufficient demand for higher education places in the region that "OC" would continue to function at its current teaching load.

Some staff members are likely to seek employment at the new university. As we have seen, much as the practice is decried, potential ability to carry out research is the primary requirement for initial hiring at a typical research-oriented university, and proven ability to publish research is the primary requirement for permanent employment at higher ranks of such a university. A new university will be anxious to establish its reputation and since research excellence is the quickest way to do this it is reasonable to assume they will be selective in their hiring. As we have seen, even leaving aside differences in skill sets, there appear to be fairly significant differences in the basic attitudes and approaches (the "culture ") of faculty in research oriented universities versus teaching-oriented two and four year colleges, and those selecting faculty for the new university will be aware of this.

Very few Caledonia College teachers obtained positions at UNBC, but the educational and research qualifications of OUC faculty tend to be higher and it is probable some would find employment at the new university. Nevertheless, it is clear that even if its proposed course offerings correspond with the skills of existing OUC staff, the choice of potential research oriented faculty available to a full traditional university with a graduate program, paying up to $100,000 for a two to three course teaching load, is going to be far greater than has been available to a university college paying a maximum of $64,000 for a three to four course load.[62] It would appear unlikely that a majority of current staff would be successful in moving to the new university as tenured faculty.

The new university will find building a new staff not without problems. Based on the UNBC experience, the staff, all hired within a short period of time, might be expected to be at similar early stages of their careers. This may create some lack of diversity of experience initially, and may create potential problems in the future as all grow old together. Thus only one fifth of faculty at UNBC are over 50, while half of faculty at the three traditional universities are over 50; 43

percent at UNBC are under 40, as compared with only 17 percent at the three traditional universities.[63] It may take time to attract good senior year and graduate students, so there may initially be an imbalance between the expectations of the faculty and those of the students.

One primary obstacle to a new university is, of course, money. Obviously some capital funds for new physical plant would be needed for a new university. Buildings of more than a strictly utilitarian standard seem to be the norm for new B.C. universities. On the other hand some savings might be achieved by building the new university on land purchased from the ample site available at OUC's "new" North Kelowna campus, allowing the two institutions to share the use, and costs, of the gym and perhaps of the library and dormitories (because of the union issue discussed in the next section it would probably not be possible to share classrooms and administration buildings). Thus a new university campus might cost less than the $130 million or so that was spent at UNBC, but undoubtedly more than an expansion of OUC designed to serve an equivalent number of students.

As we have seen, universities are also likely to have higher teaching costs than colleges, because of the cost of compensating non-teaching time of research faculty and because of higher pay rates. At the same time, a new university would undoubtedly exercise the same response as most others and transfer much of the teaching load to lower-paid sessional staff or to pure teaching staff with no research responsibility.

Providing a library at something approaching research university standards over the spectrum of subject areas that would be taught could absorb far more than the province is likely to be prepared to spend. Even now, OUC considers its own library to be seriously underfunded.

Option 2: Create a University out of part of OUC

The fact that the majority of OUC's "academic" courses are delivered at a separate campus has suggested to some the possibility of splitting OUC into a university based at the North Kelowna campus and a vocational or 2-year college.

The first question to be asked is how much money the Province is prepared to devote to such a step, and what the Province would hope to achieve by it. In the worst case, without new spending at either the university or the residual vocational college, no new higher education capacity in the region would be created. As we have seen, basic faculty costs at a research university are substantially higher than

those at a college, given teaching by full-time faculty with similar class sizes. A university without adequate funding would be forced to offset its higher faculty costs by increasing class sizes and devolving teaching to lower paid or part time staff. OUC appears to be moving away from this structure, and under "regularisation" most sessional lecturers and part time staff will be converted to regular staff. Without a major change in OUC's philosophy, only if the province is prepared to shoulder the burden of higher staff costs would more student places, or better teaching, be available.

