The Learner-Centered Curriculum Model: A Structured Framework for Technology Planning

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Overview

The learner-centered movement has its roots in the early 1980s, when U.S. Secretary of Education T. H. Bell created the National Commission on Excellence in Education. The commission’s report, *Nation at Risk: The Imperative for Educational Reform*, gave rise to a host of extensive, dedicated reform efforts, one of which resulted in the development of 14 Learner-Centered Psychological Principles by a task force of the American Psychological Association (APA).

The 14 learner-centered principles focus attention on learners rather than on teaching, curriculum and instruction, or administrative structures. The principles establish an intimate, individual, and very personal lens through which to view learning models, systems, structures, and processes. The principles are helpful—though insufficient on their own—in addressing the challenges faced by faculty and teachers in the classroom, learners in their pursuit of knowledge, administrators in their quest for efficient and effective operations, and policy makers in their efforts to provide adequate resources for the tasks at hand. Mastering these challenges requires a structured dialogue built around the learner, a dialogue that frames, in curricular terms, the essential array of issues that transcend parochial interests exemplified by the silo culture common in higher education. “Structured” here means the careful definition of key components and the delineation of key points that require discussion, understanding, and consensus.

The learner-centered framework presented here provides the requisite structure for meaningful dialogue, establishing seven essential focal points around which meaningful dialogue can be fostered and maintained. These focal points have emerged from my years of facilitating institutional engagements, either around strategic planning or conflict resolution, and together they provide the common ground for decision making in an increasingly complex, competitive, and even combative environment. By maintaining crisp focus on the curriculum, on facilitating services, and on the learners served, these seven elements keep constituents’ attention on the core function of higher education—learning.

Highlights of LCC

The Learner-Centered Curriculum (LCC) defines a framework to guide the design, development, and delivery of curriculum; the infrastructure that supports it; and the services that make it work. It forms the core of the Curriculum-Centered Strategic Planning Model detailed in an upcoming ECAR research bulletin.

Seven interrelated and interlocking components shape the LCC framework. In their simplest form they are

1. Learner populations served
2. Objectives they seek
3. Provider models available
4. Learning theory, methods, and principles appropriate to successful learning
5. Overall curriculum architecture providing the full scope of programs and approaches
6. Specific curriculum configurations designed to meet specific learners’ needs
7. Services required by learners to meet their objectives

Table 1 illustrates the key issues of each of these components.

### Table 1. The Learner-Centered Curriculum Framework

<table>
<thead>
<tr>
<th>Learner Populations</th>
<th>Learner Objectives</th>
<th>Learning Provider Models</th>
<th>Learning Theory and Methods</th>
<th>Curriculum Architecture</th>
<th>Curriculum Configuration</th>
<th>Learner Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whom do we serve?</td>
<td>What objectives do the learners in each population segment seek?</td>
<td>What models are available from which they may choose?</td>
<td>What theories and methods are appropriate?</td>
<td>What does the overall curriculum need to provide to accommodate the learners we serve?</td>
<td>How should a specific curriculum be configured for a specific population and objective?</td>
<td>What learning services are required to ensure learner success?</td>
</tr>
</tbody>
</table>

### An Illustrative Vignette

As the following vignette illustrates, the seven interlocking components of the LCC provide the structure for dialogue around academic master planning, curriculum design and evaluation, program review, accreditation self-study, technology planning, and institutional strategic planning. One uses the LCC by completing the details of each column in Table 1 and considering the implications of answers from one column on the others.

Pretend for a moment that our institution wishes to launch an online university. We will use Table 1 to focus and structure the dialogue. Before we begin, we must ask, Who needs to be at the table to adequately cover the content in the seven areas? We can see from the content that it must be a mix of leaders supported by doers from across the various organizational entities.

With such a group assembled, we begin by focusing on the population(s) to be served. A typical first response to this question is, If it’s online, it’s everybody. But is it? If faculty will require a campus residency, is it still everybody? Will you serve residents of the other 23 time zones around the world? As the group continues the dialogue, it will identify discrete populations, such as degree completers (individuals who have accumulated some college credit but no degree). Is this a good population to serve? How will you find them? How will they find you? What will they seek? These questions move us to the second column: Learner Objectives.

