

# **Educational Technology**

## **— An Overview of the Field and Current Issues —**

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### **I. Domains of Educational Technology**

Before beginning our examination of definitions of the field, it is worth mentioning that the shape of educational technology has been constantly evolving and changing.<sup>(1)</sup> Even so, a historical overview of how the field has been defining and redefining itself through “collective self-examination”<sup>(2)</sup> is meaningful because it gives us clearer ideas of the domains the field regards to be within its sphere and how the field has accommodated itself to the ever-changing questions and needs of the educational environment during the past century.

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In its origin, the term *technology* is said to be derived from the Greek term *techne*: Aristotle regards *techne* as “the systematic use of knowledge for intelligent human action”.<sup>(3)</sup> From here Gendron argues that the modern sense of technology is as “any systematized practical knowledge, based on experimentation and/or scientific theory”,<sup>(4)</sup> which is somewhat different to the general image of machinery evoked by the majority of people.<sup>(5)</sup> The origins of *technology* include the concept of the *systematic use of knowledge* per se. When and how the combinatory use of *educational technology* was coined is uncertain; after tracing the major educational philosophies that have influenced people’s concepts of education — Locke, Rousseau, Herbart, Sully, and Motessori, Saettler, who is the author of *the Evolution of American Educational Technology* (1990; 2004),<sup>(6)</sup> concludes that “much of the shape of modern educational technology evolved before research on human behavior began and long before the twentieth century”.<sup>(7)</sup> Therefore, in its conception, the history of educational technology can be said to be at least a century.

The field has used more than one name to refer to itself. From the transition of the names we can see how people in the field have regarded themselves: the names reflect the specific interests of the time, the available technology (or media), prevailing learning theories, instructional foci, motivations, and the aspirations of the people involved. The term *educational technology* may be most frequently heard in Japan today; however, the names for the field have included: *audio instruction*, *audiovisual instruction*, *audiovisual communications*, *educational media*, *instructional technology*, *instructional design and technology*, and more recently, *human performance technology* appearing in approximately this order over the decades.<sup>(8)</sup> It is safe to say that the modern type of educational technology as we perceive it now — that is, the complementary relationship between media and education — started with the usage of audio and audiovisual materials in teaching practice.<sup>(9)</sup>

According to Reiser and Dempsey, the term most frequently used in their

context, allegedly the US, is *instructional technology* though on this point opinions may differ.<sup>(10)</sup> According to Seels and Richey, *educational technology* is preferred in England and Canada while *instructional technology* is more common in the US. In this sense, Japan may rather belong to the former group.<sup>(11)</sup> Semantically, it is said that *educational technology* and *instructional technology* may have been used interchangeably; however, we should be careful which one we use because their main arguments relate to slightly different things in the field. Educational technology is said to be more related to educational settings while instructional technology encompasses many different kinds of learning situations such as in the home, at work, and study.<sup>(12)</sup> Given the traditions of the field outlined in the previous section, it is our task to reflect on and decide how to articulate our own regard to the field: how we define ourselves reflects on our research scope and the approaches we take in our practice.

The history of educational technology can be said to show a shift in focus from instructional *media* to instructional *process*. Reiser and Demsey discuss this by tracing the historical itinerary of how the *Association of Educational Communication and Technology* (AECT) has been redefining official definitions of the field.

Until the 1950s, the field's interests were focused on instructional *media*; that is, "the physical means via which instruction is presented to learners" such as films, radios, and motion pictures. According to Reiser and Demsey, the primary attention of those who equate instructional *technology* as instructional *media* is to "the design, production, and use of instructional media",<sup>(13)</sup> and even today this trend is continued by many individuals in the field. On the other hand, from around the 1960s, there appeared people who focused more on the process by which learning was facilitated by the implementation of media: their position is reflected by "The 1963 Definition" by the CDT (the Commission of Definition and Terminology, now known as the AECT) that says that:

**Audiovisual communications is that branch of educational theory and practice concerned primarily with the design and use of messages which control the learning process.**<sup>(14)</sup>

About three decades later, and with minor revisions, another definition called “The 1994 Definition” was produced in order to reflect the changes in technology and society, which was made concrete in *Instructional Technology: The Definitions and Domains of the Field*, a book which is regarded to be one of key references in the field even now.<sup>(15)</sup>