By looking at the experience in the North we can obtain some idea of the probable impact on Provincial budget costs were the Province to split OUC into a college and a university without any significant expansion of the student body. The two institutions in Prince George, UNBC and CNC, together serve some 4,700 students[64] or about 4,050 FTE (valuing part time at 50 percent of full time) at a Provincial budget cost of some $56 million,[65] or perhaps $13,800 per student. OUC served a slightly larger population of about 4,700 FTE at a provincial budget cost of $43.3 million, or $9,200 per student. Admittedly this disparity may not last, and certainly there is a clear expectation UNBC's cost per student will decrease; for example, UNBC faculty teach an average of only 14.9 students, versus an average for the system of 18.8,[66] and this ratio might be expected to rise as UNBC matures (on the other hand, UNBC's lower average faculty rank will certainly rise over time, increasing costs). As well, UNBC's role of service to the North accounts for extra costs that would not apply in the Okanagan. In the long run, however, we could expect to see some cost penalty in providing university places versus university college places.

Costs of a university growing out of a split would be affected by the status of academic subject teachers at OUC as members of a labour union, the OUC Faculty Association. As such, they could make a very strong argument for successor rights under the Labour Relations Code. Under present legislation a new university occupying the buildings now used by OUC would almost certainly be obliged to continue to provide employment to existing teaching staff.

As we have seen, there are fundamental differences between the types of faculty and faculty culture found in a research oriented university compared to those characteristic of a teaching institution, which has been the primary (although not the only) role of OUC to date. The new university, facing the challenge of establishing itself as a desirable place to teach or study, would undoubtedly follow other traditional universities in working to achieve excellence in research, where "excellence" is defined by academic peers in each field of study. Such an effort

would be seriously restricted by the presence of a body of faculty hired under quite different standards to meet a quite different set of objectives. At the same time, some of the responsiveness of OUC's current research to the local needs of the region might well be lost in the effort to meet traditional academic standards of research, which as we have noted are based on review by academic peers, not on local opinions of the research's practical value.

Probably the new university would wish to abandon the present compressed pay scales and single-rank faculty systems, at the top end to allow faculty members with proven academic research records to be attracted, at the bottom end to allow budget constraints to be met. The immediate issue, of course, would be treatment of the existing faculty. Adoption of a pay scale that resulted in most or all existing professors moving to typical B.C. university pay scales for middle or higher ranks would be very expensive, and would create enormous pressure on the other university colleges, which have faculty hired under the approximately same original conditions as OUC's.

Increasing pay scales to reflect university practices is unlikely to be sufficient to meet a new university's research objectives in the short term, however, given the continuation of existing faculty. The reputation of a university department tends to change slowly over time in any event,[67] and certainly under the existing union contract at OUC the faculty of a department plays so large a role in hiring, tenure and promotion decisions that the research standards and objectives of existing faculty are the major determinant of the qualities of additions to the faculty. A department starting off with a staff hired under different expectations, and perhaps with different goals, from those of a traditional research university will be slow to evolve towards the standard that the Provincial funders will feel is needed by a university. There may indeed be a perception, both locally and provincially, that the new university is not much different from the existing university college, except that the staff are paid more. Both those who expect a high standard of research, as traditionally defined, and those who expect more locally-oriented research, may be disappointed.

More important, a split may also create problems for potential students. Students who had gained admission to academic programs at OUC under the present open admissions policy might normally not be successful in gaining admission to the new university, which undoubtedly would have a competitive admissions policy and which would wish to maintain high standards among its graduates. In all probability those enrolled at the time of a split would receive some special consideration to allow them the possibility of completing their

degrees. As those students graduate or drop out, however, the limited capacity of the new university will be allocated to those applicants considered best able to benefit from university training. A third of UNBC students are from outside the North, and assuming a similar situation develops here (Kelowna is at least as attractive a destination as Prince George) the educational opportunities available to local students whose qualifications are not high may actually *decrease*.