It does not take much to speculate that degree completers seek a degree, but in what? How will their accumulated credits be handled? If by portfolio, do we offer that service? In addition to the degree, do they seek special skills? Will they seek to go on to graduate school? Do we have enough faculty members in the right disciplines who understand
online universities to build such a curriculum? How will ours be different? What else is out there? This moves us to the third column: Learning Provider Models.

Here the structure requires that we consider the question of what models are currently in use. By doing a bit of research, we discover more than 300 degree-completion programs already online. Many of them are hybrid or blended programs, meaning they require some campus residency, including on-campus evaluation and interviews in addition to online interaction. We discover no institution in our immediate area serving the degree completers, either in purely online or in blended format, but there are three site-based programs in the area. The question turns to the online medium as a deployment option. Is online instruction of sufficient quality and appropriate to our learner population? Our structure focuses next on exploration of Learning Theory and Methods.

Guided by column four, we do further research. We find several Web sites of interest, including the “Significant Difference Phenomenon,” the “No Significant Difference Phenomenon,” and the Asynchronous Learning Network. We find evidence that supports the viability of an online deployment, although there is much to consider when building such an entity. In fact, we begin to question if we currently have the overall structure to successfully launch such an endeavor. As a result, our attention turns to the institution’s overall curriculum architecture and the infrastructure that supports it (fifth column).

In our due diligence we ask, Do we have the expertise to design an online entity? Do we have the capacity to develop the online courses? Do we have the infrastructure to support an online environment? Do we have the business model and support system to market and deliver online programs? These are all big questions that result in our refining the questions to the emerging strategy of delivering a degree-completion program to regional residents. This focuses our attention on the sixth column: how such a curriculum would be configured.

What are the requirements of this particular curriculum? By focusing on the specifics of our degree-completion program, we begin to detail the components required to design, develop, and deploy such an online offering. We decide that we must revisit the other columns with this additional information. The conversation moves rapidly to the idea of developing a formal proposal when someone says, Hey, how will we support the students? The structure forces consideration of the services required by these targeted learners, and we move into the domain of the seventh column.

How will we provide advising, assessment, financial aid, registration, learning assistance, health services, and bookstore access to online students?

And so the structured dialogue among key leaders and doers continues, guided by the seven components of the LCC framework.

The Devil Is in the Details

The axiom that “the devil is in the details” may be true, but there is often resistance to conversations that involve details. In fact, both academic and technology planning are complex and detailed. To manage such planning effectively requires a structured
discussion among leaders and doers. A structure that follows the LCC framework requires visiting each component as the problem is discussed and the plan developed. The LCC’s seven components ensure a sufficiently comprehensive view and approach that major essential elements will not be overlooked or fall off the critical path necessary for success. The dialogue around these seven components also provides campus constituents with links to the realities they face in performing their functions.

Addressing and discussing each component provides information that builds the planned response. Next we will walk through each of the seven components and provide further foundations for the structured dialogue.

Learning Populations

The first question in the model is, Who are the learners of the 21st century? Understanding who the learners are is an essential and often overlooked component of shaping curriculum and planning for the technology needs of a changing educational environment. It provides a way of identifying learner needs and requirements as a function of their defining characteristics.

To begin to use the LCC model requires an open discourse about the learner populations as we find them in society. We can describe them in a number of ways.

- High school graduates
- Working adults
- Mid-career professionals
- Late-career and emeriti populations
- Re-entry learners
- Degree completers
- Geographic service area populations
- Interest-driven populations
- Employer populations
- Degree holders
- Disabled populations
- Other populations

This list is not intended to be definitive. We also must begin to describe learner-population characteristics, including preferred venues, constraints, and learning preferences (such as face-to-face, Internet-based, and a host of other variables). The purpose is to fully understand learning demand as segmented by population characteristic. There are many sources of this information, including the U.S. Census Bureau and the National Center for Educational Statistics. For example, on April 1, 2000, the U.S. Census Bureau declared the population of the United States was 281,421,906. Based on population growth rates, this grew to an estimated 284,796,887 by 2001. These estimates, coupled with detailed information about adult learning participation rates gleaned from surveys by the U.S. Education Department, permit
estimating the number of adult learners down to the ZIP code. Table 2 illustrates the results of such a process.

