

ASSURANCE OF LEARNING GOVERNANCE – A SYSTEMS DYNAMIC APPROACH TO ASSESSMENT

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ABSTRACT

This paper is aimed at demonstrating a dynamic system modeling approach for improving the understanding of Assurance of Learning (AOL) governance activities in business schools. This study developed a system dynamics model to explore interactions and feedback loops among assessment factors. The SD model consists of causal loops among stocks and flows that form the foundation for a computer simulation. The simulation results support the forceful new efforts of accrediting agencies, such as AACSB, to target one-third of its accreditation standards toward assessment activities. The simulation suggests that a slow ramp-up of assessment efforts, in order to avoid disruptions to current resource allocations, will produce suboptimal results. The simulation supports AOL governance policies that require a strong initial and continuing commitment to direct resources to assessment activities.

INTRODUCTION

AOL governance is defined as the administrative management of a systematic process for assessment activities. AOL governance requires reallocating scarce business school resources to assessment activities. Faculty, student and information system, resource, for example, must be redirected toward assessment activities to capture student portfolios, develop rubrics, conduct observational studies, and participate in surveys. Additional resource decisions guide efforts to measure alumni and recruiter concerns, and capture benchmarking data for use in peer school comparisons. Governance drives assurance of learning processes and by formulating strategic learning objectives, allocating resources, monitoring assessment outcomes, and disseminating results to key stakeholders.

This study applies a system dynamics methodology to further conceptualize and explore the nature AOL governance. Modeling AOL governance structures and activities can help decision makers understand the interdependencies and casual loops that characterize assessment activities. We follow the lead of researchers in who have confirmed the efficacy of systems dynamics (SD) models to explore complex organizational processes [1, 2]. A SD model is characterized by high-level view of interdependent and mutually casual factors that interact in a non linear and non instantaneous manner.

Systems dynamics model reject the view that causality works in only one direction. These models instead represent intertwining sets of factors interacting in casual loop structures. A dynamic systems model studies the effects of casual feedback structures as they influence input and outputs flows and impact the resulting accumulations of resources. Our simulation experiments focus on exploring patterns of interaction among assessment variables.