Option 3: Let OUC evolve to meet the needs of the region

OUC has already begun to evolve into an institution that can provide the region with the benefits of a research university. OUC has demonstrated sufficient research capacity to have been accepted as a member of the Association of Universities and Colleges in Canada (AUCC) and to have been recognised by the major granting councils, such as the Medical Research Council (MRC), Natural Science and Engineering Research Council (NSERC), National Health Research Development Program (NHRDP) and Social Sciences and Humanities Research Council (SSHRC).[68] OUC attracts in the order of $1 million in outside funding per year,[69] and as we have seen provides faculty time worth in excess of that amount for research. There is recognition that the Okanagan region, with an expanding population and an economic base that has expanded from tourism, resources and agriculture to include high technology and service industries such as health and education, produces strong regional needs for training and research support. There is recognition too that because of OUC's relative isolation, it has an advantage in carrying out research and forming partnerships in its own region. Areas of research that have been specifically mentioned include forest renewal, gerontology, environmental interactions, health promotion, rural studies, agricultural studies (e.g. viticulture), and First Nations studies.[70]

But in meeting the need for research within the region, OUC should also retain its ability to respond to the vision of the university colleges, which was to increase access to degree programs outside Vancouver and Victoria. OUC has been successful in providing "seamless" educational opportunities and the chance for working students to build diplomas into degrees.[71] To fill its mandate OUC must meet the educational needs of the region in a *cost effective* way, so that opportunities remain available to as many of the young people of the region as possible, with tuition fees kept as low as possible.

This means facing squarely the issues and problems related to the research function that traditional universities face in a time of diminishing funding. The

chief of these issues is the high cost of research faculty and the consequent need to transfer teaching loads to lower paid staff. Rewarding teaching skills when research is a major criterion for tenure and promotion has proved difficult. And the fundamental differences in faculty culture, in the satisfaction of faculty with their own profession and in their attitudes to their students, are issues that must be addressed when an institution considers a shift in its focus. In a small regional university the potential lack of relevance of much research to the region, and to those paying for it, must also be faced.

Some directions OUC might follow (given appropriate Provincial funding and legislation) in responding to the needs of the region are:

•OUC might work towards increasing funding for *directed* research, rather than broadening the base of faculty who are paid for a partial teaching load with the expectation they will do research. The Province, to assist, might consider the model in which research funding bears the cost of faculty salaries for the time spent on research. The traditional Canadian model of funding research has faculty paid by their universities for a full year, with grants funding only out of pocket costs, not research time or laboratory operating costs, so a university adopting this model would require a budgeted pool of discretionary research funds to supplement outside grant funds.

•To economise on the cost of research and library facilities, and to build departments with recognised research capacity, research should be focussed on a manageable range of fields in which OUC has already demonstrated leadership or in which it has the potential to excel. Most of these areas will be those which are of special interest to the region. The success OUC researchers have already had in specific areas can form a logical starting point for building excellence in a limited range of fields.

•Excellence means accepting the challenge of improving quality through competitiveness. OUC is already considering expanding the process of allowing students to compete for entry to classes. A wider faculty salary grid may be needed to reward existing staff who have demonstrated exceptional research skills as well as to attract high quality staff from outside. Merit in research as well as teaching should normally be required of those attaining high ranking positions. Major changes in the current union agreement will be needed.

•As it develops areas of research excellence, OUC should recognise that its major role remains to increase the availability of higher education in the region,

and that the needs of the region are not the same as those of the southwest of the province. Access to higher education, and the level of educational attainment, are lower in the Okanagan than in that part of the province, so undergraduate teaching should remain a major priority here. The majority of professors will not obtain research funding, perhaps because they are teaching in areas that are not research priorities, and these teachers should assume full normal course loads and be evaluated on their teaching skills. The institution should be aware and sensitive that no perfect resolution to the problem of recognising, evaluating and rewarding teaching skills has yet been devised.

•Innovation in teaching and the use of new technology should be accepted as the norm.