Table 2. Estimates of Adult Learners

<table>
<thead>
<tr>
<th>Population in 2000</th>
<th>United States</th>
<th>California</th>
<th>Los Angeles County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>281,421,906</td>
<td>33,871,648</td>
<td>9,519,338</td>
</tr>
<tr>
<td>Estimated adults</td>
<td>211,066,430</td>
<td>25,403,736</td>
<td>7,139,504</td>
</tr>
<tr>
<td>Annual learning adults</td>
<td>97,090,558</td>
<td>11,685,719</td>
<td>3,284,172</td>
</tr>
</tbody>
</table>

**Annual Learning Adults’ Motivation**

| Work-related       | 44,112,884   | 5,309,381 | 1,492,156         |
| Personal development| 42,002,220   | 5,055,343 | 1,420,761         |
| Credential acquisition | 12,875,052   | 1,549,628 | 435,510          |
| Basic skills       | 2,532,797    | 304,845   | 85,674            |

**Learning Provided By**

| Commercial providers | 26,291,279 | 3,164,391 | 889,325 |
| Postsecondary        | 8,999,028  | 1,083,114 | 304,400 |
| Trade organizations  | 4,896,530  | 589,341   | 165,629 |
| Private/church       | 2,911,450  | 350,419   | 98,482  |
| K–12                 | 1,896,854  | 228,303   | 64,163  |


Table 2 provides a balanced view of adult learning populations present in the United States. When academics see this level of detail, they quickly assimilate the sheer size of the learner population in the United States, including the number of learners in their service area, the number of adult learners served by non-postsecondary entities, and the array of objectives sought by adult learners. In a structured dialogue, this information gives rise to many more questions. What are the economic circumstances of the various populations? In what kinds of information environments will they thrive? What are their real goals? How much can they spend per year on learning? Who among them should be enrolling in our institution? How do they aggregate into subgroups such as working mothers or mid-career changers? Articulating what these learners seek is an important next step.

**Learner Objectives**

What do the learners of the 21st century seek? What are their objectives? The Household Education Survey (Table 2) reveals that some seek credentials and that nearly as many seek personal enrichment. Some seek to improve work prospects, while others want to address basic skills. Understanding learners’ objectives is an important element in identifying prospective programs, assessing existing programs, understanding learner motivations, and even sequencing learning events. A vast array of learning objectives can be identified and described as sought by 21st-century learners.
We can identify learners as those seeking degrees, skills, certificates, licenses, trade knowledge and skills, training, continuing professional education, personal enrichment, and so on. In discussion, we need to keep in mind that the dialogue is exploratory, with a goal of fully understanding the learner and the learning marketplace.

In planning a professional-development program, institutional leaders would identify programs and certificates believed to have highest value, and encourage and build a professional development plan around them. To illustrate, consider the objectives that might be sought by an institution’s technology staff as part of a comprehensive professional-development campaign or by prospective students seeking technology competency. The appropriate objectives must lead to industry-standard certifications in areas of interest to both employers and learners. The *Certification Magazine* Career Road Map identifies 16 areas of industry-standard certification opportunities: application development/programming, computer and network security engineers, database administrator, database analyst/specialist, e-commerce solution provider, hardware support, help desk (applications support), network administration, network engineering, network management, PC/hardware technician, system administration, telecom, trainers, Web professional, and “other.”

In this scenario, the learners examine all 16 areas and discover hundreds of industry certification programs available to them. Selecting “database administrator” from the 16 areas of the road map, they find that there are industry-standard certificates for IBM, Informix, Microsoft, Oracle, and Sybase. Matching learner interest and employer need drives the final selection. Academic planners at a number of institutions armed with the information outlined in this illustration have redesigned their curricula to incorporate selected certifications into their technology degree programs, thereby providing learners with additional options and incentives for enrollment.

The point here is to not be everything to everybody but to be fully informed about the variety, type, and characteristics of the objectives that learners seek to achieve. Designing curriculum and planning the information architecture around such objectives helps the institution clarify the dynamics of the learning marketplace and focus curriculum design, development, and deployment initiatives.