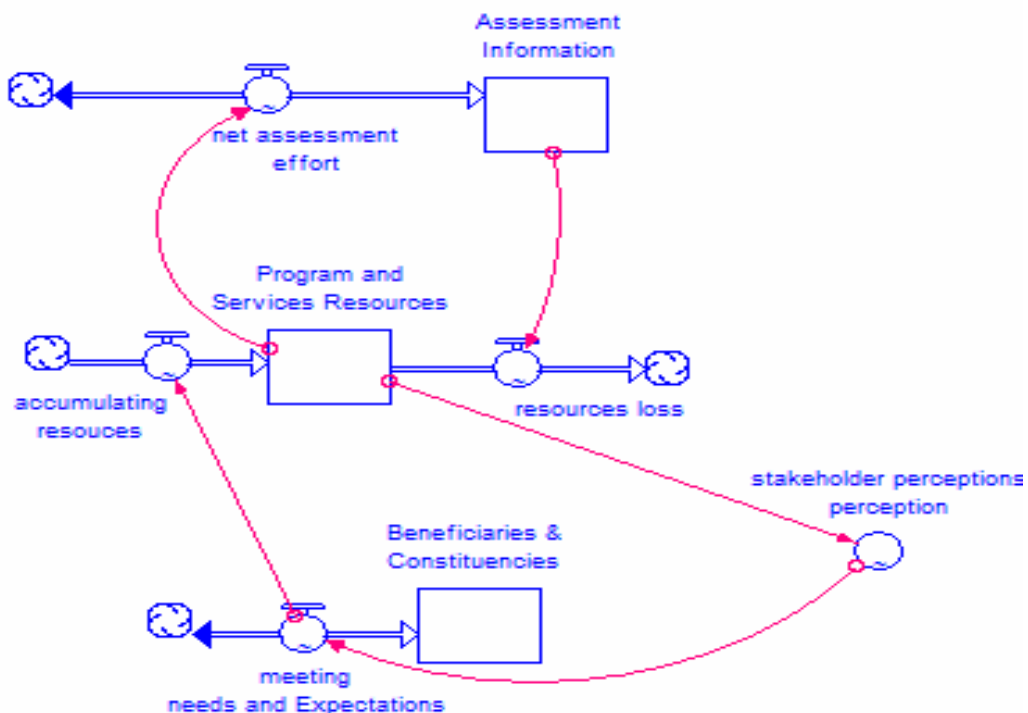
SD MODELING OF AOL GOVERNANCE

Business schools, faced with limited funding, must apply a systematic approach to allocate scarce AOL resources. AOL resources must support activities that emphasize continuous improvement and the Baldrige National Quality model provides a useful organizing framework to structure assessment activities. The Baldrige model requires effective leadership, an inclusive planning process, knowledge of the needs of groups served by the organization, and the development of data driven measures that can be focus efforts and enhance an organizations reputation among stakeholders [3].

We applied a SD model to structure assessment elements identified in the Baldrige framework in order to dynamically trace the interrelationships among assessment factors over time. The model represents intertwining sets of factors interacting in casual loop structures. A dynamic systems model studies the effects of casual feedback structures as they influence input and outputs flows and impact the resulting accumulations of resources. The simulation model allows virtual experiments on governance policies and provides the ability to trace the impacts throughout the simulated system. The goal of the simulation model is to explore patterns and provide insight to assist those responsible for formulating strategies and allocating AOL resources.

Figure one present a SD model for assessment and identifies three stocks representing accumulations of 1) an organization's beneficiaries and constituencies, 2) programs and service resources and 3) assessment information. An individual stocking level fluctuates according to it inflow and outflows. These flows are a function of casual feedback relationships involving another stocks accumulation level. Decision makers can apply the model to focus on the relationships between key variables such as resource levels and accumulated assessment data to explore the system's sensitivity to policy changes.

FIGURE ONE. A SD MODEL FOR ASSESSMENT GOVERNANCE



SIMULATION RESULTS

By experimenting with processes that drive the behavior of the SD system, we tested assumptions against the logical scrutiny of a systematic model. The results revealed accumulated stocks of assessment information allow schools to close the loop by applying assessment data to reach and maintain an effective level continuous improvement in order to meet the needs of beneficiaries and constituencies.

However, if administrative leadership relaxes efforts to translate assessment information into actionable improvements, due to increasing resistance or lack of attention, then the SD model forecasts a rapid introduction negative feedback that can quickly derails past successes. Maintaining high levels of assessment effort prevents the introduction of the negative feedback loop. This suggests AOL governance require constant attention to analyze and apply accumulated assessment information.

The simulations support anecdotal AOL recommendations that stress the need to close the loop. Martel (2007) recommends “ always, always, always chose a method that is going to produce data that you are going to use” The simulations agree that consistent efforts must be maintained to close the loop; otherwise as the simulation results demonstrate, even minor deviations in focus works its way through the system to produce negative forces that can quickly drive the system to failure.

The simulations also support the forceful new efforts of accrediting agencies such as AACSB to target one-third of its accreditation standards that require business schools to empathize assessment activities. The simulations suggest that a slow ramp up of assessment programs, in order to avoid disruptions to current resources, will derail efforts and produce suboptimal results. The simulations support AOL governance policies that require a strong initial commitment to direct scarce resources to assessment activities. The simulations suggest the initial allocation of assessment resources is needed to introduce a positive and reinforcing feedback loop that drives further successes.

SD models provide AOL governance committees with a tool to model the complex dynamics associated with assessment. By experimenting with process that drive the behavior of holistic systems, leadership can better explore alternatives for change. SD models can stimulate thinking and test assumptions to help decision makers better understand AOL trade-offs.

Caution must be used in interpreting system dynamics models that discount human effects and do not capture the true complexity of the assessment process. Also, the construction of SD model (and indeed any model) relies on assumptions and hypotheses that may not satisfy all critics. Yet, the construction and simulation of SD models can help refine and test assumptions and challenge our understanding of efforts to govern AOL activities.

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