



## Research culture among college students: A review

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### Abstract

This review reveals that the top level commitment and support are probably the most crucial variables in enabling a research presence to flourish. If the department, sees itself as a teaching organisation and not as a research one, or as a profit making enterprise rather than a learning focussed one, then establishment of a research environment will remain difficult and possibly even surplus to requirements. In a large number of the papers reviewed the question of time allocation and release from teaching load was discussed. It seems that this is an issue at the heart of research culture development; an issue that requires careful and honest consideration. The conflict between teaching and research, if not addressed, is likely to lead to the impoverishment of one or the other. A stable, supportive and yet adaptable research administration system is suggested, indeed probably a separate office to carry out the function. Communication and sharing of ideas and progress appears to contribute to the development of a research culture. This might take the form of collegial networks and the sharing of literature and publications. It is also suggested that a research presence might be enhanced by establishing a strategy for research support and by identifying favoured research topics that reflect the organisational culture.

**Keywords:** Research, communication, teaching, organization

### Introduction

"Research, to put it simply, involves 'finding out.' If this is done in advance of future action, there are obvious advantages. The institutions need to establish and sustain a research oriented environment, or research presence, in an organisation that has not traditionally been involved in research. Many Institutions of Higher Education (IHE's), that have traditionally focussed.

#### A. The level of the individual

##### A.1: Motivation and incentive

The importance of motivation is supported by Okamoto (1991) [7] who reported that factors which are very important in fostering good researchers and good research leaders are provision of facilities (particularly electronic facilities) and incentive motivation. From an informal survey Lederman (1991) [4] concluded that the morale of scientists in the early 1990's was at an all-time low. For many scientists, the difficulties of obtaining research support were beginning to overshadow the rewards of actually doing the research. That is, lower motivation to engage in research. Christensen and Jansen (1992) [11] report that internal motivation of faculty staff is a significant correlate with research productivity.

##### A.2. Developing research skills.

###### A.2.a Recruitment of the skills and interest.

Lubin (1992) indicates that one strategy for building a research team and research environment is to recruit and invest in young promising researchers and then wait to reap the benefits of their mid-career successes. In support of this notion Shoben & Smith (1988) [10] stated that the most vital potential activity that could be undertaken to enhance an

organisation's endowment of scholarship and research skills is the appointment of capable and productive scholars.

Johnston (1994) [2] also alluded to this when noting that research productivity tended to be highest in larger departments which enjoyed the presence of post-graduate students and scholars of international repute.

##### A.2.b Education and training experiences.

As indicated above, Meg *et al* (1988) [6] noted that the highest producers of research in one faculty displayed a greater preference for conducting and writing research than non-producers. They also tended to publish more and earlier in their careers than non-producers. These results were descriptively compared which correlates of research productivity for faculty in other disciplines. Polk (1989) reports that the individual knowledge required to develop a research culture includes knowledge of the following: (1) conceptual or theoretical models of thought, (2) models of scientific enquiry, (3) methodological designs, (4) probability theory and (5) statistical analysis. Individual research training and education programs should therefore include at least an introduction to these concepts.

Polk (1989) also dwelled on the important role in the induction or orientation of new personnel. She reported a case where orientation for all new staff emphasised that (a) research is necessary for the development of the discipline or profession, (b) participation in research was the responsibility of all staff members, (c) the purpose of research was (in their case) to investigate problems encountered in their work and (d) the value of research in providing data regarding the effectiveness of other goals, such as patient care or attention to student needs.

Bruce & Brameld (1990) evaluated a program of instruction concerning use of the library for senior students that aimed at improving their research efforts. Students who received extended library-use instruction were compared with those from the previous year who had not received such instruction. They found that the instruction improved student researcher's information seeking behaviours and their literature reviews. This study implicates the role of the academic library in facilitating the research process

## **B. The level of the Institution.**

### **B.1. Making Research Actions cohesive.**

#### **B.1.a. Sharing expertise and knowledge**

MacCorkle (1991) states that scholarly inquiry is a social process and that one way to encourage the research culture at an institution is to develop services that stimulate intramural communication. This is supported by Meg el et alia (1988) <sup>[6]</sup> who noted the highest producers of research were strongly motivated by internal peer support of research team members. Implications for the research culture include encouraging faculty to establish research networks and supportive research teams. MacCorkle (1991) reports that faculty research referral databases and faculty publication bibliographies are ways to disseminate institutional research interests.

Chistensen and Jansen (1992) <sup>[11]</sup> also report a significant correlation between research productivity and networking with other faculty.

#### **B.1.b. Having direction and strategy.**

Lubin (1992) <sup>[5]</sup> indicates that crucial to the development and success of a research program, top management, the administration, and the academic leadership must agree to a strategy for research support and development. It is also important to integrate a research program with an institution's existing strengths.