•OUC should create graduate programs cautiously, beginning in those areas where there is either (1) a strategic plan to build a strong, research oriented department, or (2) where the educational needs of the region require an expansion of the numbers of graduate degree holders (perhaps, for example, in providing masters degree programs for social and child care workers).[72]

Conclusions

The successful "Northern Crusade"[73] for a new university in Prince George set a pattern that is being consciously followed by some who would see a new university in the Okanagan. Now that the Pope has apologised for the grievous harm visited on the innocent inhabitants of Palestine by the original Crusaders, it is perhaps worth reflecting that although the Crusades, supported by the treasure and enthusiasm of the people of western Europe, were indeed initially successful, after not much more than a hundred years maintaining the conquests proved too costly, and little remains beyond the ruins of the magnificent and expensive castles built in the first flush of enthusiasm. The uncritical acceptance of a symbolic goal is not always the best way to achieve a complex long-term objective.

Of the options considered above, the splitting of the existing OUC into a university and a college, without a significant expansion of capacity, would appear to have least to recommend it. Practical considerations, and the Province's labour laws, suggest that most of the existing faculty would remain in place, but pay scales would probably increase and teaching loads would decline to provide time for research (although to date many staff members have not been hired or promoted on the basis of proven research records). Budget constraints would require the teaching loads they have shed to be shouldered by a new body of lower

paid sessional or part time lecturers. Library spending would be spread among a range of faculty subject needs, such that no subject could be covered at a high level. Most important, the young people of the region (except those with excellent qualifications) might have no better opportunities than now available to them.

The creation of a new university at a new site would have costs similar to those at UNBC, but if the Province were prepared (unlikely as this may now appear) to fund such a venture adequately, without reducing funding to OUC, some considerable benefits would accrue to the region. The duplication of physical facilities might well be perceived as wasteful, and could be avoided by the alternative of building adjacent to OUC, but there would remain duplication of administrative staff, classrooms, and indeed teaching skills (many subjects would be taught at both schools). There would undoubtedly be budget, public and student pressure for two institutions side-by-side to work together to eliminate as much wasteful duplication as possible.

This in turn suggests that a more sensible way to move towards an institution producing the research effort of a university, but taking advantage of the facilities and teaching strengths of OUC, would be to mandate, and to fund, OUC to carry out the most essential university roles in areas chosen to best meet the needs of the community.

Notes

[1]Provincial Access Committee, "Access to advanced education and job training in British Columbia."

[2]Ministry of Advanced Education, Training and Technology, "Forces of change influencing education and training", September 1991.

[3]Advanced Education Council of British Columbia, Access Task Force, "Access for equity and opportunity in the British Columbia college/institute/agency system: the need for a long term commitment as an investment in the present and future", August 1992.

[4]Cited in *Caught in a Crunch*, OUC Institutional Research.

[5]StatCan Daily, "University Enrolment", Stats Can web site at http://www.statcan.ca for March 9, 2000 *and* population statistics for 1998 at Statcan.ca/english/Pgdb/People/Population/demo02.htm. Statistics Canada staff indicate that the university colleges are excluded from the university enrolment statistics simply because they were formerly excluded as two year colleges and Statistics Canada has not yet undertaken the task of revising the data base. This job would require allocating university college staff and facilities, as well as students, between degree-granting and certificate–granting functions. .

[6]See, for example, Allan, Robert, "Standing room only/the case for expanding B.C.'s universities", Canadian Centre for Policy Alternatives, January 1998.

[7]Source: OUC, "The Road Ahead", quoted at web site of "University 2000", www.Okanaganuniversity.net.

[8]Robert Fine, Executive Director of the Central Okanagan's Economic Development Commission, indicates that firms searching for prospective expansion sites frequently ask whether the area has a university. Private conversation, March 2000.

[9]Jordan, S. M. & Layzell, D. T., "A case study of faculty workload issues in Arizona: implications for state higher education policy" (Denver, State Higher Education Executive Officers, 1992) quoted in Soliman, Izabel; Soliman, Hani, "Academic Workload and Quality", *Assessment & Evaluation in Higher Education*, June 1997, Vol. 22, Issue 2.

[10]Altbach, P. G., "Carnegie survey of the international academic profession, in problems and possibilities: the U.S. academic profession, studies in higher education," 20(1), 1995 quoted in Soliman, Izabel; Soliman, Hani, "Academic Workload and Quality", *Assessment & Evaluation in Higher Education*, June 1997, Vol. 22, Issue 2.