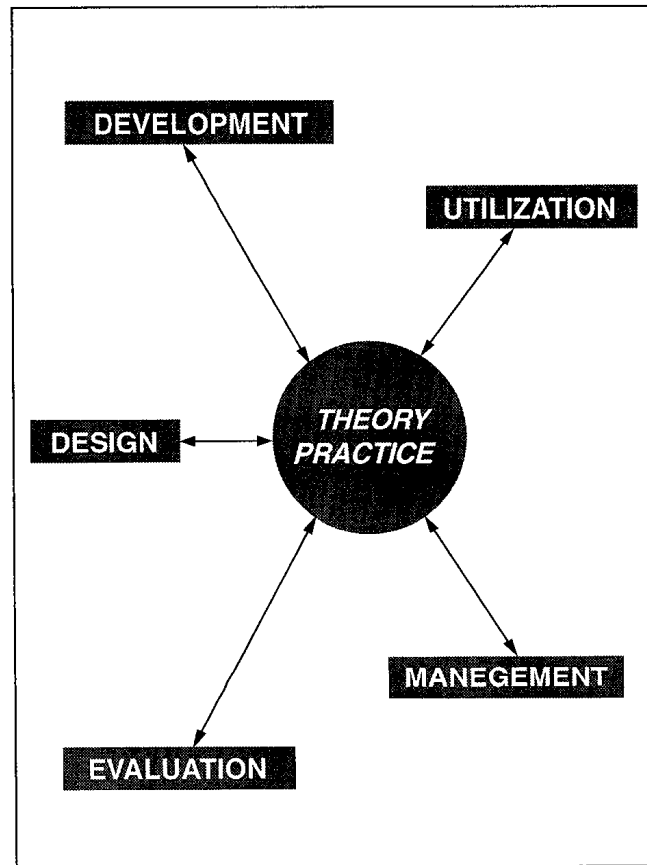
Two remarkable features should be acknowledged in the 1994 definition: 1) though the field of educational technology is a relatively young area of study in its origin, the field was considered then to have become a fully mature profession “with an extensive knowledge base and strong scholarly activity”,<sup>(16)</sup> and therefore 2) it had become ready to synthesize research, theory, and practice as an independent field of study.

The formal definition of the field in 1994 is:

**Instructional Technology is the theory and practice of design, development, utilization, management and evaluation of processes and resources for learning.**<sup>(17)</sup>

Figure 1 is frequently cited because it visually explains the main components and their relation within the 1994 definition. The important features of the definition are that 1) the reciprocal relation between theory and practice, 2) the demarcation of five domains or concerns of the field, and 3) the de-emphasis of linearity of the five domains.

It is clear to see that, in this shift in the 1960s, the field’s focus moved more to the process of instruction; in other words, the change from *media* to *process*



**Figure 1. Five domains of instructional technology<sup>(18)</sup>**

contributed to the enlargement of the domains of the field to the extent that the design process itself become an area of study even if not using any form of media such as TV or PC. Though the five domains, or rather in my conceptualization, the five phases of instructional design, help us locate what phase our attention is directed at while at the same time admitting interactive development between theory and practice. The definition clarifies this interactive feature of theory and practice as follows:

**Theory consists of the concepts, constructs, principles, and propositions that contribute to the body of knowledge. Practice is the application of that knowledge to solve problems.<sup>(19)</sup>**

Finally, though we have been reviewing the historical changes of the domains of educational technology, the most recent definition from AECT is now

in press, of which the draft happened to be obtainable from a personal website provided by Molenda, who has been the leading figure in Definition and Terminology Committee of AECT for decades; therefore, this paper can enjoy this definition one year early. The new definition will appear in a book edited by Januszewski.<sup>(20)</sup>

This new definition presents some surprising ideas that were not found in the previous definitions. It is not possible to discuss all the changes in this paper, however, the main features that characterize the new attempt will be briefly looked at.

The definition that gives the *concept* — that is original with this definition of educational technology, is:

**Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources.**<sup>(21)</sup>

After the new definition, Molenda decomposes it into the “Elements of the Definition” and explains each in detail: the elements are 1) Study, 2) Ethical practice, 3) Facilitating, 4) Learning, 5) Improving, 6) Performance, 7) Creating, 8) Using, 9) Managing, 10) Appropriate, 11) Technological, 12) Process, and 13) Resources.

