

ASSURING THE FUTURE FOR DISTANCE LEARNING

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Abstract: Throughout the world, the rapid growth and expansion of distance education programs in recent years have left many educators without a clear perception of “where are we headed and how will we know when we have arrived.” In answering those questions this article provides a framework for defining, planning for, and achieving useful results from distance education programs today and in the future. The framework includes the alignment of all that an institution uses, does, produces, and delivers with useful results for learners and society. Guidelines for the successful application of the framework are also provided.

DISTANCE LEARNING COMES OF AGE

While in the United States distance learning (DL) has only gained acceptance and popularity in recent years, it is well rooted with an extensive history in many other countries. DL has evolved over the past 160 years from correspondence courses, to educational radio, one and two-way teleconferencing, educational television, video conferencing, and to computer assisted/Web-based interactive learning opportunities (Saba, 1999; Simonson, 2000). And during this same period, most conventional education and training² institutions have been developing traditional instructor-led courses, but with few cooperative projects

linking the two domains of educational opportunities.

We are currently experiencing rapid growth in the scope and number of DL opportunities available to learners worldwide. Consider the case of countries such as Australia and Zambia, where geographic obstacles to conventional education led to the growth of extensive national distance education programs. On the other hand, institutions such as the British Open University,³ Nova Southeastern University, University of Phoenix, and Walden University emerged and developed to fill niche markets not supplied by conventional institutions. Most recently there has also been an

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increase in the number of mixed model institutions (such as Florida State University, University of North Carolina, and others) who supply both distance and conventional learning opportunities. Some of these opportunities are designed for the “traditional” student, while many others are developed to offer new opportunities to learners who have not benefited from the efforts of conventional institutions. In the private sector DL has also undergone expeditious growth within training organizations, consulting groups, and other industries alike. With this rapid growth, accreditation of programs, and acceptance of DL degrees in the workplace, DL has become more attractive to many learners.

In the past however, both conventional and distance education providers have relied on the “demand” for courses (often derived from the opinions of “experts” and not from the “needs-stated-as-gaps-in-results” of internal and external clients: students, employers, and the community) to define a curriculum or course catalogs. Problems from this quasi-needs assessment approach have been further compounded by allowing “experts”⁴ to additionally define without “hard data” what content should be included, when a course should be taught, how a course should be taught, and how students should be evaluated. The primary remaining difference in distance learning and conventional education has been the stated (but then often ignored) focus of DL institutions on the “desires” of the learner. We suggest that these conventional design technologies are not enough to create useful learning opportunities and for DL to find long-term success.

WHAT SHOULD THE FUTURE OF DL LOOK LIKE AND DELIVER?

When the “bloom comes off the DL rose”—and it will—what will distinguish useful DL from much that which is currently being offered? What should the successful DL programs of the future look like and deliver, and how will that be different from what did and does exist⁹

This paper briefly examines basic characteristics of valid and useful learning opportunities, and then compares those characteristics across modes of delivery of learning opportunities:

1. Conventional delivery;
2. Early DL approaches;
3. Current DL approaches; and
4. Recommended future DL approaches.

Based on these comparisons we offer a pragmatic definition of useful DL as well as a framework that can guide the planning, implementing, and evaluating for DL programs. Along with this we also suggest some practical tools and approaches that can assist designers, developers, and administrators achieve success in the future.

Basic Dimensions of Valid and Useful Learning and Performance Systems

In appraising DL systems within universities, colleges, businesses, and government agencies there are many useful questions we can ask:

1. Is the focus on the learner, the teacher, organization, and/or society?
2. Is the system driven by content or by the usefulness of what is learned?
3. Are needs identified? Are needs assessed? Are needs assessed in terms of demand for a course or program? Are needs assessed on the basis of gaps in results and payoffs?
4. Are the courses/programs linked to external usefulness? Are the courses! programs linked with other learning and/or performance opportunities?
5. Are the courses/programs delivered at an institution or at a remote site (including ones home or workplace)?
6. Are the courses delivered using conventional approaches, telephone, books and/or workbooks, video, computer,

- web-based means? What are the degrees of freedom for the delivery?
- 7. Is the content of the courses/programs designed by using a formal, research-based performance system or instructional design process?
- 8. Is there open interactivity between learner and instructor/deliverer? Does the learner get immediate feedback concerning performance?
- 9. Is the content of the courses/programs formatively evaluated? Summatively evaluated? Are the delivery vehicles for the courses/programs effective and efficient?

