

Executive Summary

Introduction

This review was commissioned by Suzanne T. Ortega, Vice Provost and Dean of the Graduate School, and Melissa Austin, Associate Dean for Academic Programs. The program review site visit was conducted on February 16 and 17, 2006, at the IAS program facilities on the campus of the University of Washington, Tacoma. The review committee consisted of David Allen UWS (chair), Jamie Mayerfeld UWS, Marcy Stein UWT, Daniel Lerner (Western Washington University) and Will Focht (Oklahoma State University). It was ably staffed by Augustine McCaffery.

Strengths

The IAS program, the heart of UWT, is a strong and innovative program that has accomplished much in its young history and with limited resources. Building an interdisciplinary faculty and curriculum, and serving students in it well, is an exceptional challenge that requires courage, foresight, and creativity. The leadership of the program is commended for getting the program off the ground on a solid footing. The students, current and past, are without exception, very satisfied with the program. Staff is dedicated to its success. The personnel within the IAS by and large “get” the meaning of interdisciplinarity. This alone is quite an accomplishment.

The IAS curriculum is in excellent shape: The courses are thoroughly grounded in contemporary scholarship, interdisciplinary thought and innovative pedagogy. Given its relatively brief history, it appears that graduates are well prepared for the positions they obtain after completing the programs.

The Environmental Science program within IAS is also off to a good start and has accomplished a great deal given its young age and limited resources. It has excelled in teaching, has a dedicated and enthusiastic faculty, has modern facilities, and has instituted several innovative research, outreach, field, laboratory, and certificate programs.

The Master of Arts in Interdisciplinary Studies (MAIS) is also off to an excellent beginning. We found the curriculum to be excitingly conceptualized and satisfactorily implemented. This solid base is perhaps threatened by insufficient staffing.

Areas of Concern

The program now faces new challenges, which require new approaches and solutions. Rapid growth, transition to a four-year campus, and new leadership present new opportunities for maturation. The most important challenges relating to interdisciplinarity and the environmental science program are:

- The governance and decision making structures are undermining faculty morale and are inefficient.
- Commitment to diversifying faculty and staff and even the value of interdisciplinarity are undermined by current practices of recruitment.
- The merit, promotion and tenure processes—as well as annual reviews—are not well integrated with the mission and work of IAS.

- The proposed reorganization of IAS into three divisions along disciplinary lines (humanities, social science, natural science) may threaten its greatest asset: interdisciplinary collaboration
- Additional staff and faculty are needed to accommodate increasing student demand
- The natural sciences are under-represented in the IAS and environmental science curriculum
- Recommendations for Improvement
- Clarifying and strengthening governance, decision making and communication are critical to securing the current gains of this remarkable program and positioning it for the future.
- The reward system (merit, promotion, tenure) needs to be more individualized, more collaborative, more transparent and better tailored to the actual demands of a growing, innovative and interdisciplinary program.
- Implementing a more coherent and state-of-the-art recruitment process that sustains the focus on diversity and interdisciplinarity.
- More reflection on the meaning of and commitment to interdisciplinarity should be encouraged to reach a shared vision; this vision then should be carefully articulated, reinforced and marketed
- While the reorganization of IAS into divisions is justified, the reorganization should not occur along disciplinary lines but rather along thematic or problem lines
- More should be done to incorporate natural science, social science, humanities, and fine arts into more courses throughout the curriculum
- Faculty and Staff resources should be increased to accommodate increasing student and faculty demands

Recommendation for Continuation

We recommend that all three programs be continued for ten years. Because their success hinges on critical organizational and governance factors, we recommend an administrative review be conducted in five years.

Outline:

The strength of this program has been its rapid and innovative growth. Sustaining and deepening a program, however, requires different emphases and perhaps a reallocation of talents and responsibilities. Thus we have focused the opening sections of our report on a thematic analysis of (a) Governance and Decision Making, (b) Appointment, Promotion and Tenure, (c) Resource needs, (d) Workload, (e) Diversity. A discussion of ways of thinking about “interdisciplinarity” is followed by attention to the (f) Environmental Science and (g) the Master of Arts in Interdisciplinary Studies. We conclude with a brief summary of our conversations with students and alumni.

Governance and decision making

The growth of IAS has out-stripped the decision making processes and governance structures that served it well in early, start up conditions. We noted a number of themes that warrant attention:

Planning processes that separate program-development from resource allocation.

People with budgetary and resource knowledge often enter late in the development process or, worse yet, after the program is fully articulated. This results in both inefficiencies due to extensive revisions but also bad feelings when decision makers feel ‘under cut’ by budgetary conditions that weren’t articulated initially. At a more quotidian level, the allocation of staff time seemed to be made without much consultation on its effect upon faculty and from our perspective led to an inefficient use of faculty resources on clerical tasks. Examples of program planning without adequate integration of budgetary information may include Environmental Science with no labs; Broadcasting/communication with no production equipment; studio arts without space

Communication versus deliberation versus decision making.

Meetings can potentially serve all these goals, but rarely simultaneously. Current program meetings seems to be serving none well. The large size of the program meeting is now seen as ‘the problem’ for which the new divisional structure is one ‘solution.’ For a host of reasons, we question both the nature of the solution (e.g. the current form the divisions are expected to take) and its utility—that is, the likelihood it will solve these problems. For one thing, larger units than IAS can function as effective groups and decision makers; for another, if resources follow structure (that is, if resources are allocated to these divisions—FTE’s, faculty lines, courses, staff) then the innovative, interdisciplinary nature of the programs will be threatened. If resources are not allocated to divisions, current communication and morale problems will be exacerbated.

The lack of transparency is undermining collegiality—both toward the director and within “in” and “out” groups among the staff. The budgetary process, in particular, was poorly understood by many faculty—even those with significant coordination roles.

