A MODEL OF SCHOLARLY PRODUCTION IN BUSINESS EDUCATION AS A LEARNING PROCESS

Dayr Reis and Letícia Peña

What does a model of scholarly production (SP) in business education as a learning process entail? Scholarly production by a given department or college is conceptualized here as the systematic effort to organize the process of departmental or college learning. Suppose some given rate of scholarly production activity by the focused unit, measured as a continuum of scholarly research expenditures and/or research hour inputs. What will determine the effectiveness of that unit on the performance of its scholarly functions? Our model includes the following: (1) theoretical or empirical "discovery" research, including integrative and interdisciplinary research which makes new discoveries by linking avenues of thought across disciplines, (2) applied research in which one applies others' discovery research to new contexts, fields, industries, firms, nations, time periods etc., and (3) all other forms of scholarly activity that are written, are subject to scrutiny and criticism by one's peers, and extend the boundaries of current knowledge.

The effectiveness of a given rate of SP activity as measured in terms of the aforementioned performance of the three purposes progressively increases as a function of the time over which it is extended. This relationship is denoted in Figure 1 where *Research Effectiveness of the Academic Unit* forms the vertical axis (Y) and *Time* forms the horizontal axis (X). In this context, our model

makes mention of three factors that particularly impact the effectiveness of SP activity, namely organizational learning, information accumulation, and new talent acquisition. Let us review each of these factors.

ORGANIZATIONAL LEARNING

In the first instance, as with any new operation, the effectiveness of SP will increase simply through the process of sifting and selecting out personnel and fitting individuals into functional niches more or less in accord with their inclinations and talents. In addition, SP effectiveness will also be enhanced through the evolution of a fund (reservoir) of common and interpersonal experiences, providing a better basis for group choice and intra-group communication. Consequently, SP effectiveness might at first rise sharply and then level off after a time. A hypothesized increase in SP effectiveness as a consequence of such organizational learning is shown as OL, OL¹ in Figure 1. A second and related step in the organizational learning process is likely to occur after the new component (in this instance the SP operation) has acquired an inner coherence and discipline, namely in the developing capability for communication and interaction with other units. This is shown as a second upward step in OL, OL¹.

INFORMATION ACCUMULATION

The SP activity is unique in its emphasis on the production, systematic organization and accumulation of information through external searches, analyses and evaluations, and through its own internally generated research and experiments. Aside from its current applicability and value for the real world of business, such information also feeds back into the SP capability. It cumulatively increases the capacity of the given level of the SP activity to solve problems, to provide relevant information for a changing complex of needs, and to propose and champion innovations relevant to the business world. On account of this base of accumulated information base, understood as a research tool, the effectiveness of the continued level of SP activity might be expected to increase linearly over time. This is shown as AI, AI¹ in Figure 1.

NEW TALENT ACQUISITION

We may assume that as personnel retire or otherwise depart, new talent must continuously be recruited. The capacity to maintain or to improve SP effectiveness depends on the capacity to *recruit talent* of an equal or higher caliber. The capacity to attract talent will depend on the "image" of the academic unit, and that in turn will depend on prior research or scholarly production success.

It might then be supposed that an SP activity whose effectiveness was improving over time would be reflected in achievement and reputation, and would, as a consequence, attract higher quality talent. The contribution of higher quality talent to increased SP effectiveness is shown as RT, RT^1 in Figure 1. This is given the shape of steps rising to a plateau on the assumption that those extraordinary successes that produce a quantum jump in reputations occur only as the culmination of a series of experimental probing (hence the steps), and on the assumption that there is an upper limit on the quality of talent available (hence the plateau).

From the point of view of the academic unit, extraordinary success and a quantum jump in SP reputation will have detrimental effects as well. It will increase the alternative employment opportunities and presumably the costs of retaining key faculty, and may hasten their departure (hence the depletion of effectiveness).





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Therefore, the operational effectiveness of SP is shown in Figure 1 as curve RE, RE¹, which is the sum of the three curves OL, OL¹, AI, AI¹, and RT, RT¹.

SCHOLARLY PRODUCTION AT THE MACRO LEVEL

Thus far, we have only taken into account the SP activity of the individual academic unit within a given department or college. But the effectiveness of the SP activity of the individual unit is also a function of the level of SP and the length of its continuance for that "industry" (i.e., all the similar academic units in all universities in a region, country etc.).

This macro SP also contributes to the information base and accumulating instrumentalities that constitute the research tool of each SP activity. Hence, in Figure 1, AI, AI¹ will be raised AI*, AI**, and RE, RE¹ will be raised towards RE*, RE** as a consequence of rate of SP activity over time in all similar developed academic units of all the universities of a given region or country. The information outputs of the SP activity of the particular academic unit will be externalized to some extent. They will escape the proprietary closure and control of the particular university. The greater the degree to which the information outputs of the academic unit are externalized, the more the aggregate SP of the "industry" will raise the effectiveness of each of the individual SP activities in every university.

Although a larger ratio of externalization of information outputs will raise the real SP effectiveness of every academic unit in each of the constituent universities, there will be a loss of monopoly advantage as a consequence of diminished proprietary control over information. The impact of aggregate macro level SP will increase or decrease the SP effectiveness of the SP activity in the individual academic units depending on the institutions of communications and interchange. In many countries, the electronic means of communication such as the Internet are raising the SP effectiveness of the academic units. On the other hand, in many developing countries, interchange of information is still a problem given the difficulties in accessing the Internet.

An increase in the aggregate SP activity of the knowledge industry may negatively impact the SP effectiveness of the academic unit. Other things being equal, it will be necessary to spread research talent thinner. Hence difficulties of recruitment will ensue. RT, RT¹ will be shifted downward toward the X-axis.

PROGRESS IN THE MOTHER SCIENCE

Besides being a function of SP activity over time, the effectiveness of the academic unit's SP activity at the micro or macro levels will depend on the continuation of research in the "mother" science if there is one, i.e., in the science or sciences in which the SP activity of the academic unit had its historic genesis. For example, progress in psychology, sociology, anthropology, economics, political science, mathematics, computer science etc. will feed into the effectiveness of the SP activity of the academic units such as business schools. Assuming the quality of outputs remain the same, scholarly production will also depend on the level and time-extension of research activity in other complementary sciences to a lesser degree. Again, such impact will depend on the channels of communication and interaction. In contrast to aggregate SP activity in the "industry" of academic departments of the same kind, the greater research activity in the "mother" science and in other related sciences will increase the availability of recruitable talent and will raise RT, RT¹, as well as raise AI, AI¹ towards AI*, AI**, supposing these are a part of the teaching process. Similarly, RE, RE¹ will be raised towards RE*, RE**.

To sum up, the present model describes the elements of scholarly production in business education. It explains how scholarly production progresses over time at the micro and macro levels, as a function of organizational learning, the accumulated information base, the acquisition of new talent, and progress in the science (or sciences) in which the scholarly production activity has its historic genesis.

Dayr Reis is Professor and Chair of the Department of Management of the University of Wisconsin – La Crosse *E-mail: reis@mail.uwlax.edu*

Letícia Peña is Associate Professor of the Department of Management of the University of Wisconsin – La Crosse *E-mail: pena@mail.uwlax.edu* In many countries, the electronic means of communication such as the Internet are raising the SP effectiveness of the academic units.