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Institutionalization of Student Learning Outcomes: Can it be Sustained?

by

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Institutionalization of Student Learning Outcomes: Can it be Sustained?

The efforts of policy makers to evaluate the performance of Higher Education have been discussed in the Education and Policy arenas for over two decades (Banta & Borden, 1994; Burke, 1997; Jones & Brazil, 1996): What is evaluated and how it occurs has been and remains controversial. Policymakers' efforts in the arena of Higher Education performance evaluation have evolved over the years from mandating measurement of inputs and processes to outcomes (Burke & Serban, 1997; Shulock & Moore, 2002). In the last decade, efforts to include student learning outcomes in mandated accountability have occurred as both state and federal governing bodies and regional accrediting entities begin to mandate reporting measures of student learning outcomes (SLO) (Shulock & Moore, 2002). Most educators agree that institutions should be accountable for the success of their students (Beno, Evans, & Richards, 1994; Price, Scroggins, & Stanback-Stroud, 1995). While some have embraced SLOs (Friedlander & Serban, 2004), others see these mandates as an intrusion into the realm of teaching (Simpson, 2002). And, more importantly, some see dire consequences of that intrusion for systems of education and the students they serve (Clemens, 2003; Simpson, 2002).

Quality in Higher Education

The federal government and the United States Department of Education (USDE), who for over 50 years used accreditation as a means to assure quality, now question whether that assurance of quality meets the needs of students, government, and the public (Eaton, 2003). Quality, according to Burke, Minassians, and Yang (2002), is the most "elusive of all the values" (p. 21) policy makers hold for higher education given that it can be "real or perceived" (p. 22). Further, they contend, measures of quality depend on the specific audience and "can be input

(SAT/ACT scores), a process (assessment of student learning), or an outcome (licensure test scores)" (p. 22) and that outputs (graduates) are not traditional measures of quality.

The Call for Externally Mandated Learning Assessments in Accountability

Kevin Carey, in his May 2004 report for the Education Trust, describes a system of higher education complacent about quality and student success due to market conditions of higher education. He forwards the proposition that increased enrollment demands, subsidized student loans, direct student aid, government subsidies of institutions such as tax-exempt status, and direct support of institutions, keeps the price of education low and further increases demand. At the same time, entering the market of serving this increased demand is prohibitively high. This bolstered demand and restricted supply provides institutions insulation from market forces. And, because little consumer information is available that might deter students from attending an institution, such as extremely low graduation rates, the insulation has resulted in complacency about student success at many institutions of higher education. Carey calls for a multi-pronged approach to "create accountability in higher education" (p. 14). First, he calls for a coordinated effort at federal, state, and institutional levels to make reporting information that includes student outcomes "unavoidable" (p. 15) and to require improvement plans when outcomes are determined to be unacceptable. He concludes that the accreditation process, lacking student outcomes and any real accountability, does not assure quality.

Most educators agree that institutions should be accountable for the success of their students and when reasonably valid and reliable measures can be developed, they can be used to meet identified needs (Price, Scroggins, & Stanback-Stroud, 1995). Beno, Evans, and Richards (1994) report on attitudes of faculty, staff, and administrators regarding the accreditation process and its assurance of institutional quality. In cooperation with the Research and Planning Group

of the California Community Colleges, they surveyed the institutions accredited under the 1990 standards and found that most of the respondents felt that the standards "assessed the quality" in the eight areas addressed by the 1990 standards with responses ranging from 65% to 76% in agreement for each standard. The respondents did, however, report a lack of accountability and a need for assessment of SLOs. More importantly, the policy implications section recommended that new standards incorporate requirements for "objective measures of student learning outcomes, or shifting the emphasis in the language of the standards from a focus on process and structure to a focus on student learning and success" (p. 21). The authors also report that there were not significant differences in opinions between faculty and administrators responding to the survey.

Shulock and Moore (2002) report that those in California government are convinced that there is no real accountability in higher education. In response to such criticisms of higher education accountability and accreditation, both state policy makers and accrediting bodies are either developing or implementing measurable student learning outcomes (MSLO) in their requirements to insure this quality (Shulock & Moore, 2002). Eaton (2003) reports that many in government find the loss of authority of faculty in higher education acceptable if it increases comparability. While the Academic Senate and administrators alike may question why the accreditors want to mandate MSLO, Beno (2004) suggests that the movement over the past decade that resulted in the incorporation of SLO into the accreditation standards are a product of both faculty concerns about the quality of their institutions and their efforts to assess student learning in their own environments.

Externally Mandated Assessments are Counter-productive in Higher Education

Much of the concern over the imposition of student learning outcomes into the

accreditation process revolves around control over academic matters. Faculties are concerned

that imposition of student learning outcomes into the accreditation process will result in a loss of

authority over curriculum matters and an eventual imposition of standards in the classroom

(Clemens, 2003; Eaton, 2003; Simpson, 2002).