Unclear attribution of authority: Even among very senior faculty, there was a frequently-articulated sense of “being done to” by “them.” The “them” varied and was difficult to pin down (the director, the “in-group” of faculty aligned with the Director, one of the many chancellors, the Legislature, the Seattle bogeyman). This is linked to both the lack of transparency (above) and the inadequate decision making/meeting process (below).

Examples include the decision to create a “psychology” major or one in ‘communications.’ Many people expressed the view that they are “too reactive” and ‘overly responsive’ which leads to poor decisions or, at best, a thin level of commitment.

At a different organizational level, there seems to be no way to make the centralized student recruiting staff accountable to their ‘customers’ in IAS. Consequently internal resources (inadequate as they are) had to be diverted to recruitment, especially for students of color. Another, campus-wide issue concerned the grant submission process—which seemed at least to require clarification and quite possibly streamlining but faculty had no sense of where such decisions might be made and how they might be influenced. The process of agenda-development is either unclear or highly centralized, so a) issues important to some people are never addressed and b) faculty and staff are unclear how to influence the agenda except through personal lobbying of the Director. The decision to inhibit faculty from “replying to all” on emails from the director to all faculty and to force them to either laboriously copy addresses or reply only to the director further undermines both collegiality and communication.

Agendas are too tightly packed.

Time is spent on “communicating” (announcing) that might better be handled through email; too many items result in many faculty believing they have been ‘railroaded’ into forced votes.

Deliberation.

Almost no time is devoted to extended discussions that aren’t necessarily out-come oriented (e.g. diversity is never ‘solved’; missions need frequent revisiting as both members and external conditions evolve). “Retreats” best serve this function.

Format and process

The large program-meeting is unlikely to be successful unless supported by more formal processes for gathering input and preparing for deliberation. While there is a large cadre of (talented and devoted) part-time lecturers, they are apparently excluded from IAS faculty meetings.. Despite the (relatively) small size of this program, we heard repeated articulations of marginalization and under-representation from many quarters.

A governance process that includes different constituencies (e.g. staff, lecturers, tenured and untenured, etc) and representatives who are, and are seen as, accountable to those constituencies could supplement or replace the large program meeting and generate better decision making.

“There’s no time”—an oft-repeated refrain and an all- purpose excuse. A careful re-examination of class schedules should permit adequate, supported meeting times (and not squeezed in the lunch hour). People are so committed to this narrative of ‘no time,’ and, at least it appeared to us, so committed to resisting suggestions, that this, too, might be an area (schedule construction) in which outside consultation might be useful.

Best-practices

Communication, coordination and decision-making practices need radical reformulation to meet current needs and conditions. This is an area in which outside consultation might

be helpful—in no small part because of the need to be seen as fairly neutral as well as to raise possibilities that are difficult to imagine within current constraints.

Appointment, promotion and tenure issues:

Three major themes permeated our conversations: criteria, communication and transparency. Although the APT process traditionally engenders anxiety and paranoia, these were heightened (and perhaps justifiably so) by a lack of clarity on many levels.

Criteria

As far as we were able to determine, UWT and its programs have the autonomy and opportunity to craft a set of criteria (and associated evidence) tailored to their unique situation. Yet this is a domain in which the sense of ‘victimization’ was palpable and the attribution unreliable. Often it was assumed that the Seattle campus was responsible; at other times it was local decision makers from review committees to chancellors.

One of the most obvious areas concerned the vague domain of ‘service.’ Typically, this category is used for governance responsibilities (e.g. committees, community boards) and local festivities. But at least in conversation with us, faculty included curriculum and course development, thereby denying the impressive scholarship and creativity that is the heart of ‘inter-disciplinarity.’ Because the scholarly dimensions of curriculum creation and development are vital, “Contributions to Curriculum” should be considered to be a part of both the “Teaching” and the “Scholarship” criteria for ATP.

Creating collaborative courses and, indeed, entire programs of study, shouldn’t be lumped in with planning Thanksgiving festivities.

Flexibility

Interdisciplinarity and institution-building demand much of faculty and staff. Yet at least in our discussions, there was an assumption that there was only one way to be successful at UWT and IAS. This was articulated in the traditional parlance of publication. If the “light and lively” (an apt phrase used by one of the “gray beards”) quality of your institution is to be sustained, an annual process of negotiating with individual faculty their areas of emphasis (linked to merit and promotion) might be useful.

As your cadre of associate professors approach (or are past) the point of promotion, suitably tailored criteria and flexible allocations of emphasis will be extremely important. One philosophic question you’ll need to address is whether promotion to professor should be expected and ‘routine’ recognition of quality contributions or whether it should be reserved for “star status.” Even in our brief conversations, it was clear there’s a range of opinions about this. Consultation with other interdisciplinary programs may be helpful.

Communication

Uneven and contradictory communication exacerbates an already fraught process of pursuing tenure and promotion. Tenured faculty themselves disagree about what is or should be required and they communicate their individual perspectives to the people they “mentor” (e.g. how many books are “required” and even what sorts of publishers “count”).

One example where there was uncertainty (and the uncertainty may reflect either a lack of clarity or a lack of communication) concerned external review letters and the annual, third-year and tenure reviews. The perception is that a ‘bad’ letter could trump a record of positive internal evaluation and the criteria for what constitutes a ‘peer’ reviewer was often articulated within traditional disciplinary frameworks (e.g. a ‘sociologist’). The annual reviews should almost always predict the outcome of tenure and promotion. Currently, they appear to some to be too general, insufficiently attentive to scholarly issues and insufficiently linked to the IAS missions.

Transparency

Transparency was an issue within APT as it was throughout the organization. The process and criteria for assessing and assigning workload was widely perceived as unclear and (perhaps therefore) unfair. An example concerned the heavy ‘service’ requirements. While on the one hand, there have been efforts to reduce this for untenured faculty (with frequent griping about lack of gratitude or appreciation by their seniors), on the other hand, untenured faculty are frequently approached by the Director and/or senior faculty (who may vote on their promotion) and “asked” to take on responsibilities. Many were unwilling to risk “saying no” to such requests even in the face of advice and rhetoric about doing so.

