

**In Focus:**  
**Banathy and his remarkable Functions/Structure Lens**

**Introduction**

The university environment is a complicated rhizome consisting of (though not inclusive) organizations, colleges, units and departments. In order to understand the connectivity within and around these “human activity systems (HASs)” (Cookson, 1998, 3) (which includes one to another and within itself), we as educators need to develop a “deep[er] understanding of [the] underlying structure” (Richmond, 1994 as cited in Cookson, 1998, 3) and concentrate on a “systems view” analysis, one that interprets wholly the complexity of a “dynamically changing and turbulent environment.” (Banathy, 1995, 53) Systems analysis is not a new concept, but it has become increasingly important as we begin to identify and determine how best one system works within not only its own environment but in its reciprocity to others. Banathy, a “world-renowned systems scientist” (International Society for the Systems Sciences, par. 6) and an early adopter of the systems view, constructed 3 system models called “lenses” in order to help observe and interpret these complicated environments. These lenses were applicable to “all social systems” (Banathy, 1995, 55) and worked very well within education, a highly social and dynamic environment. Through the use of one lens called the function/structure model, I will present a systems view analysis of a Resource Unit. In this account, I will describe the function/structure system, its components, the processes involved, and the feedback mechanisms that operate for the system. (Ally, 2007, assignment 1)

## Functions/Structure Model

The functions/structure lens represents a snapshot of the system at a “particular moment in time.” (Cookson, 1998, 11) It is extremely helpful in determining the systems “nature, purpose, and functions” (Cookson, 1998, 11) including its organizational structure and integration techniques. In order to apply this lens properly, there are 5 steps to the examination, they are:

“(1) defining the system image; (2) identifying the systems definition...; (3) identifying the functions...; (4) determining which components of the system carry out the functions; and (5) defining the system’s structure of relationships among the various parts.” (Cookson, 1998, 11)

## Image and Purposes

**TABLE 1. SYSTEM IMAGE AND PURPOSES**

<b>SPECIFICATIONS</b>	<b>Resource Unit</b>
Image of the system	<ul style="list-style-type: none"><li>• Resource Unit: to facilitate access to effective teaching, learning and research strategies using computer technologies.</li><li>• Resource Unit staff: a central resource for faculty; support for the university wide Learning Management System in addition to providing support to “orphaned” projects throughout the university.</li><li>• Staff: a resource centre that provides workshops on common software.</li><li>• Faculty: an opportunity to be trained on the institution wide content management system and various new media software.</li><li>• Graduate students: an opportunity to learn and obtain knowledge on common software programs and the institution wide content management system.</li><li>• Director: an opportunity for faculty to get information and support on the LMS and common software programs.</li><li>• To the president, vice-president and provost, Director of the Resource Unit: a central resource for the LMS and faculty training and support.</li></ul>

Generic purposes	<ul style="list-style-type: none"> <li>• To provide faculty, staff and graduate students with resources in support of learning management systems (LMS), and the development of workshop curriculum related to learning, teaching and technology skills.</li> </ul>
Specific purposes	<ul style="list-style-type: none"> <li>• To provide core support for the LMS and be a central resource to faculty.</li> <li>• To offer workshops to faculty, staff and graduate students.</li> <li>• To provide options to faculty about additional resources found on the university campus.</li> </ul>

As indicated in Table 1, the Resource Unit’s image centers on being a core support unit for training faculty, staff and graduate students on various and diverse technology systems within the university. Both generic and specific purposes align itself well to the image that the Resource Unit has conveyed to its systemic environment. The Resource Unit was re-established to provide for academia; this unit prepares faculty with the skills and resources in order to tackle the burgeoning commitment of teaching with technology.