Eaton (2003) states that many in the accrediting community also see the recent shift in

federal government requirements under the Higher Education Act *Recognition Standards* (i.e.

that accrediting agencies require and provide evidence of institutional and student performance,

rather than evaluating the processes), as a shift that will result in further government intrusion

into classrooms. Eaton (2003) issues another apprehension in that the accreditors themselves

express concerns that the shift to performance and outcomes in accountability will result in a

single template for quality that will decrease diversity both across and within institutions and will

limit opportunities for students.

The Western Association of Schools and Colleges (WASC) began introducing drafts of

the revised standards for accrediting California Community Colleges (CCC) at conferences for

both faculty and college administrators in 2001. While many college administrators were trying

to determine how the new standards would change the accreditation process on their campuses,

faculty began to issue concerns over where they perceived the new standards would take higher

education. Hoke Simpson, the then president of the Academic Senate for the California

Community Colleges, in a 2003 letter to the accrediting Commission for Community and Junior

Colleges responded to *Draft C* of the new standards. Simpson asserts in that letter that rather

than assure quality, the mandate for MSLO will lower the quality of education in community

colleges. He describes how instituting MSLO will potentially damage instruction by forcing teachers to focus on the measurable. Burke, Minassians, and Yang (2002) report findings that confirm that "what gets measured is what gets valued" (p. 15). Greg Gilbert (cited in Simpson, 2003), a senator from a local community college, also issues this same concern. Gilbert argues that, as evidenced in the research on the effect of K-12 reforms, imposing MSLO in accreditation could result in imposed standards and tests as well as tendencies of faculty to teach to the standards.

The K-12 progression from local standards and measures to district imposed standards and instruments and finally to state and federal requirements was cited by Gilbert as ruinous (Simpson, 2002). Gilbert describes a time-consuming and costly process that resulted in a fragmented K-12 curriculum focused on a set of governmentally determined outcomes where, as in some states experiencing this restructuring, teachers teach to standards determined by the state and students are tested on tests composed by the state in testing centers away from faculty influences. Gilbert also documents that faculty in his local senate see this transition to a tightly scripted role for teachers as a first step in privatization.

Perry et al. (1998) state that this quantitative approach to measuring quality reduces educational value to a "cash nexus" and places community colleges "squarely in the path of the diploma mill" (p. 9). More importantly, they argue that the demand to quantify the educational process is an effort to restructure community colleges in the name of accountability and are calls to quantify what is really a qualitative enterprise. Miles and Wilson (2004) also report that instituting MSLO may require major institutional changes. They report that for those colleges in the 21st century skills project who already had extensive institutional effectiveness and program

review processes but had little comprehensive learning assessments or documentation of those assessments at the student level, major institutional changes did occur.

Simpson's 2003 letter questions why the commission is challenging the legitimacy of the already existing practices in measuring student learning and achievement. The findings of Miles and Wilson (2004) validate that question. In their 21st Century Skills project, they found that of 259 respondents to a League for Innovation in the Community Colleges survey that tested agreement on a set of eight learning outcomes (i.e. their 21st Century Skills), 92% of the institutions were already addressing skills for the 21st century and over two-thirds reported at least six of the eight in their core competencies.

Beno (2004) notes that Maki (2002, cited in Beno, 2004) reported that many institutions saw the imposition of SLO in accreditation standards as strictly a compliance issue. Miles and Wilson (2004) provide the caution that the impetus to successfully implement SLO must come from the desire of the institution and valuing of student learning. Although colleges may adopt a mandated outcomes approach to satisfy demands, given the hard work, inadequate tools, and already busy schedules such a half hearted adoption is bound to fall short (Miles & Wilson, 2004).

The authors of the Howard Community College (1991) *Assessing student learning outcomes: Performance accountability report* state quite succinctly which part, the process or the outcomes, they feel is important when they report: "While the plan and report are important, they can not stand alone, for the process supplies the context and in many ways is more important than the documents themselves" (p. 1).

Implementation of the Standards

All of the stakeholders in the discussion clearly share the goals of assuring quality in educational institutions and increasing student success. Everyone also agrees that the needs of society demand that institutions greatly increase the number of students who get through the education pipeline with the skills and competencies needed to participate fully in an increasingly complex society. The question debated, however, is whether governments can or should mandate how those goals get met. Whether mandating measurement, through accreditation standards, of student learning outcomes in classrooms will increase or decrease quality is hotly debated.

The consequences of past reforms in K-12 provide a caution that mandating learning through standards and tests has unintended and undesirable impacts on students, teachers, and institutions. Rather than mandating the measurement and reporting of SLO, the evidence suggests that investing in research and new tools to measure student learning and providing sufficient resources to implement SLO measurement would speed the process of increasing student learning and success.