- 10. Are the courses/programs evaluated for return-on investment for:
 - a. learners
 - b. designers/deliverers
 - c. the institution
 - d. society?

WHAT BASIC DL DELIVERY MODES USE AND PROVIDE

Table 1 examines these ten questions for each of the four types of learning opportunity delivery:⁵

TABLE I

An Analysis of Distance Learning Delivery Systems				
	<i>Conventional Instruction</i>	<i>Classic/Historic DL</i>	<i>Current DL</i>	<i>Future DL</i>
Is it learner, teacher, organizationally, or societal focused?	Teacher/Organizational	Learner	Learner! organizational	Societal! organizational! learner
Is it content driven or usefulness of what is learned-driven?	Content	Content	Content	Usefulness
Are needs identified? Are needs assessed? Are needs assessed as gaps in result?	Assumed needs	Assumed needs	Assumed needs	Formally determined as gaps in results
Are the courses/programs linked to external usefulness? Are courses/programs linked with other learning opportunities?	Assumed	Assumed	Assumed	Linked to external value added
Are the courses/programs delivered at an institution or at a remote site, including one's home or workplace?	Institution	Remote site/home	Remote site/home	All possible
Are the courses delivered using conventional, telephone, books, and/or workbooks, video, computer, web-based means? What are the degrees of freedom for the delivery?	Conventional, books, workbooks	Conventional, books, workbooks (some audio)	Conventional, books, workbooks, video, Web-based	All possible
Is the content of the courses/programs designed by using a performance system/instruction system process?	Rarely	Rarely	Some of the time	Always
Is there open interactivity between learner and instructor/deliverer? Does the learner get immediate feedback concerning performance?	Some of the time	Rarely	Some of the time	Always when appropriate
Are the courses/programs evaluated for return-on investment for: a. the learners b. the designers/deliverers c. the institution, d. the society?	Assumed	Assumed	The institution	For all

Distance Learning Defined

So how does an organization build upon the lessons learned by educators and learners in the past and prepare for a future that is being defined today—it can begin by redefining DL.

The distance learning of the future will be defined as the delivery of useful learning opportunities in a form that is responsive to the learners requirements at a time and place convenient for the learner.

This definition emphasizes the responsiveness of the content as well as the form and place of delivery as primary characteristics of DL. Thus, it is both a learner-focused and performance-centered approach. Further it allows the learner to master the skills, knowledge, attitudes and abilities that will help them be successful not only on the job and in further training or continued education, but in their life outside of work as well.

LESSONS LEARNED FOR THE USEFUL FUTURE OF DL

Most approaches to conventional and distance learning are limited (Kaufman, 1992, 1998, 2000; Kaufman, Herman, & Watters, 1996). This is because they do not link everything that the organization (including educational institutions) uses, does, produces, and delivers with the external value added. Usually, by assumption, most training as well as educational approaches (distance or conventional) focus on only one part of the value added: course content.

But useful training or education is more than course content. What is used, done, produced, and delivered must be integrated and linked.., and this often requires evaluation and continuous improvement after the course has ended. Those programs that evaluate beyond the classroom to include “on the job performance” are considered to be “too time consuming” or “impractical.” Leaving the most valuable of questions (i.e., what value was added to the individual, small group, organiza-

tion, and community) unanswered. Intentionally adding value for the world outside of the institution (as well as adding value inside the institution) must be included in all phases of the planning, implementation, and evaluation of all organizational processes.

Let’s examine a sensible framework that can, and we suggest should, be used for any learning/performance activity (public or private) if it is to be responsive, responsible, and endure the tests of time and accountability for useful results.