### System Specifications

<b>TABLE 2. SYSTEM SPECIFICATIONS</b>	
<b>SPECIFICATIONS</b>	<b>Resource Unit</b>
Clients and Services	<ul style="list-style-type: none"> <li>• Faculty including new faculty, graduate students and staff in support of teaching with technology.</li> <li>• Consultations provided either on/off-site depending on the client’s availability.</li> <li>• Training on the Learning Management System (LMS) and common software programs.</li> <li>• Multilingual training centre and central test scanning service.</li> </ul>
Ownership of the System	<ul style="list-style-type: none"> <li>• Primary sense of ownership resides with the faculty, vice-provost, two top university administrators and the Director of the Resource Unit.</li> </ul>
Systems Responsibility	<ul style="list-style-type: none"> <li>• Workshops are offered daily for LMS training and</li> </ul>

	<p>twice every semester for other workshops taught by individual Resource Unit staff members including outside instructors.</p> <ul style="list-style-type: none"> <li>• LMS information provided on the provost’s portal website, available to anyone with an internet connection.</li> <li>• Translation Centre and scanning service is administered by front desk coordinator.</li> <li>• Test scanning service is administered by front desk coordinator.</li> </ul>
<p>Relation to Systemic Environment</p>	<ul style="list-style-type: none"> <li>• Training workshops are offered daily for the LMS and twice every semester for other workshops taught by individual Resource Unit staff members including outside instructors.</li> <li>• Translation Centre and scanning service is administered by front desk coordinator on a daily basis.</li> <li>• LMS tutorials are provided on the provost’s portal website, available to anyone with an internet connection.</li> </ul>
<p>Response to Environmental Restraints</p>	<ul style="list-style-type: none"> <li>• One source of environmental constraint was competition from staff development with similar workshop training. Staff development was provided a run down of our workshops and concluded that they were not a threat to their more intensive courses.</li> <li>• Another constraint was the limited availability of staff needed in order to serve faculty, new faculty and graduate students. With a department of 9 people and only 5 of those capable of courseware support – we could not possibly support a minimum of over 1450 courses and 30,000 users! We hired a project manager to control the intake of requests.</li> <li>• Another constraint is holiday and peak service for our Scanning service. We have to hire and/or pay overtime to a staff member in order to produce / scan tests through the machine.</li> <li>• Another constraint is front desk support. There are two support units that reside within the physical space of the Resource Unit. These additional units are located further inside the department and must be navigated to. If the Resource Unit reception is away, then we have wandering faculty. It has been recommended that the Resource Unit staff coordinate their lunches with the two other units.</li> </ul>
<p>World View of System Members</p>	<ul style="list-style-type: none"> <li>• The need for training on the LMS and common software programs is massive. Training for the LMS is provided 2 times daily – in the morning and afternoon.</li> <li>• The need to provide “different” new media tools to</li> </ul>

	faculty are a high concern. Blogging, podcasts, video, audio and Web2.0 are all in demand services. Faculty needs shape the Resource Unit’s vision and mandate.
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As indicated in Table 2, system specifications reveal that the views of clients, systems responsibility and relation to systemic environment are all similar in that they agree what services and tasks the Resource Unit should provide. The disparity arises when we look at the views of the environmental restraints, where units other than the Resource Unit, ownership and faculty expectations contrast sharply to the Resource Unit staff and what we can realistically provide for. The world views are indicative of leading edge technology and training.

**System Functions and Components**

<b>TABLE 3. FUNCTIONS AND STRUCTURES WITHIN THE RESOURCE UNIT</b>	
<b>FUNCTIONS</b>	<b>Resource Unit</b>
Maintain continuous interaction with other systems	<ul style="list-style-type: none"> <li>• Since the reorganization that happened in 2005, the Resource Unit was mandated by the Provost’s office to provide support for faculty. An advisory board was created in addition to regular audits solicited by the vice-provost and other executive administrators of the university.</li> <li>• A new website was created and given a link from the university main homepage.</li> <li>• A section of the Provost’s website is dedicated to the Resource Unit support services.</li> <li>• Every semester workshop brochures are sent out to all departments, including the various listserv’s that the Resource Unit maintains.</li> <li>• An awards conference is held every year for 2 days to showcase departmental initiatives. This provides for visibility and open communication to departments that may not be in regular contact with the Resource Unit.</li> <li>• Announcements of workshops and</li> </ul>