Overall, the new definition seems to be trying to be more comprehensive and more inclusive of the trends and achievements of other disciplines. By *concept*, Molenda tries to distinguish from “the field and the profession”<sup>(22)</sup> of educational technology, based on the idea that the validity of each should be able to be judged by different criteria: this is notable because historically, the relation of theory and practice has been taking the demarche of 1) practice only, 2) separation of theory and practice, 3) integration of both, and now 4)

independence of both. Furthermore, some of the new disciplines that seem to have a large affect on the amendment are the waves of cognitivism and constructivism (facilitating and learning), human performance technology (improving and performance), information management (creating, using, managing), and probably the achievements brought by community development (appropriate, process, and resources). The term *technological* is explained by Molenda as “the systematic application of scientific or other organized knowledge to practice tasks”,<sup>(23)</sup> which looks close to the original meaning of *technology* that we saw at the beginning of this section. Finally, the term *ethical* may sound rather abrupt in the context of the series of historical transitions of the definitions of the field; however, AECT has been preparing to clarify its position on this subject as “a criteria of profession” since Finn<sup>(24)</sup> of which the current version takes the form of “the AECT Code of Ethics” by Welliver.<sup>(25)</sup>

## **II . Emerging issues in the field**

Previous sections have briefly looked at how the field of educational technology has been evolving and how people locate their interests in the field in relation to other disciplines. This section looks at some of the key issues that people try to resolve in their research and practice today. As the field covers a broad range of areas, this section focuses on a few specific topic areas in educational technology that are more current, more common, and more relevant to the applicant’s research area of online distance learning in higher education.

### **1. Distribution systems**

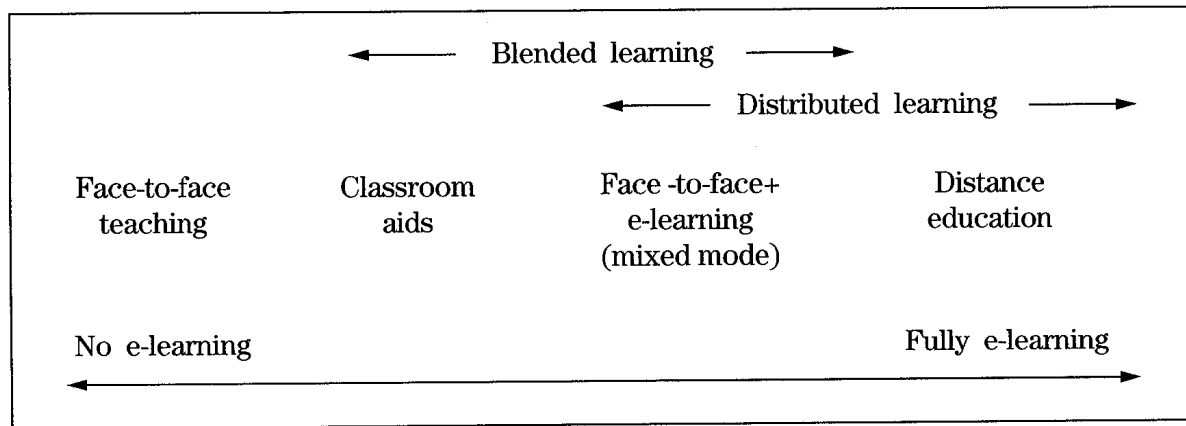
How we deliver education influences how we design our teaching. This section briefly looks at three key issues that have been raised by the digital potential. This description is made based on the works by Alley<sup>(26)</sup> and Bates<sup>(27)</sup> that try to clarify these new areas; however, as the terms are used differently by different people within the field, this section presents its own interpretation that is coherent with the flow of the other sections in this paper.

*E-learning* (electronic learning) has now become a sort of buzzword that broadly represents learning through digital information technology in Japan.<sup>(28)</sup> There are other terms that are used almost synonymously such as web-based learning, online learning, and computer-aided learning, all of which imply bringing some sort of digital technology such as computers, the internet, mobile phones, PDA, MP3, etc., into education and training. One of the “profound influences” this will bring about is standalone technology-based training (TBT), which makes it possible for learners to study using software or online in a more interactive and adaptive manner<sup>(29)</sup> where any direct human intervention may not necessarily be present. *Blended learning* often appears in the adjunct areas of the above terms; however, it is focused more on how to blend *e-learning* (all the synonymous terms we saw above roughly apply here) with *face-to-face learning*;<sup>(30)</sup> for example, the research topic includes what balance of oral lectures and online components or what combinations of different kinds of e-learning could be best matched with face-to-face components and produce the most effective learner outcomes. *Distance learning* is another term that is gaining attention, especially in higher education, in the field today. The main feature of this concept is an education system where teachers and learners are physically separated.<sup>(31)</sup> This affects all the design processes of instruction and management because learning must be planned to be completed without learners coming to schools.