THE ORGANIZATIONAL ELEMENTS MODEL (OEM): A USEFUL FRAMEWORK FOR PLANNING, DESIGN, DEVELOPMENT, IMPLEMENTATION, AND EVALUATION

A framework for defining and linking what organizations use, do, produce, and deliver is Organizational Elements Model or OEM (Kaufman, 1992, 1998). Defined in the framework are the elements of any organization, whether private or public, educational or industrial. The elements of the framework are Inputs (ingredients), Processes (methods and means, including DL), Products (such as mastery of a course), Outputs (graduation, completion), and Outcomes (the value added for society). For each of the three result elements (Outcomes, Outputs, Products), there is an associated level of planning that focus on each: Mega, Macro, and Micro.

Mega level planning—Outcomes. Responsive, responsible, and justifiable interventions, including DL, are rooted in strategic thinking and planning. For any intervention to be successful it best starts with an Ideal Vision that states, in measurable terms, where we are headed and how to tell when we have arrived in terms of the kind of world we want to help create for tomorrow’s child. This

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level of planning and focus that starts with an Ideal Vision is termed “Mega planning” (Kaufman, 2000) or “Strategic Planning Plus” (Kaufman, 1992). In Mega planning the primary client and beneficiary is society and community. Results at the Mega level are called *Outcomes*. Thus, any education, training, or performance improvement organization is actually a means to societal ends. In this light, DL is only a means to societal ends and thus its design, development, implementation, and evaluation must be focused on measurably adding value to not only the learners but society as well.

Macro level planning—Outputs: From the Mega level—the Ideal Vision—the organization determines what its mission objective is to be. A *mission objective* states where the organization is headed and how to measure when it has arrived. An organization’s mission objective states, in precise terms, what part or parts of the Ideal Vision it commits to deliver and move ever closer toward. Results at the mission objective level are called *Outputs*. In implementing DL, a primary objective for it is to enable learners to meet all graduation

and completion requirements that, in turn, allow them to add value to our shared society.

Micro level planning—Products. Based on the mission objective (Macro level plans), an organization then “rolls down” from that to define what building block results it should deliver. This level of planning usually depends on individuals and small groups to develop and deliver these important results called *Products*. Planning at this level is called *Micro level* planning. In DL implementation, Products are the building-block results obtained by learners as they demonstrate competence in required performance areas.

The Organizational Elements (as shown in Figure 1) can be “stacked” on two levels of attention: What Should Be and What Is. The two levels of What Should Be and What Is for results help us define *needs—gaps* in results— and defined through a process called needs assessment. The gaps between levels of Inputs and Processes are then “quasi-needs” and are assessed in a quasi-needs assessment or assets assessment. Planning may move forward from