[11]Moore, K. M. & Gardner, P. D. , "Faculty in a time of change: job satisfaction and career mobility" (East Lansing, Collegiate Employment Research Institute, Michigan State University, 1992) quoted in Soliman, Izabel; Soliman, Hani, *Academic Workload and Quality Assessment & Evaluation in Higher Education*, June 1997, Vol. 22, Issue 2.

[12]The OUC contract not only defines research ("scholarly activity") but specifies that the time commitment for those with research responsibilities represents 25 percent of the maximum teaching load. Thus according to the contract "...the scheduled instructional load for a full-time college professor shall not exceed ....a maximum of 16 hours per week of direct instruction... The scheduled instructional load for a full-time college professor assigned to a degree completion instructional position, or whose teaching assignment includes at least one third and/or fourth-year course... shall not exceed... a maximum of 12 hours per week of direct instruction... A college professor assigned to a degree completion instructional position, or whose teaching

assignment includes at least one third and/or fourth year course... shall engage in scholarly activity... Scholarly activity shall be understood to include continuing mastery of one's field of knowledge, awareness of current scholarship in one's own field, involvement in basic research and development, and professional or creative activity. Basic research has as its purpose contributing to the expansion of knowledge and the sharing of that knowledge through publication or other appropriate professional means. Development involves the examination of the implications of basic research and their practical application.". Collective Agreement between , Okanagan University College and Okanagan University College Faculty Association, July 1, 1995 to March 31, 1998, Articles 14, 17 .

[13]In 1995/96 average full time faculty salaries at UBC, SFU, and UVic were $79,352, $80,320 and $74,700, respectively. Source: Statistics Canada

[14] U.S. Department of Education, National Center for Education Statistics, Digest of Education Statistics, NCES 98-015,1997, Table 225, p. 239, cited in McPherson, Michael S.; Schapiro, Morton Owen, "Tenure issues in higher education", *Journal of Economic Perspectives*, Winter 1999, Vol. 13, Issue 1.

[15]Gibbs, G., "Who shall teach the teachers?", Managing HE, 3, 1996, cited in Lueddeke, George R, "Training postgraduates for teaching: Considerations for programme planning and development ", *Teaching in higher education*, June 1997, Vol. 2, Issue 2.

[16]Canadian Federation of Students, "The quality of post secondary education in British Columbia", March 1988.

[17]Some research [Banachowski, Grace, "ERIC review--perspectives and perceptions: the use of part-time faculty in community colleges", *Community College Review*, Fall 1996, Vol. 24, Issue 2,] does support the contention that using part-time faculty leads to differentiated teaching services, and appears to conclude that part-timers are less effective teachers than are full-timers. Statistics collected from reading and writing examinations given at Los Angeles Valley College show that students taught by part-timers do not perform as well as students taught by full-timers [Spangler, M.S., "Part-time faculty: Recognizing an unprotected minority", Position Paper 120, 1990 (ERIC Clearinghouse on Higher Education, ERIC Document Reproduction Service No. ED 321 793). This and others in this note are as cited in Banachowski]. But other work concludes that there are virtually no differences in quality of instruction delivered by part- and full-time faculty. One [Sworder, S., "Determination of the effect of an instructor's employment status (full-time or part-time) on the decision of students to enroll" (Ed. D. Practicum, Nova University, 1987 (ERIC Document Reproduction Service No. ED 277 408)], for example, conducted a study at Saddleback College to compare student preference levels for full-time instructors with those for part-time instructors. "Though the guiding purpose of his study was not to compare the delivery of instruction by full-timers to that of part-timers, he found that there was no question that the latter provided a quality of instruction equal to the former. Further, the results of a study conducted by the Chancellor's Office of the California Community Colleges [(ERIC Document Reproduction Service No. ED 278 449), California Community Colleges; Office of the Chancellor, 1987] to examine current policies and practices regarding the use of part-time faculty in the California system, faculty characteristics, implications for instructional quality, and policy options revealed that evidence regarding differences in the quality of instruction provided by full-and part-time faculty was inconclusive" [Banachowski]. "At Pima Community College a study was conducted to compare the characteristics of full- and part-time faculty. Student grades were examined to determine whether being taught by a full- or part-time faculty member affected student success. Major findings revealed that there were no differences in student success rates for full- and part-time faculty in general" r , [Banachowsik citing Iadevaia, D.G.,"A comparison of full-time to part-time faculty and full-time to part-time science faculty in terms of student success at Pima Community College", Ed.D. Major Applied Research Project, Nova University, 1991 (ERIC Document Reproduction Service No. ED 339 403)]. Bolge [Bolge, R. D.," Examination of student learning as a function of instructor status (full-time versus part-time) at Mercer County Community College", Mercer Community College, Trenton NJ, 1995 (ERIC Document Reproduction Service No. ED 382 241)] "confirmed these findings. Based on students' pre- and post-test scores on the mathematics subtest of the New Jersey