**Learning-Provider Models**

What options are open to 21st-century learners? The 21st century is the age in which learning will occur wherever learners have need. A complex network of learning resources is emerging, and we must embrace the concept of learning systems to meet the demand for learning across multiple venues. Models abound. In addition to community colleges, liberal arts colleges, and comprehensive universities, there are the executive-education, meta-university, and cohort models, among many others. When we talk of models, we are really discussing the way learning opportunities are packaged and delivered to the learning public. Different provider models often have different business models, admissions criteria, delivery methods, and/or assessment protocols and methods. Each model presumably has value to a learning population.
There are scores of distinct models emerging in the learning marketplace. A few examples include

- The meta-university model aggregates curriculum content from various accredited entities and provides a common catalog and a common point of presence. Examples include Western Governors University, the Electronic Campus of the Southern Regional Education Board, Michigan Virtual University, Universitas 21, and the Global University Alliance.

- Corporate university models abound and include such entities as Motorola University and a score of others.

- Commercial learning models also abound. One commercial online example is EDT Learning, which, since 2001, has acquired LearnLinc, Quisic, ThoughtWare, and Learning Edge. Another corporate/commercial example is IBM Learning Solutions, with 3,000 employees providing learning services to more than 2,000 organizations worldwide.

Remember that not all new models work, as evidenced by the closures of Fathom, NYUOnline, UMUC Online, Virtual Temple, and the Open University U.S. Some, however, are very successful, such as the University of Phoenix, whose online enrollment grew from 4,700 learners in 1997 to more than 49,400 in 2002. Forty percent are from underrepresented minority groups, 52 percent are female, 70 percent seek undergraduate degrees, and 26 percent seek graduate degrees. Only four percent seek no degree.

It is essential that we fully explore, describe, and understand these various models in order to adequately assess the emerging learning landscape. Such assessment enables understanding the competitive environment for enrollments and emerging best practices that develop as the models mature and reveal their strengths, weaknesses, values, and deficiencies. The point is to fully understand the choices that 21st-century learners have to meet their objectives. Institutions routinely offer programs through more than one model. Decisions regarding which models will be included in a 21st-century curriculum architecture for any given institution should be fully informed. As academic leaders build their curriculum master plans, the array of models provides an external benchmark against which to measure strategies emerging to serve identifiable populations.

**Learning Theory and Practice**

What learning theories and methods help inform the appropriate curricular approach to take with specific learner populations? The learning process becomes extremely important in the LCC. There are more than 50 major learning theories and many additional teaching and learning methods. The APA’s 14 learner-centered principles are another popular source of learning theories.

Examples of some popular theories include Andragogy by Malcom Knowles, Adult Learning Theory by Pat Cross, Operant Conditioning by B. F. Skinner, and teaching/learning methods such as Active Learning, Personalized System of Instruction, and Self-Paced Tutorials. Theory, methods, and best teaching and learning practices
provide the foundation upon which to build curricula, academic support systems, technology infrastructures, and professional development strategies. The theories and methods selected drive the development of the learning assessment strategy and help shape the infrastructure and support needs of the curriculum as it is designed, developed, and deployed. To be effective, they must also shape the policies, processes, and procedures that implement the curriculum. The key is to systematically build the curriculum around sound theory and methods most appropriate for the populations for whom the curriculum is designed.

Curriculum Architecture

The architecture of a curriculum describes the style, method of design, basic construction, key components, and underlying philosophies used to build the modules, courses, and programs that make up an institution’s curriculum. The architecture details the specific models used to design, develop, deliver, assess, warrant, and market a curriculum across the entire institution and all of its entities. It also includes the various business models by which curricula are purchased. Included in the array of business models are such packaging as the traditional tuition-fee model, contract-learning model, a variety of continuing-education models, as well as models to serve both vertical and horizontal markets. The architecture is also the wrapping together of the various disciplines and components of the curriculum into a comprehensive master plan. It represents the grand sum of the various components and approaches and serves to describe the academic capacities of the institution. The comprehensive nature of the architecture provides the master profile from which specific curricula are configured. The purpose of the architecture is to articulate the spectrum of options, replete with their support systems and structures. An institution’s technology architecture, physical facilities, policies, processes, and procedures must all support the overall curriculum architecture.