Until and unless more trust and transparency is established, consider establishing a ‘maximum’ service policy to protect junior faculty. Both transparency and communication can be enhanced by establishing a more collegial process of sharing materials from previously successful promotions. Such sharing is often discouraged with statements about ‘individual cases’ and ‘no guarantees’ about predictability but the effect is increased anxiety and distrust.

An excellent resource that reviews efforts to better tailor scholarship to the missions and nature of specific institutions is O’Mera K. and RE Rice (eds) *Faculty priorities reconsidered* (San Francisco: Jossey-Bass, 2005).

Expectations of Faculty

IAS should collaborative develop clearer statements of expectation vis-à-vis teaching, community outreach, course development, institution building, professional service, grantsmanship, publications and presentations, and rewards tied to meeting these expectations. One way to accomplish this is through negotiation of individualized appraisal and development (A&D) plans. These plans are used in annual performance reviews and to guide continued development of the faculty member. To increase flexibility to changing needs and interests, the plans can be renegotiated from year to year.

Mixes of research, instruction, and service (RIS) can be tailored to each faculty member’s capacity and interest (everyone should contribute to all three areas, however) in the A&D plans. For example, for exemplary teachers who are less focused on research, a 10-60-30 RIS mix may be appropriate. On the other hand, a strong researcher could be accorded a 50-30-20 RIS mix. In the negotiations, administrators must assure that the collection of A&D plans within a unit meets all program requirements (i.e., all research commitments are satisfied, all courses are covered, and all service obligations are met).

Moreover, requests for external review letters must be carefully worded so that the reviews are relevant to the expectations of performance outlined in the A&D plans. Many reviewers may not be familiar with interdisciplinarity and none can be expected to be familiar with the individualized performance expectations. Failure to provide evaluation criteria can motivate faculty to focus on traditional disciplinary performance if they believe that is what is expected by external reviewers.

Resources

The IAS faculty and staff have been functioning well with comparatively few resources for quite some time. The IAS staff appears flexible and able to multi-task, everyone assuming various roles within the program as needed. The staff also serves as excellent ambassadors to the IAS program; notably, many of the IAS staff are graduates of the program. However, the need for additional resources is quite obvious.

Staff Resource Needs

Equity Across UWT Programs – Inadequate staffing concerns resonate throughout IAS. As of March 2006, the IAS program enrolled 766 students (717 FTE). The next largest UWT program enrolled 389 students, slightly over half the number of IAS students. Yet that program has nearly 6 staff members while IAS has 8 staff members – not including the staff member recently hired for the new Global Honors program. These data, along with faculty and staff reports, support the observation that IAS is greatly understaffed. The student advising demands alone suggest the need for more staff.

Recruitment and Advising

A specific area of need is student recruitment. Although UWT Student Services personnel engage in recruiting for the entire university, the IAS staff reported a lack of coordination, creativity, and vision among UWT recruiters. The IAS staff, in turn, have assumed the major responsibility for student recruitment despite their small numbers.

Related to general recruitment are issues of recruitment and retention for students of color. In addition to providing more staff for recruiting, resources should be allocated to assisting staff in cultivating a group of “IAS Program Ambassadors” from the existing IAS student population to assist in designing and implementing recruiting activities throughout the communities of south Puget Sound.

Internships - Both faculty and staff highlight the student internship as one of the most valuable learning opportunities available to IAS students. Currently, staff reported that 10-15 percent of students are involved in community based internships. Yet, both faculty and staff report that additional resources are needed to cultivate these internships and then supervise students enrolled in them. In the foreseeable future, the need for staff support for student internships will only increase as new programs are developed, such as psychology. We recommend that the program consider hiring an Internship Coordinator, along with more advising staff, in order to increase and sustain a program of community internships.

Faculty Resource Needs

Assistance with Searches – The IAS faculty is responsible annually for an excessive number of faculty searches as the campus continues to grow. In 2005-2006, faculty

participated in 9 searches. Because of a lack of resources, faculty receive no support from staff in conducting these searches. Faculty report that they have to download applicant files, set up phone and on-site interviews, maintain consistent records, all with little assistance from IAS staff. Clearly, on a campus that is growing exponentially, staff support for faculty searches should be supported.

New Program Resources

This topic was addressed in the section on Governance and Decision Making. In that section, the review committee discusses the apparent discrepancy between those involved in the development of new programs and those involved in resource allocation.

Apparently, new program development occurs routinely without consideration of program cost. (See pages x-x for a more thorough discussion of this topic.)

Community Intellectual Life

Some faculty reported a dearth of activities on campus that would contribute to the development of an intellectual community. More comprehensive support for guest speakers coming to campus is recommended.

Workload

The review committee found that both faculty and staff workloads at IAS are unreasonable. They can be changed, and they should be. In several places we have discussed the urgent need for more staff. The reallocation and redesign of staff workload should precede new hiring.

Under circumstances in which the UWT has had to deal with a series of underfunded or unfunded mandates, and with faculty hiring ongoing at a rapid pace in order to have a lower division program in place this fall, any thought of lightening the current standard of teaching 6 courses per year may seem like dreaming. However, we believe this workload to be unreasonable, and suggest that changing it is urgent business. The reasons are glaring:

1. On top of this six course load, the pressure to do sustained research and to publish continues unabated. Most faculty feel they will be judged by UW Seattle standards in spite of their teaching load, and many younger faculty are unwilling to take the chance that doing less research will be sufficient. Even those who are very worried about finding the time to do any sustained research value their status as UW faculty, and this creates still more tension.
2. The continued demands of institution building, including curriculum planning, new course design, and continuous faculty searches, far exceed anything that faculty at most institutions experience.
3. The lack of resources at UWT in general, and at IAS in particular, mean that expensive talent and precious time is wasted doing necessary chores, like copy duplicating, or printing out applications for faculty positions, or coordinating internships for students.
4. There is evidence that there are equity problems with teaching load across the divisions of UWT.