In 2004, the first accreditation of a college in the CCC using the SLO oriented standards was begun. The WASC implementation of the SLO oriented focus of the Recognition Standards included in the Higher Education Act came just before the deadline in the Act. Information about the changes to accreditation has been disseminated through conferences, specialized training institutes and workshops even as the standards were in development. Sessions focused on implementing SLO continue in most venues throughout the state. Whether the implementation of SLO will be one of compliance and minimal change or a diffusion of an innovation that can improve the institutions capacity for increasing student learning is still in question.

Problem Statement - The Problem of Implementation

In late 2004, the Western Association of Schools and Colleges began using revised standards for accrediting California Community Colleges (CCC). The revised standards focus all aspects of accreditation on Student Learning Outcomes. Efforts to bring structural change in CCC that would meet the revised standards began in 2001 with a number of association and state sponsored workshops, institutes and training on developing and assessing student learning outcomes to improve teaching and learning. Some structural change occurred in early adopter colleges in the CCC system such as changes to college mission statements, budgets and program review processes, as well as the creation of staff positions and committees to support, coordinate and monitor activities. This paper will analyze how those changes were affected using aspects of Roger's theory of innovation to explain the different rates of adoption and the likelihood of those changes being sustained within the adopting colleges within the CCC system.

Setting the Stage - Plan of the Paper

The prior sections of the paper have set a controversial background for the implementation of SLOs in the new standards. The following section will provide a brief description of the aspects of Rogers' theory of Diffusion of Innovation used to examine the adoption of SLOs in CCCs as specified in the newly adopted WASC accreditation standards. Data from faculty and administrator perceptions collected through personal interviews of faculty and staff from three colleges and a focus group of college administrators, local academic senate representatives and faculty from six colleges in a southern California region, will then be presented. Once the theory and data have been described, Rogers' theory will be used to examine the diffusion, and predict continued diffusion, of SLOs as an innovation in CCC. Whether these

mandated requirements can be positioned as an innovation that will complement existing faculty norms and values or be perceived as a continuing threat to those values will be also be discussed.

<div align="center">Rogers' Theory of Diffusion of Innovation</div>

This section of the paper will familiarize the reader with Rogers' *Diffusion of Innovation* theory and adoption research (Rogers, 2003) as it relates to the adoption of Student Learning Outcomes (SLO) in California Community Colleges (CCC). The area of Rogers' theory used for the analysis in this paper will focus on the communication channels used to facilitate the diffusion of an innovation as one of the main determinants of the diffusion process. Although the focus of this paper is on only one of the four main elements of diffusion each of the elements and the five stages of innovation diffusion will be introduced to provide reference point within the diffusion process. Also discussed will be how communication channels relate to: the different roles of diffusers; the functions of change agents that have been used by WASC, the CCC Chancellor's Office and colleges, and professional organizations to facilitate the diffusion in the CCCs; and the characteristics of the different categories of adopters and their relationship to the various roles in CCCs.

Elements of Diffusion

Rogers defines diffusion as "the process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 2003, p. 5). The process of diffusion is based on four main elements of diffusion; 1) innovation, 2) communication channels, 3) time, and 4) social system. He describes diffusion as a "special type of communication" (Rogers, 2003, p. 6) that is about a new idea which involves the reduction of uncertainty through information sharing within a social system.

To better describe the process of diffusion of innovation, the idea or innovation itself will be the first element considered here. Rogers defines an innovation as "an idea, practice, or object that is *perceived* as new by an individual" [italics added for emphasis] (Rogers, 2003, p. 11). He makes a particular point to emphasize that it is the perception that counts in both the newness of an innovation and attributes of innovations. It is not the opinion of experts that determine these dimensions of an innovation but the perceptions of potential adopters. Although the practice of measuring SLOs is not a new idea in the national perspective, it is perceived by most faculty members in CCC as a newly mandated practice (Simpson, 2002). Rogers explains that there are five main perceived attributes shared by most innovations that help explain the majority of differences in rates of the diffusion or adoption of innovations. These five attributes will be addressed in the Innovation Attributes section.

The second element to be considered, and the specific area of focus of the analysis in this paper, is the communication channel through which information is shared about the innovation. Rogers explains that the means of communication (i.e., mass media or interpersonal) or the source of the information (e.g., a colleague versus a representative of a regulatory body) has an influence on how the innovation is perceived by potential adopters. He asserts that interpersonal communication - when two or more individuals have similar status, education or other important similarity - is more effective in impacting the decision whether or not to adopt an innovation than mass media channels where awareness is primarily affected. The interpersonal communication channel is extremely important in the middle stages of adoption when diffusion spreads from *Early Adopters* to the *Early Majority* and *Late Majority* categories of adopters which are discussed in the third element of diffusion, *Time*. The differences of influence by communication channel will be discussed in reference to how WASC communicated the new Accreditation

Standards requiring SLO and how WASC, professional organizations, the state Chancellor's

Office, and community college faculty communicated the three types of knowledge sought by

potential adopters (i.e, awareness of the innovation, how-to information, and principles

underlying how the innovation works).