More recently, a new concept that treats the three areas above as being on a continuum where it is the *degree* of certain elements which is different seems to be becoming a powerful framework in the field. Figure 2 below by Bates may help locate the conceptual relations among the three basic areas we have seen.

In this scheme, with the advent of e-learning potentials, the distinction between face-to-face and distance learning is said to be rapidly blurring; that is, it is estimated that 100% face-to-face learning (no e-learning components) or 100% distance learning (no direct contact among participants) will rapidly disappear.





**Figure 2. *The Continuum of technology-based learning*** <sup>(32)</sup>

From this perspective, it is anticipated that how the three distribution methods will be interrelated and evolve will become a big topic of interest in the field. However, this paper takes the position that the concept of distance learning will remain and be independent from other concepts because as Bates argues, “distance education can operate with or without online learning”. <sup>(33)</sup>

## 2. New technologies

There are numerous new digital technologies that have become available in education, and accordingly, the number of research reports to test their effectiveness on learning is very large.

One that has been catching people’s attention is the potential brought by mobile technology such as mobile phones and MP3 players (often represented by the ubiquitous iPod). The ability of delivering audio or audio-visual digital data to portables is called podcasting or sometimes vodcasting/videocasting when audio-visual files are included. <sup>(34)</sup> Historically, it is Duke University that first gave iPods and voice recorders to all their freshmen to enhance and support learning: their experiment found “increased student engagement, reduced dependence on physical materials and supported individual learning styles”. <sup>(35)</sup> Now, students in many places can download free academic content such as open lectures from the websites of recognized universities including Harvard

University, Stanford University, Ecole Normale Supérieure, and many others,<sup>(36)</sup> which are regularly updated, allow for automatic notification, and can be carried around in their MP3 players and portable phones if they wish.<sup>(37)</sup>

To gain higher interactivity and functionality in education and training, much research has been done with regards to learning management systems (LMS) that allows integrated management of teaching and learning online; some of the commonly applied software worldwide includes FirstClass, Blackboard, WebCT, and Moodle. The Moodle system is different in that it is free open source software<sup>(38)</sup> in contrast to the others that are license-based. In our context, though less known worldwide, are LMS software systems such as Internet Navigware (licensed), CHORUS (licensed), Xoopes (open source), and others. How to use the system effectively with regard to our pedagogy, usability for learners, course designs in relation to face-to-face mode or stand-alone, etc., is becoming a hot area for research in the field right now.

Since 2003, the use of the online world, Second Life for educational purpose or as a 3-D virtual classroom<sup>(39)</sup> has attracted many people's attention. This is a topic that is sure to appear in major academic conferences regarding technology and education in 2007. Among the actual experiments include examples of a course on law called *CyberOne* offered by Harvard Law School<sup>(40)</sup> and an introductory course to the humanities offered by Stanford University.<sup>(41)</sup> Also, recently a combinatory usage of Second Life and Moodle, called Sloodle, has been reported.<sup>(42)</sup> Though serious research and discussions on the educational effectiveness of Second Life are keenly awaited, and it could be the case that the interest may turn out to be phenomenological, the trend (at least in the US) seems to be towards the utilization of the software rather than vice versa.

An obvious concern or even a threat from the digitalization of educational content that this section overviewed is that anybody can now access high quality content freely, which further is *recyclable* and *sharable* in many different forms for