There is widespread concern across the IAS faculty with the character of the decision-making process with respect to workload. The perception is that there is little transparency, and that it is not clear how workload decisions are made, or where--in IAS, or UWT, or UW Seattle. There is also a widespread perception that decision-making processes within IAS are not democratic, that crucial issues affecting workload, policy and priorities of all kinds are not openly discussed in faculty meetings. The review committee recommends a careful look at increased faculty involvement in planning, workload, and policy decisions as part of an effort to improve efficiency, sustainability, and morale.

The issue of workload also arose amidst discussions of the identity of the UWT and IAS, and what sort of differences ought or ought not to exist between UWT and UW Seattle. This is most vivid in the context of the pressure on faculty to do research and publish without the benefit of a reduced teaching load. The review committee has no magic solution to the complex of problems regarding the relationship of UWT to UW Seattle, and the blatant inequity of funding for UWT programs. However, we do suggest that the success of IAS has rested on its uniqueness, and its respect for its teaching mission. This is reinforced by the enthusiasm students and alumni have for their experience in IAS programs. Establishing realistic priorities and expectations for IAS faculty is vital to their long-term health and professional vitality.

Budget, curriculum, staffing, planning, and decision-making procedures need to be re-examined with an eye to coordination and collaboration. We also suggest consultation with sister institutions on best practices for coordinating and implementing policy in each of these areas.

We believe you have established a vital and dynamic educational setting in which these changes have a chance to happen. The success of your program to this date, and your obvious dedication to preserving its uniqueness and fostering its growth and accessibility, speak well of your prospects.

Diversity

Faculty and staff in IAS, and UWT generally, seem to be keenly aware that they sit in the middle of a very diverse community, with special opportunities to design outreach programs that relate to the community's people, schools, businesses, and other institutions, and to enrich the campus through programs that draw the community onto campus. Given staffing levels in IAS (see section on Resources), there are virtually no resources available to support the development of such programs. With the advent of lower division students in the fall 2006, and the necessity to support recruitment and retention services for them, and to greatly strengthen recruitment efforts generally, the prospect of initiating these programs soon seems bleak. However, the review committee sees these opportunities as fundamental to the long-term success of the campus and recommends that new resources for these purposes be given a high priority, and made part of a planned, coordinated effort with recruitment and retention.

The section of the IAS self-study expresses a sharp awareness of UWT's and IAS's diversity problems. The percentages of minority students in IAS exceeds that at UWT (except for Asian/Pacific Islanders), and in Pierce County (except for Hispanics). IAS leads UW Seattle in percentage of African American and Native American students, but

is behind in Hispanic students and has only a quarter of the Asian/Pacific Islander percentage found on the Seattle campus. It is noted that both Tacoma Community College and The Evergreen State College/Tacoma do better, so improvement is clearly feasible.

Faculty diversity has improved since the program's inception. The faculty has gone from 15% female to 45%. 44% of the males are tenured, while 32% of females are tenured. Ethnic diversity is a continuing problem. All IAS staff are white, as are 81% of the faculty. We heard from several staff and faculty that virtually all minority hires have been "targets of opportunity," and the normal faculty hiring process has resulted in little or no minority hiring. The self-study, however, mentions that it is not clear that hiring committees have been reading carefully and using the diversity hiring toolkit used by the UW, and concludes, "...we need to be much more vigilant about making diversity a key priority in faculty searches by taking advantage of all legal channels to do so" (37). We second that motion. It should be noted that TESC has made a major, relatively successful efforts over the last ten years to increase diversity in faculty and staff in the face of limited budgets. To the extent that this resource may not already have been tapped, TESC's consultation should be sought.

We heard from several faculty that there is an (all too typical) extra burden on faculty of color to serve on committees (e.g. search committees), to work with students of color, to teach courses with diverse subject matter or involving diversity issues, and generally to present the face of diversity. Remembering that this is likely to happen, being sensitive to it, and minimizing it should be on the IAS agenda.

Since it is the review committee's position that increasing the number of IAS staff is an urgent necessity, with particular attention to recruitment of students and to assisting faculty in conducting searches, we see it as equally urgent to use this opportunity to diversify an all-white staff. It is clear from both the tone and substance of the self-study that this urgency is shared by IAS. Awareness of the diversity problem is reflected in the course offerings of IAS, and in outreach programs, on-campus symposia, and other activities organized by faculty and staff.

Finally, staff and faculty need training to deal with diverse students and with diversity issues. We urge UWT to work for the resources to implement training to meet these challenges, particularly with the lower division students about to compound the problem.

Some Brief Reflections on “Interdisciplinarity”

It is difficult to talk clearly and precisely about interdisciplinarity if we do not agree on terms. The following term definitions may help facilitate conversation.

TERM	PREFIX	DEFINITION	EXAMPLE
Unidisciplinarity	uni = one	refers to a single discipline	chemistry
Multidisciplinarity	multi = many	refers to a collection of two or more single disciplines	chemistry and geology
Interdisciplinarity	inter = between or among	refers to a combination of two or more disciplines into a coherent interdiscipline	geochemistry
Transdisciplinarity	trans = across	refers to a subsumption of disciplines within an integrated transdiscipline	ecology
Metadisciplinarity	meta = above	refers to a transcendence of disciplines in which disciplinary boundaries are irrelevant	sustainability

In our interviews, we noted that people were using the terms multidisciplinary and interdisciplinary interchangeably. Moreover, on those occasions when we asked people to define the term interdisciplinary, we received varying replies.

IAS employs most of the disciplinary constructions defined above. Some of its courses are unidisciplinary, its programs are a combination of multidisciplinary and interdisciplinary, and a few examples of transdisciplinarity can also be found. While the IAS program may consider aspiring to metadisciplinarity it may be more practical – at least at this point in its evolution – to focus on a combination of transdisciplinarity and interdisciplinary. IAS should do all it can to avoid unidisciplinary and multidisciplinary courses, programs, and approaches.