Curriculum Configuration

This sixth component is where the thread is drawn across the previous five components of the LLC: specific population characteristics and needs, specific objectives, existing or emerging models, sound theory and practice, and the curriculum architecture of the institution. Deploying a curriculum involves selecting the appropriate pieces from the architecture to construct and support a specific program to a specific population. If the existing architecture does not support a particular curriculum configuration, then the essential components must be added as part of the build out. This often requires significant work on policies, processes, and procedures as new curriculum configurations are designed and developed. The configured curriculum is deployed with specific content-delivery options, targeting a specific set of outcomes, using a specific business model, assessment strategy, marketing, and enrollment-management methods. A configured curriculum is marketed, included in catalogues, promoted, and ultimately enrolled in. Once the configuration is established, the work is still not complete. The next step is to design, develop, and deliver services to the students enrolled in or seeking to enroll in the program.
Learner Services

Services are as important in the learner-centered curriculum as design. Advising, counseling, and assessment are among the most important processes to integrate into the curriculum. Too often they are added on, rather than built in, to the curriculum model. For example, a number of institutions have evaluated modularized curricula only to discover that their information systems will not support such an approach. It is one thing to offer an online course, but what about online advising, registration, and all other services an online learner might need? Institutions that deploy a curriculum in a service center or remote site soon discover the need to constantly rethink their service strategy based on critical mass of learners, available technology, and the proclivities of the population served. The assessment of learner-service needs involves reaching back across the preceding six columns to pull the context forward and construct a service architecture that will enable wrapping a service environment around the curriculum’s learners based on their needs.

What It Means to Higher Education

The LCC framework provides a means to engage in and sustain a structured dialogue surrounding the complex issues emerging in higher education. Recently, a community college that had adopted a curriculum-centered strategic-planning process based on the LCC framework was faced with the potential of severe budget reductions from the state. Institutional leaders used the LCC logic to systematically develop budget-reduction strategies that were learner centered. That meant serving as many students as possible within their core service area, protecting as many in-process students as possible so that they could fulfill their objectives, and sustaining as high an academic quality as possible given the budget reductions. To meet these goals, the institution targeted five populations to receive priority registration so that the students could fulfill their learning obligations. Identifying specific populations led to the offering of a few courses with lower enrollments (courses that would have been cut) in order to provide the opportunity for learners to complete their objectives. It also gave first priority to members of certain populations, guaranteeing they were able to enroll in required courses. In addition, the college implemented block registration for future registrations to place targeted populations in restricted programs and guarantee timely completion.

A comprehensive four-year institution also used the LLC approach when designing its academic-technology strategy. By using the LLC, the institution identified goals of launching a laptop program, introducing wireless technology, developing a portal, and advancing the academic infrastructure for course delivery. All of these goals were integrated into a synergistic approach that synchronized efforts. This meant that when the first wave of laptops was deployed to the freshman class, wireless was in place; a portal greeted the registrants and displayed everything they needed to know to flourish. At the same time, faculty were piloting the scholar support system, debugging and developing content. Modifications based on sound theory and practices were incorporated, assessment systems were identified, and all are being woven into the infrastructure.
The learner-centered approach is a powerful framework to use for decision making, problem resolution, and planning.

**Key Questions to Ask**

Virtually every institution seeks to enhance the quality of its programs and services to improve the learner environment and the learner’s experience. Here are a few questions to begin a learner-centered approach.

- Is our curriculum aligned with the needs of the learners we serve?
- Are our policies, processes, and procedures aligned with the needs of the learners we serve?
- Are our services aligned with the needs of the learners we serve?
- Does our infrastructure support the curriculum and the needs of the learners we serve?
- Does our planning process adequately assess the needs of the learners we serve?
- Are our institutional programs designed around the appropriate principles to achieve optimum learning?

**Where to Learn More**

- The American Association for the Advancement of Science, Project 2061, [http://www.project2061.org/](http://www.project2061.org/).
- Arizona learner-centered education, [http://ag.arizona.edu/azlearners/](http://ag.arizona.edu/azlearners/).
Endnotes


3. You can download a full copy of the Learner Centered Curriculum Model (PDF) by registering for Featured Content at <http://www.mgdolence.com>.


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