The rate of adoption can also be impacted by the degree to which individuals

communicating are similar or have similar interests. When individuals share common meanings,

culture, and social characteristics the communication is more likely to be effective in knowledge

gain, attitude formation, and decisions to adopt or resist adoption. When individuals share

environments, interests or culture, such as faculty in CCC, Rogers categorizes them as

homophilous. On the other hand, individuals must be somewhat *heterophilous*, the opposite of

homophilous, at least in regards to the innovation, for diffusion to occur. However, the more

homophilous the group, such as when interpersonal communication occurs between faculty

within a discipline or department, the more effective the communication. The differing rates of

adoption of SLO in CCC will be examined with regards to the communication channels and

shared interests of the faculty when the diffusion of SLO is discussed later in the paper.

The third element of diffusion is Time. Rogers' definition of diffusion includes the

communication of the innovation "over time" (Rogers, 2003, p. 5) to account for the 1) the

innovation-decision process, 2) the relative place in time of adoption with respect to others in the

system, and 3) the rate of adoption within a system. He also delineates fives stages within the

innovation-decision process: (1) knowledge, (2) persuasion, (3) decision, (4) implementation,

and (5) confirmation (Rogers, 2003, p. 20). The innovation-decision process of moving from

knowledge seeking to confirmation of decision to adopt or reject adoption usually occurs in that

time ordered sequence. Rogers explains, however, that when individuals are coerced or ordered

to adopt an innovation, the decision and persuasion stages can be reversed. More importantly, because individuals adopt at different rates and system adoption-decisions involve many individuals, system adoption becomes much more complex. Adoption of WASC mandated SLO in CCC will be examined in reference to both the individual adoption rates and system adoption rates with respect to faculty within a college as communication channels have changed over the diffusion period since 2001.

The forth element of diffusion, the social system, is defined by Rogers as individuals, groups, organizations and subsystems engaged in "problem solving to accomplish a common goal" (Rogers, 2003, p. 23). Diffusion occurs within a social system and the structure of the system affects the diffusion in a number of ways. Consideration must be given to effects of group norms, roles of opinion leaders (such as faculty senate), change agents, the types of innovation-decisions made, and the consequences of the innovation to social structure and individuals within the social system. Rogers recognizes both formal, agreed upon patterned social behaviors, and informal structures, interpersonal communication links between system members, within the social system. Aspects of communication structures that influence the rate and the adoption or rejection of an innovation do not necessarily coincide between the formal and informal structure. This paper will discuss how the communication channels and the formal structure of the CCC statewide academic senate, local academic senates and groups of faculty influence diffusion of SLO within their groups and how those groups influence adoption across groups within the college and system of colleges.

One of the aspects of social system that will be discussed in detail in the innovation attribute section is compatibility with social norms. Social norms, as agreed upon patterns of "tolerable behavior" (Rogers, 2003, p. 26), can be a barrier to diffusion if not considered in the

innovation design and diffusion planning. WASC mandates on faculty adoption of SLO will be discussed in relation to current faculty norms that emphasize academic freedom and academic matters as the perview of faculty. Opinion leaders are in the center of communication networks and are typically homophilous with the members of the social system and although they can be used as social models, they must remain within the boundaries of social norms or are at risk of losing their influence within the social system. Additionally, Rogers warns that homophilous groups are averse to people and innovations that differ from the norm. Heterophilous social systems on the other hand, because there is often interaction between people from different backgrounds and interests, are more likely to accept and even encourage change from system norms. Change agents, on the other hand, are normally heterophilous with the members of the social system but often use opinion leaders to facilitate communication of innovation knowledge in homophilous groups by accentuating the compatibility with system norms.

Another aspect of the social system that must be considered is the type of innovation-decision being made and the amount of influence of that type on the diffusion. Rogers discusses three types of innovation-decisions. Early diffusion research focused on the first type of innovation-decisions, the *Optional innovation-decision*, where individuals can, independent of others within the social system but within social norms, adopt or reject an innovation. In recent decades, two other types were identified and studied: *Collective* and *Authority* innovation-decisions. Collective innovation-decisions consist of decisions made by consensus within a system and authority innovation-decisions are made by those in power positions who then require implementation. Authority innovation-decisions are most common in organizations such as schools and government and typically have faster rates of adoption than optional innovations-decisions. However, Rogers also explains that when authority decisions are made, members of a

social system may circumvent adoption during implementation. The circumvention of WASC

mandated SLO[1] by faculty needed to implement SLO will be discussed in the analysis section of

this paper. An additional consideration the influence of a social system on diffusion and the

influence of an innovation on the social system is that of the consequences of an innovation.