Strengths

By and large, IAS faculty, staff, students, and administration understand and support interdisciplinarity. This is unusual. Perhaps the program consider adding this as a by-line to their banner: The Interdisciplinary Arts and Sciences Program: We Get It!

The program can continue to mature and progress, however, in its pursuit of interdisciplinarity. The following areas of concern and recommendations are offered in that spirit.

Areas of Concern

The primary threat to continued evolution toward interdisciplinarity is faculty “buy-in.” Newer professors, particularly those of junior rank, are less committed to interdisciplinarity than others. This may be due to their quasi-unidisciplinary backgrounds, insufficient socialization into interdisciplinary, and the pressures of scholarly contributions (publications and grants) to achieve tenure. We fear that their

reward system may be counter-productive; that is, they are pressured to publish and perform research in their areas of specialization and thus see little reason to spend the effort and time in interdisciplinary collaboration. If this is the case, IAS should seriously examine its tenure and promotion policies to ensure that interdisciplinarity is respected, encouraged, and rewarded.

IAS Reorganization

The proposed reorganization of the IAS into three divisions (Culture and Ideas, Society and the Individual, and Natural World) is likely a step backward.

- Culture and Ideas encompasses primarily the humanities (history, fine arts, communication)
- Society and the Individual encompasses primarily the social sciences (political science, psychology, global and regional studies, labor and gender studies, economics, and education)
- Natural World encompasses primarily the natural sciences (environmental studies, environmental science, ecology, and GIS)

These divisions reflect traditional disciplinary groupings that will reinforce disciplinary stereotypes, create barriers to interdisciplinary collaboration, motivate competition for resources, and discourage flexibility in the face of changing needs and interests.

Given the challenges of rapid growth, particularly in faculty size and student enrollment, it is going to be increasingly difficult to maintain interdisciplinarity. Therefore, new organizational structures will be required. We suggest that IAS consider horizontal (cross-disciplinary structures) with highly porous and somewhat fluid boundaries. Moreover, it's imperative that these structures be designed by the faculty themselves rather than be imposed from administration. This will improve the sense of stake and ownership, increase program legitimacy, and better accommodate changes that may become necessary as faculty come and go and interests change.

We encourage IAS to aspire to metadisciplinarity, which involves dissolving boundaries, searching for connections, thinking in terms of integrated systems, being creatively synthetic in conceptualizing new frameworks and models, innovating new methodologies of investigation, and seeking practical applications of the results of research to demonstrate the value and power of metadisciplinarity.

A structure and curriculum that is organized around themes or problems is an antidote to traditional disciplinary organizations that threaten interdisciplinarity. A few of the enormous number of possible interdisciplinary themes that could be adopted are urbanization, social justice and welfare, social institutions, water and watershed management, energy supply and conservation, civic engagement and citizenship, community vitalization, risk management, sovereignty and autonomy, natural resource conservation and restoration, and sustainability.

Regardless of how the reorganization occurs, we recommend that the faculty be given a full opportunity to participate in this decision. We encourage the administration to continually reinforce the vision of interdisciplinarity and ask for creative solutions. It is easy to fall back on the familiar disciplinary boundaries; therefore, they might consider

using a facilitator who continually challenges participants to escape tradition be used to guide discussions to so that IAS will continue its progress toward interdisciplinarity.

The following table presents three examples of horizontal organization, which we offer simply to illustrate how horizontal divisions (breadth, with depth) could be defined. This illustration assumes that sustainable improvement of quality of life is the organizing theme.

OPTION	DIVISION	SCOPE	FOCUS	EXAMPLES
Option A – Impacts	#1	Human impacts on nature	How humans affect the natural environment	pollution, resource depletion, habitat change, climate change
	#2	Natural impacts on humans	How humans depend on the natural environment	resources, ecosystem services, aesthetics, cycles
	#3	Regulating impacts	How the interdependent relationship between human and natural systems can be sustained	restoration, conservation, policy, institutions, precautionary principle, education, behavior modification
Option B – Components	#1	Scales of sustainability	Spatial and temporal considerations	geography, trans-generational equity, trans-scale analysis, change
	#2	Resources for sustainability	Natural, social, technical	resource assessment, resource systems, conservation, capital conversions, modeling
	#3	Processes of sustainability	Processes of assessment, adaptive management, decision-making	democracy, evaluation, conflict management, policy learning, ethics
Option C – Concepts	#1	Theories of sustainability	Conceptual, normative, empirical	development and evaluation of conceptual models, systems theories, hypotheses
	#2	Skills and tools of sustainability	Impact assessment, outcome assessment	ecosystem impact assessment, social impact assessment, economic impact assessment, political and policy assessments, spatial and temporal assessments
	#3	Applications of sustainability	Simulations, field demonstrations, full-scale deployments	applied sciences and evaluations

Faculty Hires

IAS should hire more inter-, trans-, and meta-disciplinarians. It is foolhardy to expect that the program can plug all disciplinary holes with unidisciplinarians, let alone engage them productively in collaborative cross-disciplinary research. The metaphor of color photographs to illustrate these two approaches to faculty hiring.

Analog printing utilizes an overlay of a limited number (typically four) colored layers to achieve full color fidelity. Digital approaches use thousands of colored pixels. Developing a full color spectrum in the IAS curriculum does not require scores of unidisciplinary (pixilated) faculty. Instead, a lower number of interdisciplinarians (who vary in color but each cover a wide view) can produce the same photograph.

To the extent that unidisciplinarians (or quasi-unidisciplinarians) are hired, IAS should institute a program that socializes them into higher-level disciplinarity so that they can function effectively in interdisciplinary collaborations.

Marketing and Recruitment

Some interviewees mentioned that it was difficult to recruit students to an interdisciplinary program because they are used to thinking about traditional majors. We recommend that IAS market careers rather than majors. In other words, students are seeking rewarding careers; an interdisciplinary degree better prepares them for many of the challenging and rewarding careers of tomorrow. Testimonials from employers and alumni can be an effective marketing tool.