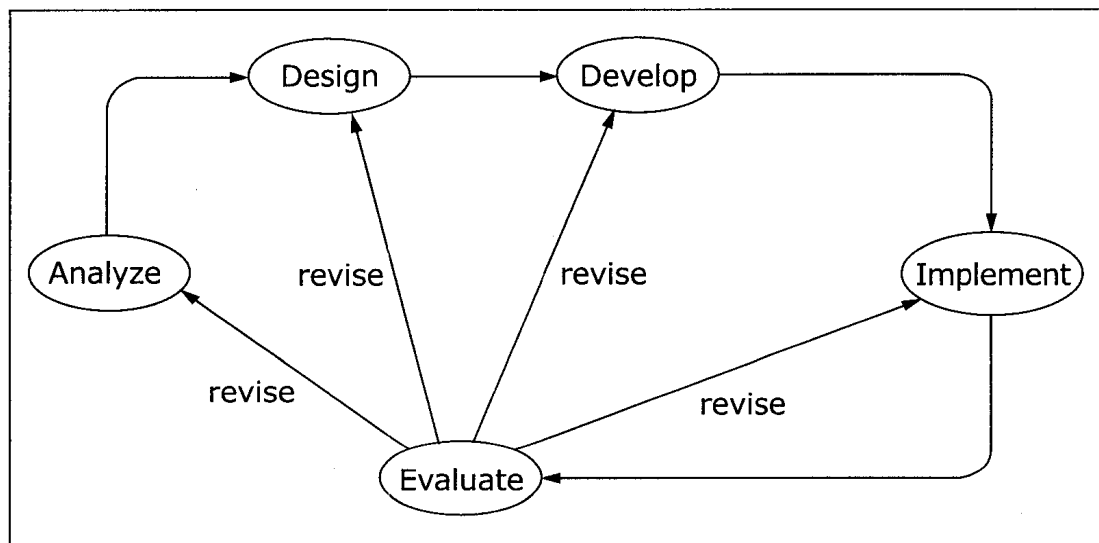
future use. This free delivery of content could undermine the existence of traditional educational institutes that exchange education for tuition fees. On the other hand, the availability and ease of delivering digital content by almost anyone with little resources via blogs and wikis, for example, makes it more and more difficult for learners to distinguish the authentic from the fraudulent on the web. To cope with this, both faculty development on the side of providers and knowledge of information science on the side of learners to educate and learn how to live with these new technologies are necessary.

Finally, though this is more relevant for research tools rather than to pedagogy, new findings resulting from recent developments in artificial intelligence, cognitive and neuro-science, and so on, that allow us to see and test what is happening in our brains more directly will require us to redefine how we develop, design, and implement technologies in our practice more rigidly than ever.<sup>(43)</sup>

### 3. Instructional design

In this paper, we use the definition of instructional design by Gagne et al. that says that it is the field of study that considers “how principles of learning inform the design of effective instruction for intentional learning”.<sup>(44)</sup> It is safe to say that the two instructional models, the ADDIE model and Dick and Carry’s model would be the ones most frequently referred to.

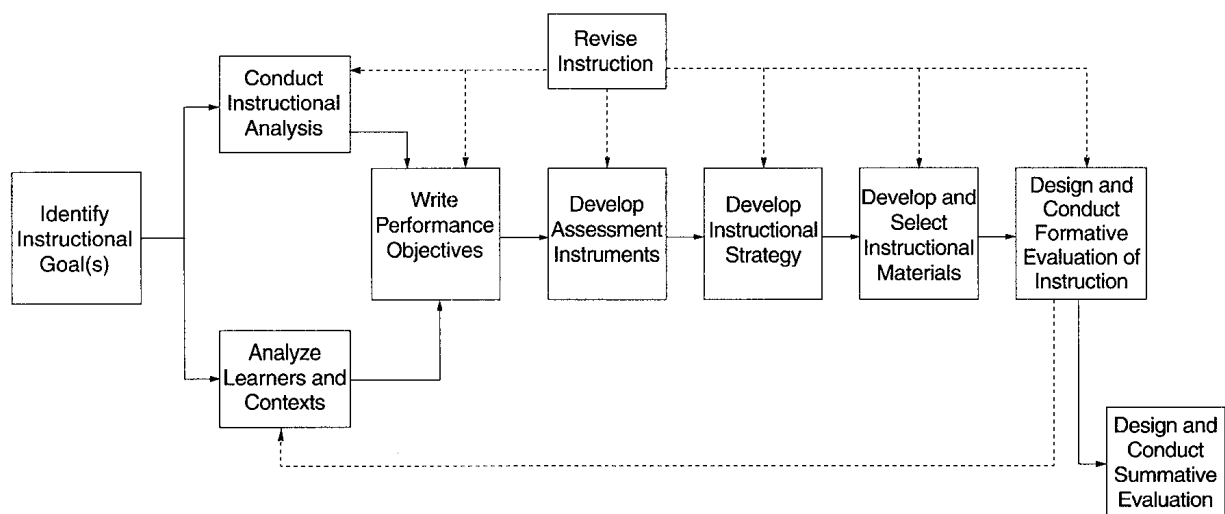
The ADDIE model, which is also a kind of ISD model and is more like “a colloquial term used to describe a systematic approach to instructional development”,<sup>(45)</sup> decomposes the instruction process into five components: analyze, design, develop, implement, and evaluate. Molenda investigated the origin of the model to find that the author of the model is *unknown* though he admits that “the underlying concepts of ISD can be traced to the model developed for the United States armed forces in the mid-1970s”.<sup>(46)</sup> A notable aspect of the model is the feedback pathways that should occur between



**Figure 3. *The ADDIE mode of instructional design*** <sup>(47)</sup>

evaluation and the other four components so that a cycle of instruction process is considered to be not a simple linear process but a process of continuous evaluation and revision at each phase.