	<p>upcoming seminars sent regularly to the listserv, departments and teaching hospitals.</p> <ul style="list-style-type: none"> <li>• Two staff sent every year to conference proceedings dedicated to emerging technologies.</li> </ul>
Define the Resource Unit on a continuous basis; the Resource Unit system's image and purpose	<ul style="list-style-type: none"> <li>• Vice-provost, director and advisory board met frequently to discuss the efficacy and viability of the support unit.</li> </ul>
Define subsystems that can offer resources	<ul style="list-style-type: none"> <li>• The Resource Unit defined as subsystem, course design and development, training, library services, workshop fees, program management, and continuous interaction with the university general environment</li> </ul>
Coordinate with others systems to assure availability of resources	<ul style="list-style-type: none"> <li>• The Resource Unit drew upon the resources of another unit to provide for training, program development and conference proceedings.</li> <li>• The Resource Unit drew upon the resources of another unit to provide for training to teaching assistants.</li> <li>• The Resource Unit drew upon the provost's office to provide for visibility and sustainability of the unit.</li> <li>• The Resource Unit director coordinated with various senior executive officers within the university, university council and advisory board for sustainability of unit.</li> <li>• The Resource Unit drew upon the Administrative Management System (AMS) to provide for a online registration system.</li> </ul>
Acquire and maintain resources	<ul style="list-style-type: none"> <li>• The management subsystem was led by the director, vice-provost and advisory board.</li> <li>• The 9 full-time staff members comprised the instructional subsystem. The unit director in consultation with the courseware support specialists determined choice, scheduling and revision/or development of existing new</li> </ul>

	<p>courses. Webmaster contributed to the design and preparation of portal website and other promotional materials for conferences.</p> <ul style="list-style-type: none"> <li>• Program and Promotion Coordinator comprised the conference and mailing listserv subsystem.</li> <li>• AMS comprised the online registration subsystem.</li> </ul>
<p>The students utilize the resources</p>	<ul style="list-style-type: none"> <li>• The Resource Unit after the reorganization had 5 full time staff members. The unit was given 2 new positions and budgetary control. Software budget was allocated to the central library.</li> <li>• A new lab was constructed to accommodate 10 more students; concurrent workshops could now be held.</li> <li>• Registration system goes online included are VISA/MC payments, class lists, cancellations and waiting lists.</li> <li>• Website becomes part of the library Content Management System (CMS); easier to navigate, search and subscribe to RSS feeds.</li> <li>• Additional part-time staff member gets hired to help with requests on LMS.</li> </ul>
<p>As participants within the system, students enrol and take part in the courses. The system is guided so as to keep the system operating.</p>	<ul style="list-style-type: none"> <li>• With the added advisory board, the management structure was formally sanctioned by the vice-provost and senior executive officers. This created sustainability of the unit.</li> <li>• With the director being a previous faculty member, recommendations towards unit efficacy and viability remained at the fore.</li> <li>• Extra staff is hired for help in case of overload.</li> </ul>

Table 3 outlines all of the functions of the system and identifies the mechanisms designed to execute them. The Resource Unit interacts with a variety of systems to continue its viability (and visibility) within the university. While The Resource Unit works directly with one other subsystem,

Administrative Management System (AMS), it interacts with a multitude of various other subsystems of other systems within the university. In addition to physical system interaction, the Resource Unit's mailing list boasts an impressive email inventory totalling in the thousands, distributed around the tri-campus. Due to the vast array of systems that the Resource Unit interacts with, many departments and campuses have displayed a willingness to continue reciprocity and help out if needed. Another unit within the university has been a highly used resource for help in the implementation of the LMS.

### **Relational Integration of the System**

Prior to the reorganization, the Resource Unit was considered isolated, specialized and heuristic. The unit itself was highly autonomous and had little interference from the parent university. When ownership changed, the Resource Unit was stripped of its autonomy, held accountable (much more know) to its constituents, i.e. faculty and had to deal with a "Reactive Orientation" (Cookson, 1998, 9) in regards to the general environment. This is not to say that the Resource Unit was never accountable; its previous constituents were specialized in nature and did not necessitate constant deliverables. Having been mandated now as a central resource to the university at large, the Resource Unit could no longer be heuristic in its endeavours, and began to operate in a closed environment resembling a deterministic system in which everything was delegated from top-down with little to no involvement from staff. While the Resource Unit has begun to see a warmer reception by the general environment, the systemic environment still remains cautiously optimistic in its future endeavours.



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