Name of the IAS Program

It may be that the term interdisciplinary does not accurately describe the mission or vision of IAS. We recommend that IAS stakeholders reflect on its identity, agree on disciplinary construction terminology, and adopt a name that more accurately reflects its mission.

The Environmental Science program

The Environmental Science program within IAS is off to a good start and has accomplished a great deal given its young age and limited resources. It has excelled in teaching, has a dedicated and enthusiastic faculty, has modern facilities, and has instituted several innovative research, outreach, field, laboratory, and certificate programs.

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The program now faces new challenges, which require new approaches and solutions. Rapid growth, transition to a four-year campus, and new leadership present new opportunities for maturation. The most important challenges relating to interdisciplinarity and the environmental science program are:

- The proposed reorganization of IAS into three divisions along disciplinary lines (humanities, social science, natural science) may threaten its greatest asset: interdisciplinary collaboration

- Hiring additional faculty who are trained in single disciplines may also threaten interdisciplinarity
- The natural sciences are under-represented in the IAS and environmental science curriculum

Recommendations for Improvement

- More reflection on the meaning of and commitment to interdisciplinarity should be encouraged to reach a shared vision; this vision then should be carefully articulated, reinforced and marketed
- While the reorganization of IAS into divisions is justified, the reorganization should not occur along disciplinary lines but rather along thematic or problem lines
- IAS should hire more interdisciplinarians rather than filling holes with unidisciplinarians
- More should be done to incorporate natural science, social science, humanities, and fine arts into more courses throughout the curriculum

Our external reviewers agreed that there exists no model program against which the IAS environmental science can be compared. Though the field is old (many programs were created more than 40 years ago) and large (more than 1000 degree programs in the US deal with environmental issues), program structures, curricula, and pedagogies vary widely. Therefore, our approach to reviewing the environmental program was to evaluate it on their own terms, based upon the program's history, mission, and vision. The Environmental Science program was started in 1996 by Cheryl Greengrove (the current coordinator) and David Secord (now at UWS). The Science Building, completed in 2002, hosts the program's offices, laboratories, and classrooms. The program serves about 40 BS majors, 20 BA majors in environmental studies, 50 minors, 10 students in its restoration ecology certificate program, and 20 students in the GIS certificate program. The program has five full-time faculty who each teach at four to five courses (lecture, field, and lab versions) per year. Additional courses are taught by adjunct professors.

Strengths

We congratulate Drs. Greengrove and Secord for establishing a solid program that has a bright future – if adequate resources are provided for its growth and continued maturity.

The commitment of the faculty to the program and to Dr. Greengrove's leadership is impressive. Clearly, enthusiasm for the program is palpable and the faculty is indeed dedicated and energetic. It is quite amazing what they have accomplished given their small number and large curricular area they are trying to cover. We commend the unit for its cohesiveness, teamwork, and shared sense of purpose.

The Science Building provides excellent facilities for the program at this stage of its evolution. No doubt, as the program grows, its laboratory and classroom needs will also grow. We were especially impressed with the flexibility that was built into the design of the facilities, which will go a long way toward accommodating changing needs of the program. The program won UWT's only University of Washington Brotman Award for

Instructional Excellence in 2004. The program's emphasis on experiential learning has deservedly been recognized and should continue to be encouraged.

The program does a great job of encouraging a sense of community, not only among its faculty and staff, but also among its students. Students tend to take classes as cohorts, field classes foster friendships, Project Earth encourages group participation, faculty stay involved with students, students have representation on program committees, and the program encourages a team-based culture. A gateway course on environmental citizenship is also planned, which will encourage student involvement in the community. Other courses emphasizing problem-based learning are being considered. These efforts encourage learning, increase satisfaction, provide support, and foster interdisciplinary collaboration.

The capstone course requires students to develop research proposals in teams of up to three. Students are also encouraged to present the results of their research at the annual ES program research symposium, which is open to the public. Involvement of undergraduates in research is commended and will serve well those graduates who go on to graduate school.

Areas of Concern

We asked the ES faculty how they define environmental science. The answer was "natural sciences applied to solving environmental problems." Despite this answer, we believe that the faculty appreciates that social sciences and the humanities are also important to solving environmental problems. When asked what they believe their niche is at UWT and within the environmental field, they responded that theirs is the only BS environmental program in the region; interestingly they did not define a niche in terms of vision, mission, curriculum, or pedagogy.

We were very surprised to learn that the only natural science curriculum at UWT is administered by the environmental science program. This is astonishing given the size of the faculty and student body. Natural science is disproportionately underserved at the campus.

The few faculty dedicated to this area is a major weakness of the program. Current faculty members have advanced degrees in geology and geosciences, environmental chemistry, civil and environmental engineering, aeronautics and astronautics, zoology, and history. We understand that the unit has requested additional positions (e.g., environmental policy specialist, environmental botanist, environmental microbiology, environmental organic chemist, two mathematicians, applied statistician, applied hydrodynamicist/fluid mechanic, and math education specialist) to bolster course offerings and competencies. Though we agree that the unit is understaffed, we are concerned by the emphasis on hiring additional quasi-unidisciplinarians such as those mentioned. This approach will inevitably lead to an almost never-ending list of request-for-specialist-hires in order to plug disciplinary holes. Hiring transdisciplinarians is both better and cheaper.

The faculty also expresses dissatisfaction with support of the program. They believe that they need more staff support, more faculty, more credit for service, and more appropriate evaluation criteria. For example, only one person is assigned to laboratory support.

Given the number of lab courses and projects, an urgent need exists to hire another laboratory assistant. Faculty also are concerned that meetings with the administration are irregularly scheduled and do not encourage dialogue. Like those in other programs in IAS, the ES faculty is concerned that outside reviewers for promotion and tenure may not appreciate interdisciplinary work. The faculty recommends that request letters for reviews state the unique mission of IAS and the ES program and suggest review criteria that are relevant to interdisciplinarity.

