Institutional Support for the Virtual Professor

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Abstract

Academics who hold positions at single-mode, distance education institutions are presently being hampered by an adherence to a long-standing set of protocols (specific office location, face-to-face meetings) that were put in place when the conventional post-secondary was the norm. With the advent of a powerful merging of personal computers and the internet, a shift from those protocols to one of support for the virtual professor is in the offing, to the benefit of both the professoriate and the student. A key factor in this shift is the degree and quality of institutional support that will allow these changes to take place. This paper focuses on a number of the key factors that will have to be addressed if this new type of distance education academic is to function effectively.

Key words: Distance education, single mode, academics, academic responsibilities, institutional support

Introduction

The emergence of large-scale university degree programs that are being offered by single mode distance education institutions and the number of such programs that are planned for the future has focused attention on the changing role of the academic who holds a full-time position at one of these institutions (Beaudoin, 1990; Olcott, 1996). The traditional role of the individual who holds a tenured position at a post-secondary institution has evolved over many decades and there is a clear consensus as to what that role comprises. Typically, the academic is one who has been accredited as a subject-matter expert in some discipline or field of study and who instructs students, carries out research and publishes the results and provides service to the community. These activities and efforts typically follow on a formal appointment to an institution according to the terms of a collective agreement and are executed under the aegis of what is oft-referred to as academic freedom. Historically, the institutions that underwrite these formal academic appointments have been represented by buildings in a specific location. Now, there are reasons why such a long-held model for higher learning should be questioned (Guskin, 1994; Hilz, 1990) and alternative structures should be considered. One of the substantive changes that needs to be scrutinized is the traditional role of the academic and the working relationship in the form of institutional support in the execution of typical academic responsibilities.

For the virtual professor, as one manifestation of the distance education academic, advances in telecommunication technologies have greatly increased the accessibility to distance education post-secondary institutions and programs (Olcott, 2000). Indeed, the argument is made that these new, powerful and ubiquitous technologies should be viewed

as instruments of positive change for post-secondary education. Not surprisingly, the potential effect on universities has been noted (Williams, 1995) and, for one, has resulted in calls for an examination of how academics ply their trade in this new environment. It is generally agreed that the manner by which academics have traditionally fulfilled their roles will markedly change in the near future. For single mode, distance education institutions, one possibility is for the evolution of the academic who is anchored to a particular institution to move toward what might termed the "virtual professor" (Jones and Schieman, 1996; Jones and Schieman, 1998; Jones, 2000). This individual would be engaged to carry out the three traditional roles of academics (instruction, institutional and community service, research) but would do so from whatever locale the individual academic deemed to be the most appropriate and productive. Another possibility is that a virtual academic might enter into agreements with more than one institution in order to carry out this 3-pronged mandate but that particular configuration would be too complex for this discussion and would be best left to future consideration.

On the surface, these possibilities might seem relatively minor but a closer analysis and some reflection would reveal that the effects on the traditional role of an academic would be substantial. This paper focuses on the institutional support factors that would have to be addressed if the virtual professor is to execute efficiently and effectively the various and traditional responsibilities of the full-time academic. Also, a brief discussion of the competencies required of the virtual academic in order to function effectively is presented.

Types of support

To narrow the discussion to a manageable level, let us assume that our virtual professor has an appointment at a single mode, distance education institution and differs only from his or her distance education colleagues in that this individual does not physically appear at the home institution. What would be some of the concerns that this individual might face within the framework of the traditional responsibilities cited above?

Three major support concerns for the virtual academic are (1)communications support, (2)support for access to information and (3) technical support. A strong case could be made that unless the necessary procedures, policies and resources are put into place to ensure that the virtual academic's home institution is prepared to provide high-quality support for these concerns, the virtual academic would be at a disadvantage with respect to the fulfillment of traditional responsibilities. In a very real sense, the virtual academic is expecting no more than the support that would be given to an academic at a conventional, single-mode distance education institution although, admittedly, the weight given to these three areas would be somewhat different and the allocation of institutional resources would have to accommodate this shift in internal decision-making about policies and resource allocation.