Although change agents generally try to introduce innovations that will have desirable, direct and

anticipated consequences, consideration must be given to undesirable, indirect and unanticipated

consequences since the consequences may affect both the individual and the social system. The

discussion of undesirable (and possibly unanticipated by the change agents and authority-

decision makers) identified by the CCC statewide Academic Senate (Simpson, 2002) will be

included in the discussion section of the paper.

Innovation Attributes

Rogers (2004) identifies five main innovation attributes perceived by individuals

considering adoption that help explain differences in adoption rates: 1) Relative Advantage, 2)

Compatibility, 3) Complexity, 4) Trialability, and 5) Observability. The first two attributes or

characteristics, as suggested by Rogers, are "particularly important in explaining" rates of

adoption of an innovation (p. 17). Rogers also explains, however, that the particular

circumstances of the diffusion may determine the importance of the attribute in determining

diffusion. As will be discussed later in the paper, the attributes quickly become important

depending on the communication channels being used.

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[1] Although Rogers classifies laws passed by governing bodies such as the U.S. Congress as a

Collective-decision within the congress, WASC's implementation of the SLO Recognition Standards passed by the

congress in the Higher Education Act is classified here as an Authority-decision based on the inclusion of SLO in

the accreditation standards requirements.

Additional characteristics were also cited by Rogers that have been used in diffusion research. One additional attribute he cites from the work of Holloway in 1977 that was found to influence educational innovations, Status Conferral, can be considered as a "subdimension" of Relative Advantage depending on the communication channel, the type of knowledge being sought, and the stage of innovation diffusion the actors are operating within. How the importance of each perceived attribute fits with the diffusion of SLO in CCC will be discussed as they relate to messages within communication channels and their ability to explain diffusion rates.

The five attributes are introduced below to provide a synopsis of each characteristic. Because relative advantage and the relationship to communication channels is discussed in the analysis an extended introduction is provided.

Relative Advantage

The relative advantage attribute can be described as how a potential adopter perceives an advantage to adopting the innovation. The higher the degree of advantage perceived, the more likely the innovation will be adopted. The advantage can take many forms such as economic, social status, reduction of effort and the like. Which dimension of the innovation that is perceived as advantageous is highly dependent upon the characteristics of the potential individual or group, the communication channels used for knowledge delivery and place in time within the diffusion period. For example, an early adopter may adopt for status or function and ignore economic considerations as when video cassette recorders (VCR) were introduced and sold for $1,200. Twenty years later when a VCR is often less than $50 and owning a VCR no longer confers any status, economics and function are the advantages most important to a late majority adopter. How faculty perceive relative advantage, as influenced by the costs versus

benefits and communication channel of information delivery will be discussed with regards to

SLO adoption in CCC.

Because diffusion of innovation is an uncertainty reduction process, individuals and

organizations often seek relative advantage information during the innovation decision process.

They want to weigh the potential benefits and costs. The more relative advantage they perceive

the faster the rate of adoption. When innovations can be incrementally adopted (discussed further

in Trialabilty) and benefits can be experienced quickly, innovations diffuse more rapidly.

However, when innovations are preventative and benefits are derived from the avoidance of

some future event or a delayed benefit of a non-event, the relative advantage is often difficult to

demonstrate because future events often may or may not happen. Additionally, the consequences

of the event being avoided may be unknown or are often too abstract. Preventative innovations

are more difficult and often take longer to diffuse. Communication campaigns have been

demonstrated to facilitate preventative diffusion but special efforts are needed to emphasize the

relative advantage. Whether SLO accreditation standard requirements are perceived as

preventative or incremental innovations will impact the perceived advantage and diffusion of

SLO. How this perception is developed will be discussed in the analysis section of the paper.

Incentives are often used by change agencies to increase relative advantage and increase

the rate of diffusion. Rogers (2004) identifies five types of incentive policies used for influencing

relative advantage and diffusion. Two of those forms are relevant to the discussion of SLO

diffusion. *Adopters versus diffuser incentives*, and *positive versus negative incentives* will be

considered using WASC, CO, and college practices.

Compatibility

The compatibility attribute is also of particular interest in the discussion of communication channels. Whether an innovation is perceived as compatible with existing values is largely influenced by the communication channel used and the actors involved in the communication. Prior experiences of educators with the accrediting commission and experiences of educators in other educational entities will also be considered in the content of the messages flowing through the various communication channels and the receptivity of potential adopters based on the perceived compatibility.