College Basic Skills Placement Test (NJCBSPT) at Mercer County Community College in Trenton, New Jersey, he found no significant difference in student learning based on whether they were taught by full- or part-time faculty. [cited in Banachowski]..

[18]Hannon, Charles, "Teaching the conflicts as a temporary instructor", *College Literature,* June 1997, Vol. 24, Issue 2.

[19]This is the case at UVic.

[20]About $140 million at UBC and $20 million or more each at UVic and SFU. Source: combined statement of Revenue and Expenditure, fiscal year 1996/97. Revenues for sponsored research were about $179.0 million, expenditures about $181.4 million.

[21]Total of general operating fund and specific purposes fund spending on faculty salaries, plus benefits for faculty estimated using salary ratio. Source: Combined statements of UBC, SFU, UVic and UNBC, year ended March 31, 1997.

[22]1997/98 funded FTE for UBC, SFU, UVic and UNBC, Universities and Institutes Branch.

[23]Moore, David S.; Cobb, George W., "Statistics education fin de siecle", *American Statistician*, Vol. 49, Issue 3 (August 1995).

[24]Edgerton, Russell, "The re-examination of faculty priorities", *Change*, July/August 1993, Vol. 25, Issue 4.

[25]Mcinnis, Craig, " Academics and professional administrators in Australian universities: dissolving boundaries and new tensions", *Journal of Higher Education Policy & Management*, November 1998, Vol. 20, Issue 2.

[26]Moses, I., ""Tensions and tendencies in the management of quality and autonomy in Australian higher education," *Australian Universities' Review* 38.(1995). Cited in Taylor, Tony; Gough, John; Bundrock, Valerie; Winter, Richard, "A bleak outlook: academic staff perceptions of changes in core activities in Australian higher education, 1991-96", *Studies in Higher Education*, October 1998, Vol. 23, Issue 3.

[27]Edgerton, Russell, "The re-examination of faculty priorities", *Change*, July/August 1993, Vol. 25, Issue 4.

[28]Loque, Dennis L., Comment: " Some observations on the significance of the research requirements in academia", *Financial Practice & Education*, Spring/Summer 1991, Vol. 1, Issue 1.

[29]Waddock, Sandra A., "Paradigm shift: toward a community-university community of practice", X*International Journal of Organizational Analysis*, July 1999, Vol. 7, Issue 3.

[30]"President Donald Kennedy's address on April 5, 1990 to the Stanford faculty, billed as a "vision for Stanford's second century." cited in Edgerton, Russell, "The re-examination of faculty priorities", Î*Change*, July/August 1993, Vol. 25, Issue 4"

[31]Neumann, R, " The teaching-research nexus: applying a framework to university students' learning experiences", *European Journal of Education* 29, 1994. Cited in Jenkins, Alan; Blackman, Tim; et al, "Teaching and research: student perspectives and policy implications, Teaching college students; teacher-student relationships", *Studies in Higher Education*, June 1998, Vol. 23, Issue 2.

[32]Jenkins, Alan; Blackman, Tim; et al, "Teaching and research: student perspectives and policy implications", *Studies in Higher Education*, June 1998, Vol. 23, Issue 2.