Communications support. The first concern centres on the need for the provision of support for three types of communication: text exchanges, audio interactions and audio-visual interactions. The ability to make contact and to share information between and among students, colleagues, institutional departments and external agencies (e.g., other academics, government institutions, research centres) by means of a high-quality and stable set of technologies (text, audio, audio-visual) is paramount. Indeed, it would be

folly to argue otherwise. Table 1 depicts these three communication needs, a grouping of

traditional academic responsibilities and the interactions between them:

	Instruction	Service	Research

Text
(e-mail,
course web
page)
	- provision of
	  course outline
		- committee chair	- data analysis
			  software
			  (quantitative)

	- course study
	  guide
		- committee
		  member
			- data analysis
			  software
			  (qualitative)

	- course
	  assignment
	  manual
		- student advisees	- research design
			  consultation

	- asynchronous
	  conferencing
		- thesis supervision	- statistical
			  analysis
			  consultation

	- assignment
	  submission
		- thesis committee
		  member
			- data analysis
			  interpretation

	- assignment
	  feedback
		- project
		  supervision
			- access to
			  existing data
			  (government,
			  NGO)

		- project committee member	- grant writing

Audio
(real time)
	- synchronous
	  conferencing
		- student advisee
		  communications
			- research design
			  consultation

	- collaborative
	  activities for
	  students
		- thesis supervision	- statistical
			  analysis
			  consultation

	- presentations
	  by instructor
	  and students
		- project
		  supervision	

		- student oral
		  defense (thesis or
		  project)	

Audio-Video
(real time)
	- synchronous
	  conferencing
		- student oral
		  defense (thesis or
		  project)	

	- presentations
	  by instructor
	  and students		

Table 1. Types of support for specific responsibilities
of a virtual academic

It perhaps goes without saying that manifestations of this breakdown of the interactions between communications type and academic responsibility have been in place – perhaps ad hoc - for many years but such a structured analysis can be enlightening in that it can provide a framework for the systematic implementation of an institutional initiative to put into place, as a result of internal budget and resources considerations, a cohesive and well-integrated collection of resources.

This classification scheme is to some extent arbitrary and there are instances in which one or more of the cited responsibilities could be slotted under more than one type of support. For example, as indicated under the Research category, consultation between the virtual academic and those who facilitate the design of research and the analysis and interpretation of data that have been collected maybe carried out either via textual exchanges (e.g., e-mail) or by synchronous audio conferencing. A second example would be a scenario in which a graduate student is ready for an oral defense of a dissertation or thesis. The options would be to have the committee of virtual professors choose between the audio and the audio-video technologies. The latter would be particularly useful for institutions that were concerned about the matter of student identity. Similarly, for instructional purposes, the virtual academic might opt for a teaching strategy that requires real-time audio-visual interaction, as might be the case for counselling psychology courses that focus on interpersonal, real-time interaction. The point here is that, if the support for all 3 types of communication is well-designed, dependable and stable, then the decision as to how each will be employed can be left to the discretion of the virtual academic.

Access to knowledge and information. This second support concern centres on the virtual academic's need for easy and reliable access to the existing bodies of knowledge in his or her discipline and to other forms of information. The rationale in this instance is no different from the situation at any conventional university which, in a nutshell, is that those charged with providing a critical analysis of the standard model of any field of study or discipline, with disseminating those features of that standard model and with generating new knowledge via research and scholarship must have easy and flexible access to sources that allow for these academic endeavours to occur. Specifically, the virtual academic's home institution must make available a comprehensive set of electronic databases (e.g., E.R.I.C., PsychLit) for literature reviews, support for searching these same databases and the procedures for obtaining either an abstract or a full-text copy of pertinent articles. Issues such as site licenses for these databases, copyright concerns and the maintenance of these resources would fall on the shoulders of the institutions library or research departments.

A second repository of potentially useful documents would be governmental and non-governmental publications. Typically, reports of research and projects that are implemented by these agencies require very specific expertise to acquire and would likely be beyond the purview of the individual virtual academic. Finally, if we take as a given that any one institutional library will not have in its holdings a copy of all foundational texts in any discipline, the opportunity and subsequent procedures for obtaining particular texts via inter-library loans must be set into place.

Technical support. The third concern is that of hardware support, software support and a first-rate internet connection. A virtual academic must have what might be colloquially

referred to as a "state of the art" system, especially for internet communication. The criteria by which one determines the power of any standalone personal computer system is difficult to describe precisely as advancements in all aspects of home computers surface in the marketplace with regularity and benchmarks for comparison purposes are dated rather quickly. Perhaps it is not unreasonable to state that, whatever configuration is provided by the home institution, the system's specifications must be up to the task of handling the demands of the three types of communications delineated in table 1.