Okamoto (1991) <sup>[7]</sup> reports that a research culture is enhanced by determining a research theme. In determining the research theme, there are 2 main considerations - 1. picking out the "candidates" or "research questions" and 2. evaluating them. Imagination and creativity are essential in picking out the "candidates". Okamoto advocates a combination of brainstorming and scenario writing as effective for improving creativity and imagination.

### **B.2 Making research easy for researchers. (Facilitation of research)**

#### **B.2.a Having Institutional Support**

Lubin (1992) <sup>[5]</sup> indicates that success of a research environment depends upon a firm commitment of time, effort, money, and resources on the part of top management, the administration, and the academic leadership.

Shoben and Smith (1988) <sup>[10]</sup> advocate that institutions that desire to integrate full-scale research must provide effective research support and appropriate research administration. For the necessary scholarship to grow organically out of the intellectual directions of scholars rather than out of reaction to available funds requires the strong representation of research in the highest councils of the institution. This may require procedural modifications within the institution to facilitate the research effort. In essence this means that an institution cannot

expect chemistry lecturers to do research if there is not a laboratory, nor photography lecturers without a darkroom or studio. Institutions serious about developing and sustaining a research culture must be prepared to provide the infrastructure and facilities for all academic disciplines that are the equivalent of chemists' laboratories and photographers' darkrooms.

### **Commitment to research and researchers' perceptions of support.**

In an unpublished doctorate Martin (1988) examined why research by staff members flourishes in some institutions and fails to appear in others. A perspective on the effectiveness of an organization in supporting research was suggested as including the context (setting), the culture (institutionalized support), and the climate (the shared perspective of the staff). A sample of seven US institutions with "exemplar" staff research programs was acquired.

The study included one survey per institution on organizational context and research culture that were to be answered by a representative from staff administration. Secondly, a questionnaire on research culture and organizational climate was distributed to 100 randomly selected staff members. A survey to all staff asked questions on research productivity. There was a significant difference among the institutions studied in research productivity; and differences between them were found.

#### **B.2.a.ii. Administrative support**

A stable administrative support system is crucial, according to Lubin (1992,) <sup>[5]</sup> for the development and success of a research program. A firm commitment of time, effort, money, and resources is required on the part of top management, the administration, and the academic leadership. If there is no display of commitment or mixed signals about commitment then one can hardly expect a flourishing research culture to develop. It is important to acknowledge that research management and administration is a professional practice and academic field in its own right that envelops an exceptionally broad range of talent and expertise (Krebs, 1992).

#### **B.2.b. Having Research facilities and resources.**

One component of research culture establishment outlined by Polk (1989) includes introduction of the artefacts of the culture. She states these as being the tools and facilities for conducting research and describes their introduction as contributing to the "birthplace of the research acculturation process" (Polk, 1989, p.27). This was mentioned, above, in relation to putting "resources into research" in addition to just having "money for research." Much of the literature dwells on the role of information facilities, particularly electronic ones. In addition to incentive motivation, Okamoto (1991) <sup>[7]</sup> states that the next most important factors in fostering good researchers and good research leaders are hardware support and software support. Ali and Young (1992) found that acquisition of electronic databases was a significant factor in increasing faculty research output.

## Conclusion

Top level commitment and support are probably the most crucial variables in enabling a research presence to flourish. If the IHE, or department, sees itself as a teaching organisation and not as a research one, or as a profit making enterprise rather than a learning focussed one, then establishment of a research environment will remain difficult and possibly even surplus to requirements. The first crucial step therefore, involves the organisation in making a decision about whether or not it wants a research culture to develop and whether or not they are prepared to support it. The rest of this conclusion assumes an organisation that does want research to flourish.

In a large number of the papers reviewed the question of time allocation and release from teaching load was discussed. It seems that this is an issue at the heart of research culture development; an issue that requires careful and honest consideration. The conflict between teaching and research, if not addressed, is likely to lead to the impoverishment of one or the other. IHEs establishing a research presence must ensure that their requirements for staff to engage in research do not become a burden that interferes with their ability to meet their teaching commitments and standards, and vice versa.

A stable, supportive and yet adaptable research administration system is suggested, indeed probably a separate office to carry out the function. Recruitment of such an administrator should be done with great care, since they will find themselves handling paradoxical roles and tricky boundaries.

The organisation should provide realistic standards of research quality and acceptability. It is expected that a research culture would develop as the pool of research skills increase within the organisation. This might be achieved both by recruiting the skills into the organisation, and by training and developing those skills with existing staff.

Communication and sharing of ideas and progress appears to contribute to the development of a research culture. This might take the form of collegial networks and the sharing of literature and publications. It is also suggested that a research presence might be enhanced by establishing a strategy for research support and by identifying favoured research topics that reflect the organisational culture.

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