The Dick and Carry Systems Approach Model, which is “probably the best known of all instructional design models”,<sup>(48)</sup> was originally proposed in 1978 in the textbook “The Systematic Design of Instruction”<sup>(49)</sup> that was most recently revised and reprinted in 2005.<sup>(50)</sup>



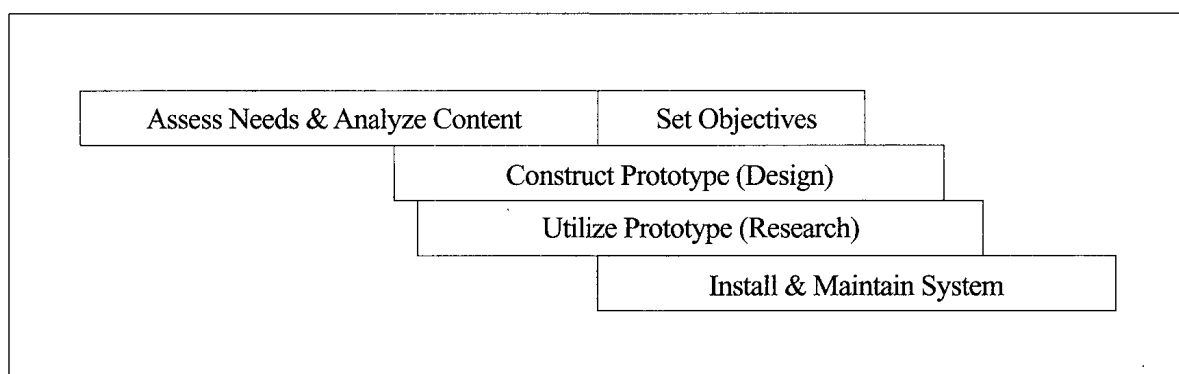
**Figure 4. *The Dick and Carry systems approach model*** <sup>(51)</sup>

When comparing the ADDIE model and the Dick and Carry model, the latter presents more detailed steps in the process but the main five components of ADDIE are also represented in the Dick and Carry model. A key element of instructional design models are their articulation of the crucial elements to be included rationally for our planning and implementing of teaching practice, which otherwise could be done by improvisation. On the other hand, it can happen that we become carried away in observing the prescribed process and consequently neglect available options that could make the process more efficient. For this, the rapid prototyping that we will be looking at might be regarded as a solution.

Four current topics in instructional design will be further looked at: 1) rapid prototyping, 2) constructivism, 3) online potentials, and 4) learning science.

Though the primary motivation of instructional design is to make the instructional process more systematic, there have been also critiques that ISD concerning its linearity and complexity that is “(ironically) too process driven” to be adopted for the urgent needs of today and for less experienced designers.<sup>(52)</sup> To meet these needs, a simplified version of ISD called *rapid prototyping* is proposed that has its origin in the software design model.<sup>(53)</sup> According to Tripp and Bichelmeyer, making a model contains a certain level of internal inconsistency because model-making includes artificial simplification while the actual application is more complex and unpredictable. To solve this dilemma, they propose rapid prototyping that has a more problem-solving and goal achieving orientation, of which the merits are increasingly being accepted where agile decision-making is predominant such as with online learning and web-based materials development.<sup>(54)</sup>

If the ADDIE and Dick and Carry models provide the process to make our practice more systematic, we must still rely on some underpinning learning theories to know how to map our resources for our instruction. As epitomized by the recent keynote lecture entitled “Constructionist Online Learning Goes