Software support is another arm of institutional technical support and manifests in mainly two ways. First, instances of the standard application programs (e.g., word processor, internet browser, drivers for peripheral cards, etc.) must be made available. More important, perhaps, is that procedures should be in place that allow for the upgrading and, in some case, the customization of these generic programs to conform with institutional standards (e.g., templates for the publication of internal documents, internal program settings to clear security barriers like firewalls). Second, the matter of software viruses demands attention and the standardization of ways to ensure that the latest version of this type of defensive software is easily obtained. Third, for data analysis purposes, software that is designed for both quantitative (e.g., SPSS) and qualitative (e.g., Atlas-TI) methodologies must be made available and supported, as would the case for any other application program, with respect to training, upgrades and internal – i.e., institutional - standardization procedures.

Third, all aspects of connecting to the internet (e.g., dial-up, broadband, wireless) must be overseen, distributed and maintained. In particular, a sophisticated and well-organized help desk must be available all day/everyday to aid those virtual professors

(and their students) who are having difficulties. These components of the hardware support will not be inconsequential and will require foresight and significant departmental support from the institution to ensure that high-speed and reliable connectivity is standard.

Finally, the ergonomics of a personal computer workstation have to be addressed as would be the case for any office or work environment at non-distance education institutions. Provision would have to be made for unique interactive devices (e.g., large displays, input devices), well-designed desks and chairs, adequate lighting and storage units.

Required academic competencies

Paralleling the communications and technical support described above, another factor that bears scrutiny is the competency level of the virtual academic to take advantage of all that the home institution provides. A large body of research that focuses on human-computer interaction (Card et al., 1983 ; Shneiderman, 1987) makes it clear that individuals vary greatly on their ability to make full and effective use of any computer system. The message from these researchers is that it should not be taken for granted that anyone who uses a computer system will do so in a fully productive manner and that, in many instances, instruction (both initial and on-going) in the use of any software/hardware combination (text, audio, audio-visual) will be required. Of course, many of these competencies and sub-competencies will be acquired informally but it would be foolhardy to think that some form of systematic orientation and instruction wouldn't be necessary. A compilation of many of those competencies (basic, intermediate and advanced) is presented below:

	Hardware	Software	Internet
Basic	- use and maintenance of main system and typical peripherals (printer, headphones, audio system, webcam) - use of alternative input devices	- use of application software (e.g., word processors, database programs, presentation applications) - backup of user data files - tweaking preferences and options	- use of browsers and features (bookmarks, filters, preferences) - use of e-mail programs and features (e.g., attachments) - use of audio and audio-visual software
Intermediate	- upgrading of internet connection device (modem, cable modem, web cam) - minor troubleshooting	- installation of application programs - installation of software drivers - updating software drivers - file formats (text, sound, video)	- installation of browsers - installation of e-mail programs - installation of audio and audio-video applications (two-way and multiple users)
Advanced	- major troubleshooting (e.g., installation or removal of peripheral cards)	- installation or upgrading of operating system - multiple operating systems	- web site development and maintenance

Table 2. Competencies required of the virtual academic

A reasonable expectation is that, even today, many of these virtual professors would
have mastery of the intermediate competencies (Spector, 2001) and a few would fall into
the advanced category. Both of these groups would be in a very strong position to carry
out the typical responsibilities of an academic by means of the 3 types of support
described in table 1. There would, of course, be exceptions but those could be handled

with the helpdesk personnel. A more substantive institutional effort will have to implemented to bring those with a basic competency set up-to-speed.

Conclusion

Much change has taken place in post-secondary educational circles as a result of the convergence of desktop computing and the internet in the last decade. The effect has been quite striking for single mode, distance education institutions (Van Deusen, 1997) and institutions have not been quick to respond. Such recalcitrance is unfortunate for, as has been argued, there is no need to hamstring academics of these institutions IF a comprehensive and long-term series of support strategies (organizational, administrative) are devised and implemented. Perhaps the strongest point that can be made is that, if the virtual professor were supported as discussed in this paper, the virtual student would benefit greatly.

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