Understandably, but unfortunately, the faculty have been devoting much of their time to institution-building (planning, hiring, curriculum development, administration) rather than scholarship and teaching.

Recommendations for Improvement

Mission and Vision

We encourage the ES faculty to frequently remind themselves of the importance of broad interdisciplinarity and to adopt a definition of environmental science, as well as a program mission and vision, that explicitly makes clear the interdisciplinary nature of environmental science and their particular niche within the larger institutional and environmental arena.¹ For example, a sustainability theme with a focus on social and ecological diversity, urban community development, and coastal ecosystems seems appropriate. Plans to offer a degree in sustainable development with the Urban Studies program should be pursued expeditiously (though we were uncertain as to the reasons why urban studies is not incorporated into IAS, since this field is also interdisciplinary and closely related to other IAS programs).

Faculty Hires

Rather than hire new quasi-unidisciplinary faculty to plug holes in the curriculum, we strongly recommend that the program consider hiring transdisciplinary persons who can teach transdisciplinary courses. Such persons exist, having obtained transdisciplinary degrees in environmental science, environmental studies, and environmental management. Hiring three or four of these people can provide the teaching and research service of at least twice as many quasi-unidisciplinarians and participate in transdisciplinary collaborations far more easily than those the program currently plans to hire.

Curriculum Development

The number of courses containing a natural science component should be significantly increased. By this we do not mean that more geography, geology, chemistry, botany, biology, ecology, microbiology, or similar courses be developed. Such disciplinary additions do not well serve the interdisciplinary mission of IAS. Instead, I recommend that more interdisciplinary courses that include natural science be developed and that natural science content be added to more of the existing courses.

As long as the program is offering all natural science classes at UWT, consideration should be given to developing special sections for ES majors. Complaints were voiced that some classes must repeat material learned in earlier classes because non-majors are

taking the class without the benefit of the earlier courses. This hinders learning progress. Ultimately, however, natural science should be incorporated into other courses so that non-majors do not have to gain natural science training by taking natural science classes in ES.

Staff Support

Staff support for faculty should be increased to relieve the faculty from many of the clerical and administrative duties that take time away from course, student mentorship, and research collaboration. An additional laboratory assistant should be hired to help on lab preps. Other staff needs have been identified in the program's 10-year growth program, which includes a fiscal specialist, science advisor, science recruiter, instrument technician, capstone coordinator, and program coordinator. We don't have sufficient grounds to comment on these requests/priorities.

Master of Arts in Interdisciplinary Studies

Only five years since its creation, the Master of Arts in Interdisciplinary Studies (MAIS) is a strong and vital component of UW-Tacoma. It is the only interdisciplinary master's program in Washington state, and indeed the Pacific Northwest, and in curricular design and thematic focus is unique among interdisciplinary master's programs in the country. Staying true to its interdisciplinary mission while orienting its curriculum toward the "foundations of public action," it has attracted a diverse group of students, both recent college graduates and older students with established careers. Its value to students is now a matter of record: several MAIS graduates have made major career advances as a direct result of their degree, while others have gained entrance into prestigious PhD programs.

The program wisely and deliberately aims to advance the professional goals of its students by deepening and enriching their intellectual approach to the study of social problems. It was aptly described to us as a self-consciously "professional non-professional program." The four required core seminars, which deal with alternative modes of explaining and evaluating social phenomena, cover difficult theoretical material, but also include case studies to serve as models for students' specific research topics. In addition, students take a capstone seminar and specialized electives, and conclude by writing a thesis on their specific area of interest. The MAIS alumni with whom we spoke unanimously and enthusiastically praised the philosophical emphasis of the curriculum. The theoretical training was difficult, they reported, but it has proven highly valuable in their subsequent professional lives, because it enables them to respond more intelligently and effectively to the social and policy challenges that confront them at work. But they also celebrated the practical guidance and skills training they received in courses such as the capstone seminar and the seminar on "Teaching Writing in Public Action." We view the combination of theoretical instruction and attention to skills as a deeply admirable feature of the program. Both faculty and students reported a high level of satisfaction with the program. Nonetheless, we note some areas of concern. The first and most important concern, emphasized to us by both faculty and students, is that there are too few faculty members involved in the program. Students gave high marks to the faculty,

but expressed understandable frustration that sometimes two or even three of the four core seminars were taught by the same professor. The shortage of involved faculty also helps explain the scarcity of elective graduate seminars, another widely recognized problem. Attempted remedies, for instance team-teaching of core courses to expand the ranks of “core” faculty, have achieved only partial success. We encourage continued efforts of this kind, but also think that willingness and ability to teach core seminars in the MAIS sequence should be made an explicit condition and expectation of a significant proportion of new IAS faculty hires.

Another concern expressed to us by the faculty is the uneven quality of the students. While the best students are outstanding, as good as students in the country’s top graduate programs, others are unable to cope with the intellectual rigors of the program, and slow down the learning experience of the better students. Anxiety about not having sufficient FTEs has led to the admission of under-qualified students. We have some sympathy for this concern, and encourage consideration of a more selective admissions policy. The impact on FTEs could be compensated by more aggressive recruitment efforts, and it is possible that a higher admission standard could itself be a recruitment aid.

Some students reported difficulty finding faculty members to supervise independent study courses, which become necessary in an interdisciplinary program defined as broadly as this one. Other logistical hurdles were mentioned as well. We do not believe that all these problems are structural; many are properly addressed by the advising staff, who are best placed to address the varied needs of individual students. The advising staff have done an excellent job of answering these challenges, but they are overloaded with multiple responsibilities. There is a need to hire additional qualified advisors to lighten the unrealistic burden placed on current staff.