[33]Astin, A.W. & Chang, M.J., "Colleges that emphasise research and teaching: can you have your cake and eat it too?" *Change*, 27(5) (1995), cited in Jenkins, Alan; Blackman, Tim; et al, "Teaching and research: student perspectives and policy implications", *Studies in Higher Education* (June 1998), Vol. 23 Issue 2.

[34]Terenzini, P.T. & Pascarella, E.T., "Living with myths: undergraduate education in America", *Change*, 26(1), January/February, 1994. Cited in Jenkins, Alan; Blackman, Tim; et al, "Teaching and research: student perspectives and policy implication", *Studies in Higher Education*, June 1998, Vol. 23, Issue 2.

[35]Ibid., p. 30.

[36]Ibid., p.30.

[37]Astin, AlexanderW., "What matters in college? Four critical years revisited" (San Francisco, CA, Jossey-Bass) 1993. Cited in Jenkins, Alan; Blackman, Tim; et al., "Teaching and research: student perspectives and policy implications", *Studies in Higher Education,* June 1998, Vol. 23, Issue 2.

[38]Jenkins, Alan; Blackman, Tim; et al.,"Teaching college students; teacher-student relationships", *Studies in Higher Education*, reported in "Teaching and research: student perspectives and policy implications", June 1998, Vol. 2,3 Issue 2.

[39] Edgerton, Russell, "The re-examination of faculty priorities", *Change*, July/August 1993, Vol. 25, Issue 4:

[40]Karl Pister, report of June 1991, cited in Edgerton, Russell, "The re-examination of faculty priorities", *Change*, July/August 1993, Vol. 25, Issue 4.

[41]James Fairweather, Article in *Change*, July/August 1993, Vol. 25, Issue 4.

[42]Edgerton, Russell, "The re-examination of faculty priorities", *Change*, July/August 1993, Vol. 25, Issue 4.

[43]Taylor, Tony; Gough, John; Bundrock, Valerie; Winter, Richard, "A bleak outlook: academic staff perceptions of changes in core activities in Australian higher education, 1991-96", *Studies in Higher Education* , October 1998, Vol. 23, Issue 3.

[44]McCollow, J. & Lingard, B., "Changing discourses and practices of academic work", (Australian Universities' Review 39, 1996), as quoted in Taylor, Tony; Gough, John; Bundrock, Valerie; Winter, Richard, "A bleak outlook: academic staff perceptions of changes in core activities in Australian higher education, 1991-96," *Studies in Higher Education*, October 1998, Vol. 23, Issue 3.

[45]Moses, I., "Redefining academic roles in support of teaching", 1997. Sharpham, J. & Harman, G. (Eds), "Australia's future universities" (Armidale, University of New England Press, p. 188). Quoted in Taylor, Tony; Gough, John; Bundrock, Valerie Winter, Richard, "A bleak outlook: academic staff perceptions of changes in core activities in Australian higher education, 1991-96", *Studies in Higher Education*, October 1998, Vol. 23, Issue 3.

[46]President Donald Kennedy's address on April 5, 1990, to the Stanford faculty, billed as a "vision for Stanford's second century," quoted in Edgerton, Russell, "The re-examination of faculty priorities", *Change*, July/August 1993, Vol. 25, Issue 4.

[47]Boyer Commission Report on Education Undergraduates in the Research University, November, 1998. The entire report is available at http://notes.sunysb.edu/pres/boyer.nsf/webform/contents.

[48]Moore, David S.; Cobb, George W, "Statistics education fin de siecle", *American Statistician*, August 1995, Vol. 49, Issue 3.

[49]Boyer Commission Report on Education Undergraduates in the Research University, November, 1998. The entire report is available at http://notes.sunysb.edu/pres/boyer.nsf/webform/contents.

[50]It is intended that UNBC will also come under the Universities Act in the fairly near future, say Ministry sources.

[51]UNBC annual statements for year ended March 31, 1999.

[52]Annual statements for fiscal year ended March 31, 1999.