Complexity, Trialability, and Observability

The last three attributes, although important in predicting diffusion will be only briefly described here. Often the message and communication channel participants emphasize these attributes as well and therefore a description, however brief, is warranted. *Complexity*, sometimes measured and perceived as simplicity, is determined by the potential adopter as their ability to understand and use the innovation. Simpler innovations are more likely to be adopted quickly than complex innovations. *Trialability*, or the characteristic that a perceived innovation can be tried in small pieces or in one instance but not necessarily fully adopted is often seen as a benefit to adopters. When potential adopters can experience the benefits of incremental adoption, the likelihood of adoption is increased. *Observability*, when an adopted innovation is easily observed by potential adopters, can influence the adoption decision. When respected group members have adopted an innovation, the more easily others can readily observe the innovation and the benefits of the innovation, the faster the diffusion rate.

The Data

Data Collection

To assess how the student learning outcomes initiative is being perceived on community college campuses in the state, four individual interviews were conducted and one regional focus group was held. All of the interviewees and focus group participants had previously participated in workshops on developing and implementing SLO. Each interview lasted approximately fifteen minutes. The interviewees consisted of two faculty members, one researcher, and one vocational dean. The two faculty were from a northern California college in the Sacramento area and the vocational dean and researcher were from two colleges in the greater Los Angeles area. The focus group consisted of six college teams from the San Diego and Imperial Valley areas. Teams were comprised of five to eight members usually with two instructional administrators, two to four faculty and in some cases a campus researcher. Teams usually included local senate representation and faculty from a variety of disciplines. The focus group conversation lasted approximately two hours.

The Story within the Data

All of the participants in both the focus group and interviews acknowledged that SLO were at least in part a new requirement for accreditation and for many contained some new ideas. Faculty participants in both the focus group and the interviews clearly took exception, however, to the WASC implications that SLO were not a part of the "old way" of teaching. Attendees of recent WASC workshops on SLO reported in the focus group that WASC was still saying "this is the bad old way and this is the good new way". MB, a biology instructor and curriculum chair at a northern California college, stated in her interview:

There has been a tremendous assumption that learning has not been occurring until the document is handed to the governing body. That's the frustration. We're being asked that "when did you stop beating your wife" question. Since then, having engaged the process, we've discovered that it is actually very, very valuable and has started good discussions among our colleagues. (04/28/05)

Because all of the participating colleges were in different stages of the accreditation cycle, and some colleges report using the changed standards as the initial driver for attention to SLOs while others reported student learning as the driver, colleges were in vastly different stages of knowledge acquisition about SLOs. In all of the discussions, however, participants recognized that awareness of SLOs was growing on their campuses. One faculty member interviewed estimated that 75% of faculty on his campus were aware of the term "student learning outcomes" and that SLOs were now part of the accreditation process but only 10% of faculty on his campus were familiar enough to know how to develop and use the concepts in SLOs. Another college in the focus group reported:

At Grossmont college, we are about a year and a half away from accreditation. We're in the process of self study. We have begun the dialog in both our curriculum committee and our program review committee. There is a sense that we are embracing student learning outcomes. We are not looking at student learning outcomes implementation as a way to meet accreditation standards. This embracing of student learning outcomes appears to be infecting our colleagues. This focus on teaching and learning with an institutional focus began long before the accreditation standards were revised.

The venues for learning about SLOs also varied depending on the position (i.e., faculty administrator, and researchers) held by participants in their institution. Faculty leaders, administrators and researchers reported first becoming aware of SLOs and their implementation in accreditation at professional organization meetings. Faculty leaders reported awareness particularly from the statewide academic senate institutes as concerns were being raised about the WASC imposition of SLOs in accreditation. Campus venues for awareness were reported as local senate meetings, national discipline conferences and departmental meetings. Generally, many faculty reported being previously unaware of student learning outcomes or specifically the language used to talk about them. Many of the parts of student learning outcomes, however, such as behavioral objectives, rubrics, assessing learning, evaluating assessments of learning, planning instructional modifications, and participating in dialogue with other faculty about student learning has been occurring although in sporadic and often inconsistent ways.

Administrators reported first hearing of the SLOs in reference to the changing accreditation standards as they were being developed in early 2002 at annual conferences. The vocational dean interviewed (04/28/05) expressed an experience on her campus that was also echoed at the focus group. Once the administrators on her campus were made aware of the new focus for the accreditation standards at professional association conferences, a group of three administrators and three faculty went to a workshop put on by the CCC Research and Planning Group (RP Group). She reported that:

> Four people continued the effort after returning to the college, meeting monthly, and then
>
> when the curriculum chair went to the academic senate faculty institute, she came back
>
> and said "thank you very much, now go away". To the managers who were involved that

was fine, with it being one less thing they had to do, and it had started a dialogue across

the campus.

The vocational dean at one of the colleges whose VP of Instruction and local senate

president were expressing great success in collaboration between administration and the local

senate on SLO implementation stated privately, to not publicly contradict his VP of Instruction,

that the same kind of experience had happened with a group that he had participated in at his

college.

Campus practices varied widely on venues for raising awareness among general faculty.