**Figure 5. The Rapid prototyping ISD model<sup>(55)</sup>**

Mainstream” by Bruckman at the Technology, Colleges and Community (TCC) international online conference 2007, the learning epistemology that is most frequently referred to for instructional design is *constructivism*. Duffy and Cunningham note the general view of constructivism in instructional design as “(1) learning is an active process of constructing rather than acquiring knowledge, and (2) instruction is a process of supporting that construction rather than communicating knowledge”:<sup>(56)</sup> a series of social learning theories such as active learning, discovery learning, authentic learning, collaborative learning, etc.<sup>(57)</sup> that emphasize learning in a real social context with the values of “collaboration, personal autonomy, generativity, reflectivity, active engagement, personal relevance, and pluralism”<sup>(58)</sup> are the step-children of constructivist thinking. On the other hand, constructivism could be opposed to the ideals of instructional design because the emphasis on individualization is opposed to systematization and/or unification of the process of analysis, design, development, implementation, and evaluation.<sup>(59)</sup> For this reason, Karagiorigi and Symeou suggest reconciliation with “non-radical” constructivism<sup>(60)</sup> or not too extreme views of constructivism in our actual application.

The potentials brought by new digital technologies that we saw in the previous section, now make it possible to realize instructional designs that allow a high level of individualization and collaboration. From this perspective, new instructional design models have been tested such as those found in Colon et

al.<sup>(61)</sup> and Tam<sup>(62)</sup> to name a few. Detailed discussions about how technology could be aligned with constructivist approaches are developed in the second candidacy examination paper about transmission vs. construction of knowledge. In short, the new type of knowing and learning, and therefore teaching, that fit better with the image of “a matter of constructing and navigating a local, situated path through a rhizomous labyrinth, a process of dialogue and negotiation with and within a local sociocultural context”<sup>(63)</sup> would find as its ally web-like structure where many layers of information are intricately networked to be accessible anytime anywhere by anyone who needs it.

Finally, the recent debates over the distinction between learning science (LS) and instructional design (ID) should be mentioned. It can be summarized as:

The objectivist-constructivist debate is related to the division between instructional design (ID) and learning science (LS) in the United States. It is extensively expressed in the May-June 2004 issue of Educational Technology as articulated by Merrill (2004), Ragan and Smith (2004) Retigeluth (2004) and Spector (2004). Spector’s comments revealed the relationship between the objectivist-constructivist debate and the ID-LS debate: “One might argue that with regard to learning outcomes, LS is primarily focused on learners and basic questions about learning, while ID is primarily focused on learning and basic questions about instruction”.<sup>(64)</sup>

That is, that instructional design can be understood to be developed from instruction, that is, the view of educational provider (teachers, tutors, administrators, etc.) while if our attention is more on learners and learning, we should turn around and restructure the existing instructional design models to take the view of learners and learning. This shift in point of view in the field has just begun; still, it is worthy to be kept in mind as this sort of viewpoint-shifting and the distinction of learning and teaching could become another mainstream in

research of the field in the near future.

#### 4. Research design

This section briefly looks at the recent trends in research design that attract people in the field of educational technology and education in general.

Decision-making backed up with empirical evidence has become the norm in education since the first half of the century.<sup>(65)</sup> In its infancy, the research methods in education owed largely to social science where the scientific method or objectively quantifiable data was the norm. However, as the needs of educational research is often bound to a specific problem or situation, alternative research methods to delve into a specific educational condition or qualitative methods such as interview, observation, and case study were introduced. To offset the weaknesses of both, collecting data from both forms or a *mixed-methods approach*<sup>(66)</sup> is now gaining support as a solution to balance objectivity and relativity in the field.

Drawing on this trend, so-called *design-based research* (or sometimes called *design research*) which has its origin in Brown<sup>(67)</sup> and Collins<sup>(68)</sup> is now gaining attention. Though it is still in its infancy, its main purpose is to present a new paradigm where “research *and* practice concurrently” advance<sup>(69)</sup> so that the research is anchored in the real context of a specific educational setting without controlling many different kinds of interventions but examines the events as they occur.<sup>(70)</sup> This direction seems to coincide with the shift in pedagogical orientation in educational technology named “the Problem-solving Archetype” where teaching and learning is conceived more as co-incidentals rather than closed “self-contained entities”.<sup>(71)</sup> A direction towards developing “a design science of education, where we investigate how different learning-environment designs affect dependent variables in teaching and learning” posited by Collins et al.<sup>(72)</sup> seems to be viable for our further practice.