[53]The OUC contract allows department heads 1 hour per week of instruction relief for the first 4 department members and 0.2 hours for additional members. Collective Agreement between Okanagan University College and Okanagan University College Faculty Association, July 1, 1995 to March 31, 1998, Article 18.05.

[54]While it is hard to forecast what impact the difference between administration-driven and faculty-driven organisations would emerge, a recent Australian study McInnis, Craig, "Academics and professional administrators in Australian universities: dissolving boundaries and new tensions", *Journal of Higher Education Policy & Management*, November 1998, Vol. 20, Issue 2, that reports on the results of a survey of academics and professional university administrators (e.g. department and laboratory managers, policy analysts, human resource professionals, and registrars) in Australia about the perceptions of their work practices may be useful. It is clear that there are marked differences of view between academics and administrators, and they often disagree. For example: Administrators were considerably more positive about their universities than were academics, and also indicated a greater sense of belonging at their institution; administrators were markedly more optimistic in their perceptions of morale and work atmosphere; the administrators appear considerably more positive about the social climate in which they worked, with 71% reporting a friendly atmosphere; a notably higher proportion of administrators (69%) than academics (57%) were positive about the community image of their university. There were strong contrasts in the ratings of level of satisfaction with the academic standing of the university: 72% of administrators were satisfied as against 51% of the academics.

[55]See also, for example, Marginson, S., "The limits of market reform: positional competition in Australian higher education", 1997 in Sharpham, J. & Harman, G. (Eds) "*Australia's Future Universities*", (Armidale, University of New England Press), cited in Taylor, Tony; Gough, John; Bundrock, Valerie; Winter, Richard, "A bleak outlook: academic staff perceptions of changes in core activities in Australian higher education", 1991-96, *Studies in Higher Education.*

[56]See "Community colleges: A sector with a clear purpose", May/June 1990, Vol. 22, Issue 3 and "Are liberal arts colleges really different?", *Change*, March/April 1990, Vol. 22, Issue 2.

[57]"Community colleges: A sector with a clear purpose", *Change*, May/June 1990, Vol. 22, Issue 3.

[58]"Are liberal arts colleges really different?", *Change*, March/April 1990, Vol. 22, Issue 2.

[59] "Community colleges: A sector with a clear purpose", *Change*, May/June 1990, Vol. 22 Issue 3.

[60]"Are liberal arts colleges really different?", *Change*, March/April 1990, Vol. 22, Issue 2.

[61]"Are liberal arts colleges really different?", *Change*, March/April 1990, Vol. 22 Issue 2.

[62]The figures shown are approximate 1999-2000 ceiling faculty salaries at Simon Fraser University and at OUC, respectively. AUCC, *Results of the Faculty Remuneration Study*, May 1999.

[63]Source: Table 10, "TUDBASE" tables at website of The University Presidents Council of B.C., found at www.inst.uvic.ca/tupc.html. Figures are for 1996/97, because figures for UNBC are not available for 1997/98.?

[64]1995/96, part and full time. Ministry data on enrolments is available at the Ministry website at www.aett.gov.bc/enrollments/enrl9596/….

[65]Public Accounts 1998/99: *Detailed Spending*.

[66]Source: Table 12, "TUDBASE" tables at website of The University Presidents Council of B.C., found at www.inst.uvic.ca/tupc.html.

[67]See, for example, Baldi, Stephane,"Departmental quality ratings and visibility: The advantages of size and age", *American Sociologist*, Spring 1997, Vol. 28 Issue 1

[68]Report of the Ad Hoc Committee on Research "Research Development and Enhancement Plan", OUC.

[69]This is an approximation. Grants are often for multiple year periods, so it is difficult to estimate the amount of grants applicable to each year

[70]Report of the Ad Hoc Committee on Research "Research Development and Enhancement Plan", ZOUC.

[71]Tom Landecker, letter "OUC is doing it right", *Okanagan Saturday*, April 1, 2000

[72]Howard Petch, report on university colleges, 1998, cited in OUC, *The Road Ahead: Critical Issues for OUC.*

[73]This is the title of Charles McCaffray's account of the creation of UNBC.