One college at the focus group session reported particular success at raising awareness through

faculty newsletters with articles written by faculty, for faculty. The newsletter was distributed

through hardcopy via campus mailboxes. That same college was also having some success with

raising awareness and more detailed how-to information through regularly scheduled monthly

forums focused on SLOs. Faculty attending the monthly forums, which they reported as three to

five faculty at each forum, were able to received one hour of flex credit for each forum

attendance. Many of the participants in the focus group and half of the interviewees reported that

campus institutes were being held for more how-to communication of SLOs where flex credits

were often available. Nearly all of the participating colleges reported that the local senates had

accepted the responsibility on implementing SLOs as being within their purview of academic

matters. All of the colleges reported either revisions or plans to revise program review

requirements and many were implementing revisions to the curriculum approval process to add

SLO requirements that would help satisfy the accreditation requirements. At the northern

California college, faculty opinion leaders had developed a primer to SLOs that was being shared

with faculty going through either the curriculum approval process or program review.

The researcher interviewed had quite a different experience with SLOs awareness that went back to the mid 1980s when his southern California campus implemented conversion of their objectives in the *course outline of record* and *course syllabi* to behavioral objectives. In the late 1990s, he participated in a workshop developed through a collaborative effort of the Chancellor's Office (CO) and the CCC Research and Planning group. Although efforts to begin implementing more ideas from the workshop back on his campus were planned, the retirement of the VP of Instruction and a new focus on other issues arising with the arrival of the new VP, those efforts were soon extinguished. Additionally, although he was very fluent in the concepts of SLOs and was presenting at SLO workshops for the RP Group sessions occurring around the state, issues other than SLO implementation that were occupying the local senate were derailing any efforts to offer or bring SLO workshops to his campus.

When asked where pockets of acceptance or resistance to SLOs were on his campus, one faculty interviewee stated that:

> There is a cluster of resistance, if you will, and that cluster of resistance tends to sit in
> the humanities. I think you'll find that in most institutions. The humanities and social
> sciences are probably the ones that will be the most resistant on any campus. If you
> find resistance you'll find it there; history, psychology, philosophy, humanities. You
> see the least resistance in vocational areas and the sciences. Those disciplines are
> used to measuring things anyway. The whole process does not intimidate them much.
> When you go to the humanities area and talk to a sociology professor and ask what it
> is that you expect the student to learn in your class. They are apt to say "They're
> going to learn how to think". At some of our retreats I've been in knock down drag

out fights with people when they say "You can't measure what I do. You can't

measure what an education does." (NW, 04/28/05)

To demonstrate how varied faculty experience is with bringing SLO concepts to their

disciplines, one faculty member in the health science area at a southern California college,

reported that when bringing up some new ideas about integrating SLOs into their curriculum at a

department meeting, she was admonished with "you're new, you'll get over it". She then

followed that statement with "National conferences seemed to help because people come back

and say 'It was not just Janet making it up.' People are finding unique strategies at conferences

that will work on our campus."

Anxieties were still evident, however, on many of the campuses as reported by a few of

the participants and acknowledged by most of the others. Some colleges reported that many local

faculty senates were still citing the same concerns issued by the statewide academic senate in

their opposition to the mandates in 2002. One participant added that on her campus the climate

had changed in the senate from "Don't go there," to "What is this about?". One faculty member

interviewed mentioned this conflict and also added an additional anxiety over what could be an

unanticipated consequence of SLO implementation at their college:

> There is some anxiety about conflicts between mandated student learning outcomes
>
> and academic freedom. We have discussed this at our convocations. There is also a
>
> concern that we are in danger of risking the transferability of our courses if we revise
>
> the course objectives because the course objectives are part of the articulation
>
> agreements with the four year institutions. There is also anxiety in that something is
>
> being imposed from above.

There were a number of other anxieties and concerns mentioned in the discussions ranging from use of SLOs in faculty evaluations to the continuing concerns over imposition of standards in the classroom and the use of valuable time for a compliance activity.

The Application of Rogers' Theory - Integration Section

The data collected through the interviews and focus group on the adoption of SLOs in CCC fits well with Rogers' theory of diffusion of innovation. Rogers' theory helps frame the data to determine whether SLO rates of adoption can be sustained or will accelerate on individual campuses in the CCC system. Particularly the communication channel aspects of Rogers' theory allows an analysis of why some campuses are experiencing more rapid adoption of SLOs than others.

As an innovation implemented by an *Authority-decision* mandated by congress, WASC and college administration, SLO adoption clearly met resistance through the formal channels of communication and social structure of the statewide Academic Senate (AS). This in turn led to an undermining of efforts by local senates, just as Rogers' theory suggested as a possibility in circumstances of Authority-decisions to adopt. As the senates, both statewide and local senates, took charge of the implementation, however, many faculty perceived the decision to then be a *Collective-decision* to adopt and the formal resistance dissipated. Rogers' theory also suggests that Authority-decisions and Collective-decisions to adopt often diffuse more rapidly. Most reports by faculty leaders, even from those embracing SLOs, stated that without the imposition of SLOs in the accreditation standards, they believe little movement would be occurring in their adoption on their campus.