Finally, as we saw in the definition of the field in section II.1, in the process of executing research in an educational setting where humans are involved, greater attention is being placed on how to observe the moral issues when executing research in educational settings.<sup>(73)</sup> This involves the problems of informed consent, privacy, exploitation, dignity, rights to education, and many others that have been practiced in other fields such as scientific and medical research.<sup>(74)</sup> Though the issues of ethics have been seriously considered only from the beginning of this century, as more and more academic associations have become more vigilant in refusing any presentations and publications that go against these common human rules, it can be predicted that this issue will continue to gain attention in the field.

### III. Conclusions

This paper overviews the historical transition of the domains of educational technology and examined some of the focused topics of the more recent research pursuits by people in the field.

A weakness of the approach this paper has been taking is that its scope considers mainly the trends in the U.S. and Japan. As we saw that the field has its origin in the U.S. and therefore it gives a suitable model to be learned from; however, because of the nature of the field it rapidly became networked via the internet and any topic of the field is now widely and easily available around the world. If time permits, a much wider literature review covering different continents will be conducted in order to capture the bigger picture of the trends in the field.

Orey, who has been authoring *Issues and Trends in Instructional Technology* section in *Educational Media and Technology Yearbook* since 2001, observes “ePortfolios, technology integration, gaming, and multicultural perspectives” as new waves in online learning for the year 2006.<sup>(75)</sup> He draws our attention to the importance of investigating the “rocks” in the river — that is, the core topics of

the field, not the “water” that is ever changing: in his view, the rocks are “instructional design, instructional theory, and learning theory”. This is suggestive because however the apparent trends of the research in the field changes, it warns us that we should keep an eye on both the momentum of the river and the larger context that it has been flowing through: the longer history of other disciplines and human civilizations. I would like to keep in mind his metaphor in my future research practice and eye the “rocks” in the river so as not to be washed away by the water in the river.

## Notes

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- (2) Seels and Richey, 1994, 1.
- (3) See Heidegger, 1977 in Paul Saettler, “Antecedents, Origins, and Theoretical Evolutions of AECT,” *TechTrends* 43 (1998), 51.
- (4) 1977 in Saettler, 1998, 51.
- (5) Ivor K. Davies, “Educational Technology: Archetypes, Paradigms and Models,” in J. A. Hartley and Ivor K. Davies, eds., *Contributions to Educational Technology*, (London: Kogan Page, 1978).
- (6) Paul Saettler, *The Evolution of American Educational Technology*, 2nd revised ed. (Greenwich, Connecticut: Information Age Publishing, Inc., 1990; 2004).
- (7) Paul Saettler, 1994, 51.
- (8) Reiser and Dempsey, 2007; Saettler, 1998; Stephanie Walden, 2005, “What is educational technology?,” *Encyclopedia of Educational Technology*, <http://coe.sdsu.edu/eet/>.
- (9) Saettler in Seels and Richey, 1994, 13.
- (10) Reiser and Dempsey, 2007.
- (11) Seels and Richey, 1994.
- (12) Seels and Richey, 1994, 3-5.

- (13) Reiser and Dempsey, 2007, 3.
- (14) CDT (Commission on Definition and Terminology), "Part I: Definition," *AV Communication Review* 11 (1) (1963), 18.
- (15) Seels and Richey, 1994.
- (16) Seels and Richey, 1994, xv.
- (17) Seels and Richey, 1994, 1.
- (18) Seels and Richey, 1994, 10.
- (19) Seels and Richey, 1994, 11.
- (20) Reiser and Dempsey, 2007, 8.
- (21) Molenda, 2004, 1.
- (22) Molenda, 2004, 10.
- (23) Galbraith, 1967, 12 in Molenda, 2004, 8.
- (24) James D. Finn, "Professionalizing the Audio-visual Field," *Audio-visual Communication Review* 1(1) (1953), 6-17.
- (25) Paul Welliver, ed., *The AECT Code of Professional Ethics: A Guide to Professional Conduct in the Field of Educational Communications and Technology*, TechTrends, (Bloomington, IN: Association for Educational Communications and Technology, 2001). (accessible at <http://www.aect.org/Intranet/Publications/ethics/menu.html>).
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**Educational Technology**  
**— An Overview of the Field and Current Issues —**

〈Summary〉

Terumi Miyazoe

This paper discusses some of the key issues that currently define the domains of educational technology. It first overviews historical transitions in the way the field has defined itself. Next, it discusses some specific issues commonly viewed as research interests in educational technology today. The paper concludes with the importance of tracking both the core issues such as instructional design theories and learning theories as well as lesser issues that take precedence at a given moment so as not to lose sight of either the big picture of educational technology as a whole or the specific trends within it.