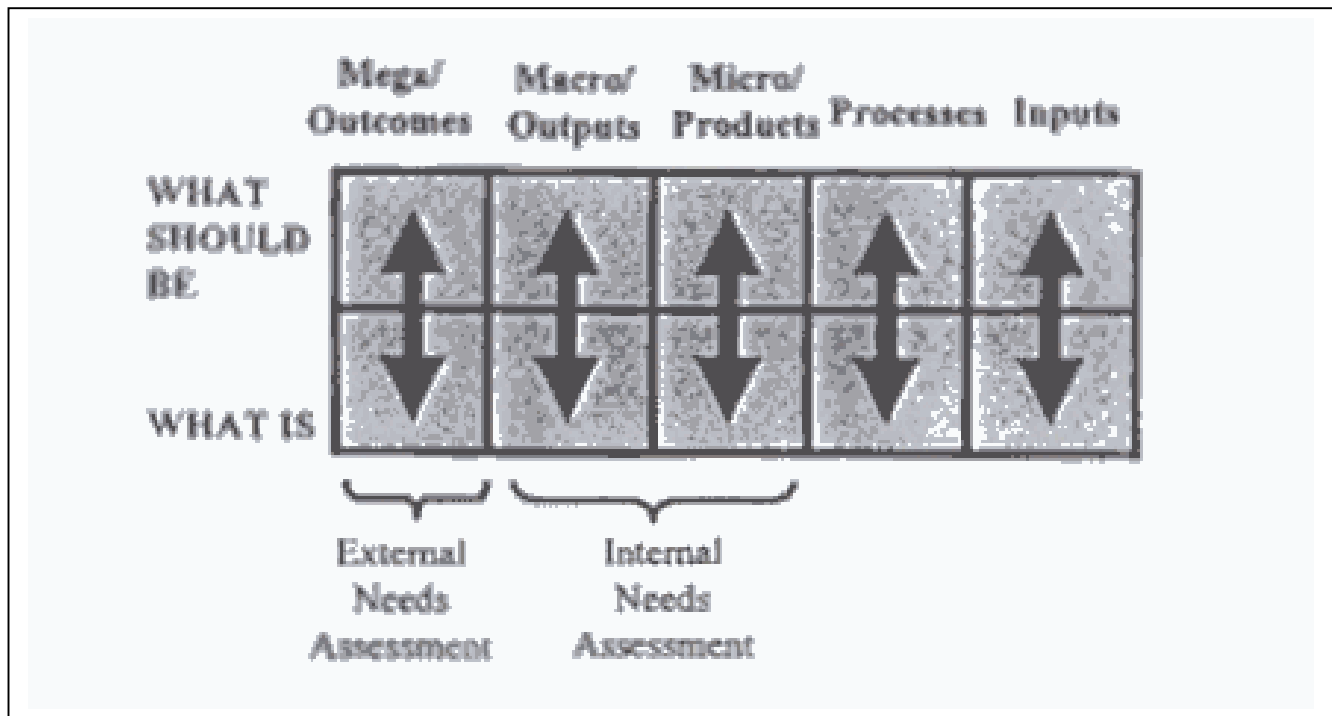


FIGURE 1
The five Organizational Elements and their relationship to the two dimensions of What Should Be and What Is (From Kaufman, 1998, 2000)

these discrepancies between What Should Be and What Is in terms of results.

If we analyze the four delivery modes for training or education identified earlier against the OEM, we find some informative patterns (Table 2).

It would seem as if “Classic/Historic Distance Learning” was simply a conversion of conventional instruction to a different mode of delivery. Then, with the availability of more sophisticated delivery vehicles (such as computers, the WEB, CD-ROM) DL has migrated to include more concern with the design of learning opportunities and more concern with the linkages among the curriculum, the learner, and completion of programs. We urge that the DL paradigm of the future—the one that will persevere after “the bloom is off the rose”—will use and link all of the Organizational Elements.

Given the OEM and useful learning and management practice, we recommend the following guidelines for the future usefulness, effectiveness, and efficiency of DL:

Select a valid performance model or process and then rigorously apply it. Performance and learning design are not a matter of hunch, intuition, and content-orientation alone. The development of any DL performance system should have standardized, responsive, and responsible performance models applied by all. We suggest that the conventional “ADDIE” model⁶ is useful but incomplete. It does not assess needs before analyzing needs, and continuous

improvement is not a part of conventional evaluation as it should be. Contemporary understandings of performance systems indicate that many of the steps of the performance system model can overlap and thus avoid the long and often drawn-out “analysis paralysis” of some ill-conceived approaches.

Link all three levels of planning and

results. Use an Ideal Vision as the starting place for all planning and decision making. An Ideal Vision states the kind of world we want to create for future generations. An Ideal Vision is the same as the Mega level of planning and only identifies Outcomes. It never includes Inputs, Processes, Products, or even Outputs.⁸

The Basic Ideal Vision (Kaufman 1998, 2000) was derived from asking people, almost worldwide, to define in measurable terms the kind of world they wanted to help create for tomorrow’s child (see Figure 2). Then, all Inputs, Processes, Products, and Outputs were deleted to form what is in the Basic Ideal Vision. An organization’s mission objective is then derived from the accepted and shared Ideal Vision. It represents that part of the Ideal Vision the organization commits to deliver.

If there is *not* a linking among Products (e.g., course mastery), Outputs (e.g., certification, graduation, or corn-

TABLE 2
Modes of Instructional Delivery and Their Association to the OEM

	<i>Conventional instruction</i>	<i>Classic/Historic DL</i>	<i>Current DL</i>	<i>Future DL</i>
Mega/Outcomes				X
Macro/Outputs			x (?)	X
Micro/Products	X	X	X	X
Processes	X	X	X	X
Inputs	X	X	X	X

BASIC IDEAL VISION: The world we want to help create for tomorrow's child

There will be no losses of life nor elimination or reduction of levels of well-being, survival, self-sufficiency, quality of life, from any source including (but not limited to):