Rogers suggests that when informal channels are used for information dissemination about an innovation, potential adopters are more likely to take the position of the information

provider when making the decision to resist or adopt. This tendency was clearly demonstrated in

the reports from faculty both in the case for early resistance, when information dissemination,

and the subsequent resistance, began through the formal communication channels from WASC

to the AS, and later in acceptance of the adoption as the decision to adopt was perceived to

change into a collective-decision. Dissemination of the rejection of SLO imposition in the draft

standards by the AS quickly spread through the informal communication channels in the

homophilous groups of faculty local senate and departmental meetings. And, those same

informal channels were used and are continuing to be used to diffuse the adoption once the

collective-decision was made by the senates to take control of the SLO implementation process.

Even more important, the evidence of faculty acceptance of the innovation when awareness and

how-to information was gained through informal sharing among faculty at discipline specific

conferences, even when the faculty was previously a member of a resistant homophilous group

on campus, demonstrates the effectiveness of the informal communication channel in

homophilous groups for diffusion of innovations.

      The effect of where the institution is in the accreditation process and the period within the

diffusion process contained in the *Time* element of Rogers' theory and the impact of Time on the

rate of adoption also align well. This was clearly demonstrated by the reports of those who had

begun adoption before the revision of the accreditation standards as well as those facing the new

standards in accreditation within the next few years especially where dialog has begun on the

aspects of the self-study. There was evidence that once the formal social structure of the campus

was able to view the norms of faculty as compatible with the adoption of SLOs and the local

senate in turn made the decision to adopt, mechanisms were quickly put into place to facilitate

the diffusion. And this integration of the innovation into the social norms began to increase the

relative advantage perceived by faculty and the ability of faculty leaders to influence the adoption just as the theory predicts. Evidence of these increases are encapsulated by the curriculum chair's interview comment that "Since then, having engaged the process, we've discovered that it is actually very, very valuable and has started good discussions among our colleagues…It was something we recognized we needed to do for both internal and external reasons. It very quickly has become a faculty dominated process and right now as curriculum chair, I'm telling everybody you will put course student learning outcomes in your course outlines." As the innovation diffusion process moves to begin transition from Initial Innovators to the Early adopters and Early Majority Adopters, the role of change agents and how they and their message are perceived by potential adopters is also changed. Change agents, often seen as suspect by homophilous groups are transformed into facilitators of information dissemination and resources. This is clearly demonstrated reports of focus group and interview participants of the trend seen at adopting colleges of inviting external experts from outside their group to put together institutes on their campuses for disseminating the "How-to" type of knowledge. Additionally, many colleges were using incentives to speed adoption for diffusers, in the form of stipends, or adopters, in the form of flex credits, for conducting and attending "how-to" sessions for knowledge acquisition.

Although the theory of diffusion does address both individual adoption and system adoption, the data gathered was not sufficient to evaluate either individual faculty adoption or system wide adoption. Other promising studies are underway that will allow both of these areas to be explored.

Conclusions

According to Rogers (2004), diffusion occurs within a social system and the structure of the system affects the diffusion in a number of ways. This paper examined the effects of communication channels, social structure within CCC, group norms, roles of opinion leaders (such as faculty senate), change agents, the types of innovation-decisions made, as well as the timing and eventual consequences of the innovation to social structure and individuals within the social system. The concepts used in Rogers' theory of Diffusion of Innovation for this analysis was a remarkably good fit of theory and data for the innovation being examined. The rates of diffusion appeared, from the data collected, to support the theory in nearly all areas considered in this analysis. The theory accurately describes and allows some predictive power to determine how the communication channels and the formal structure of the CCC statewide academic senate, local academic senates and groups of faculty influence diffusion of SLOs within their groups and how those groups influence adoption across groups within the college and system of colleges. Additionally, the theory helps explain the differing rates of adoption within colleges based on where they are in the diffusion process.

The transition of faculty perceptions of SLOs from WASC mandates, and the associated resistance, to faculty adoption of SLOs to improve teaching and learning was easily explained by the application of Rogers' theory and suggests that diffusion will occur. And, as that diffusion occurs, the theory suggests and the data support it, the rate of diffusion will also increase.

Although the data was not sufficient to predict adoption in the "improvement of teaching and learning" sense contained in the accreditation standards across all colleges involved, some of the data did support the transition in relative advantage perceived by faculty at some colleges. A

more thorough application of the theory on an individual local campus level could help local

change agents and faculty leaders strengthen the transition from compliance to improvement.

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