The 2010 strategic plan calls for the creation of a graduate-level certificate program in non-profit studies, to be supported through new staff, faculty, administrative hires. We support this proposal, and believe that it dovetails well with the MAIS program, given the program’s thematic focus on public action and the fact, noted in the self-study, that “because many master’s students work for government and non-profit agencies (or aspire to such employment), there is significant interest in coursework in non-profit studies.” Non-profit studies instructors have been remarkably successful in raising money in the community, and their undergraduate courses are very popular. We encourage efforts to strengthen non-profit studies, at both the graduate and undergraduate levels, for the following reasons. Non-profit studies is a rapidly growing field of inquiry across the country, it complements existing strengths in IAS and the MAIS program, it offers numerous opportunities for productive collaboration between UWT and the community, it serves existing needs and interests of UWT students, and it has the potential to become a powerful tool for both program development and student recruitment.

Comments on meetings with students and alumni

Current Students

All in all, undergraduate students we talked with are happy with their education and experience at UWT. Nevertheless, they expressed the following concerns.

- 1 On preparation for success in the IAS program provided by local community colleges
 - Area community colleges need to do a better job at preparing students to be better communicators (writing and speaking)
- 2 On campus culture
 - Need more sensitivity & demonstration of concern for non-traditional students & mid-life learners
 - Need more of a sense of identity and shared culture
- 3 On course scheduling
 - Course offerings are too limited, especially on weekends and evenings
 - Frequent scheduling conflicts force students to choose between courses that they want to take
- 4 On curriculum
 - Need more fine arts classes that are infused with political, cultural, economic, and other social ideals aimed at fostering a sense of community and improved quality of life
 - Such courses should be infused throughout the curriculum at UWT
 - Need more and more frequently offered natural science classes that articulate better with the social sciences and humanities
- 5 On pedagogy
 - Some don't like group work
 - Some don't like on-line courses, but these are rarely offered at UWT
- 6 On mentorship
 - Want more peer advising
 - Want more opportunities to meet with faculty outside of class and more long-term mentoring
- 7 On diversity
 - Too much indoctrination and not enough discussion of diverse views
 - Conclusions and Recommendations
 - Provide attractive, comfortable, and convenient shared spaces that encourage student, faculty, staff, administration interactions, which can speed development

of an encompassing campus culture that unites and bonds people with each other and to the institution

- Encourage upperclassmen to mentor underclassmen, especially during their freshman year; perhaps, individualized mentor assignments can be made to help new students acclimate to UWT and provide suggestions on how to succeed and become more comfortable and confident
- Faculty and administration should minimize scheduling conflicts for popular and priority courses
- Consider more frequent offerings in evenings and weekends (and perhaps well-designed online courses) to meet the special needs of non-traditional students (selection of classes for special offering should seek input from students); also consider alternatives to group projects, especially those that are difficult for non-traditional students to participate effectively
- Strengthen links among natural science, social science, humanities, and fine arts in all classes
- Sponsor limited-enrollment writing and speaking classes to prepare students early for improved communication skills in subsequent courses and post-undergraduate work

Alumni

All of the alumni are quite satisfied with their degrees and education. They are excellent ambassadors for the program.

1 On the degree name

- Alumni are satisfied with the name of their degree; they have learned to explain its meaning and value

2 On the value of interdisciplinary education

- As students, they had to learn the value of interdisciplinary education during their tenure at UWT. They most value its broad applicability and its incorporation of a wide variety of skills and competencies.
- They have learned to emphasize the tools that they gained and apply these to their jobs
- They have no interest in working in unidisciplinary jobs
- Alumni should speak more to current students about the value of interdisciplinary education and post-graduate opportunities

3 On comparison to The Evergreen State College

- Prefer the more formalized structure of the IAS curriculum (core courses and capstone)

4 On preparation for graduate school

- They believe that they are well-prepared for graduate school, as long as they seek a graduate degree in another interdisciplinary program that places more emphasis on breadth over depth
- They are not interested in specializing in a single discipline in graduate school
- Need better articulation with UWS so that UWT alumni applications to its graduate school will be competitive

5 On curriculum

- Need more natural science content in IAS courses
- Need more guidance and support on thesis projects
- Need more electives courses to augment plans of study

6 On diversity

- Need more diverse faculty and curriculum and students
- Need more international focus in courses and opportunities for studies abroad
- Need better marketing to diverse communities
- Handicapped access and accommodation could be better

Conclusions and Recommendations

Foster a strong alumni association that will help build a sense of identity, assist in recruitment, attract support (from them and their associates), and encourage the success of current students. IAS should consider alumni websites, newsletters, reunions, awards, banquets, exchanges, speaker bureaus, internships, and other opportunities for maintaining a relationship with alumni.

1 On campus culture

- Need more younger students, more resident students, and students who will stay on campus longer than two years; this will be accomplished once UWT becomes a four-year university
- The mattress facility is located too far away from the campus core and thus is not well-suited for encouraging campus-culture building through student-faculty-staff-administration interactions
- The “green” is too small and too polluted with dog feces to serve as an outdoor meeting area

2 On student recruitment

- Need help from alumni
- Need more diverse faculty to recruit minorities
- Need better descriptions of the value of interdisciplinarity to help overcome ignorance and prejudice by those previously exposed to unidisciplinary approaches

IAS Review

- Staff criticism is particularly harsh of the student affairs recruitment office
 - Need an institutional recruiting plan
 - Need a clearly articulated vision
 - Need more creativity, innovation, and flexibility; less dogmatism, arrogance, and resistance to change
 - Need better organization and leadership that inspires confidence
 - Need less turnover
 - Need to include IAS staff in planning and implementation
 - Need more commitment and more concerted recruiting efforts

3 On Interdisciplinarity

- Students initially do not appreciate the importance of Interdisciplinarity but learn during the course of their stay at UWT how valuable it is

Conclusions and Recommendations

The UWT recruitment office should be reviewed and significant changes made to improve the effectiveness of its recruitment effort; dissatisfaction with its functioning is high.

As previously mentioned, more should be done to encourage a sense of identity and shared culture. The green should be kept clean and more centralized meeting areas should be created that encourage campus community interaction.