- **war and/or riot**
- **unintended human-caused changes to the environment including permanent destruction of the environment and/or rendering it non-renewable**
- **murder, rape, or crimes of violence, robbery, or destruction to property**
- **substance abuse**
- **disease**
- **pollution**
- **starvation and/or malnutrition**
- **destructive behavior (including child, partner, spouse, self, elder, others)**
- **accidents, including transportation, home, and business/workplace**
- **discrimination based on irrelevant variables including color, race, age, creed, gender, religion, wealth, national origin, or location**

Poverty will not exist, and every woman and man will earn as least as much as it costs them to live unless they are progressing toward being self-sufficient and self-reliant. No adult will be under the care, custody or control of another person, agency, or substance: all adult citizens will be self-sufficient and self-reliant as minimally indicated by their consumption being equal to or less than their production.

The Basic Ideal Vision (Kaufman, 1998, 2000)

pletion), and Outcomes (e.g., self-sufficient, self-reliant individual who is also a “good neighbor”), then DL might be a “solution to no known problem.” In other words, for DL to be a solution of the future it will have to begin by defining the value it adds to learners and society.

In so doing, DL programs should pay special attention to the following:

Don't confuse the means of delivery with the mastery requirements for learning. Unfortunately, most contemporary approaches to education and DL start with the assumptions about the most effective and efficient mode and methods of delivery. Don't select the means before defining and justifying the ends.

Select the methods and means of DL on the basis of who are the learners,

where they are, what they must master, and how best to organize the learning opportunities. The future will allow for more motion, inquiry, and simulation. Prepare to use what can best meet the objectives.

Conduct needs assessments. Many so-called needs assessment approaches, such as “training needs assessments,” blur the distinction and relationship between ends and means (Triner, Greenberry, & Watkins, 1996). To be useful needs should be defined as “gaps between current and desired results.” A needs assessment is then the identification of needs and the process placing them in priority order on the basis of the costs to meet the needs as compared to the costs of ignoring them (Kaufman, 2000; Kaufman & Watkins, 1996). A systematic as well as a valid approach to

needs assessment is critical in setting direction for an organization and providing information for decision makers.

Use a learner-focused performance-centered approach. The DL experience should be designed specifically for the results to be achieved and using research knowledge of individual differences, motivation, and learning styles for defining and achieving objectives. The learning materials and methods of delivery will be responsive to whom the learner is, where they are, and how they best learn given the tasks

- to be completed.

Creating DL that systemically adds value.

There are many new realities for society, organizations, and individuals. In education we are increasingly being required to provide responsive and responsible learning opportunities at a time and place convenient for the learner. To do this effectively we must not continue to select the means of DL before selecting and justifying the ends and consequences we commit to deliver. And to be successful, everything we use, do, produce, and deliver should add value to all partners: learners, organizations, and society.

The future of DL is being defined today. We can learn from previous conventional education and distance education approaches, or we will be mired by yesterday's successes. We have proposed in this article several concepts, tools, and techniques that will hopefully assist you leading your organization and our communities toward achieving useful results. We urge each of you to stretch beyond the comfortable places we reside in today, and create a future for DL that goes beyond our dreams.

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NOTES

1. In this article we will use the following terms interchangeably: distance learning, distance education, and convenience learning.
2. While it is often convenient for a distinction to be made between education and training, such a distinction is, perhaps, artificial. The basics for both are similar: improve performance that adds value within and outside of the organization. The context in which DL occurs does not modify the ends and means to be accomplished and used. One distinction could be made that education is designed for transfer of what is mastered to situations not currently known while training is designed for immediate transfer to a known job or task.
3. Its U.S. relative, the United States Open University, is now being formed.
4. These "experts" are often "subject matter experts," or as we would suggest "subjective matter experts," since their input is rarely based on externally verifiable data rather than their own opinions and prejudices.
5. An earlier classification of factors for technological innovation in general has been provided by Ely (1990).
6. ADDIE = Analysis, Design, Development, Implementation, Evaluation. The useful ground rules for creating or ratifying an Ideal Vision are: (1) only include ends and not means, and (2) all results must be at the societal and community level.

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