

John M. Keller: A Profile of an Influential Leader

Claudia M. VonDrak  
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IT 8100  
Instructor: Dr. Rita Richey

It is crucial and necessary, when beginning an effort to describe a significant and influential leader within a given field, to first establish the criteria for selection. These criteria then become the mirror that either confirms the original conjecture or refutes it. However, an image can be viewed within a mirror from many angles. Thus, it will be the task of this introduction to frame the view by acknowledging the discipline-specific roots of the field of Instructional Technology (IT), discussing briefly its current formal acknowledgement of influential leadership and then, creating the overall framework for the discussion of a significant, influential leader within the field.

Alan Januszewski, author of *Educational Technology: The Development of a Concept*, traces the foundational roots of the field of Instructional Technology to two distinct disciplines: science and engineering. Summarizing the earliest reference of these influences from the viewpoint of Dale, Hobin and Finn in the late 1950's, Januszewski (2001) states, "This technological orientation (*the Audio Visual concept*) was grounded in the production-oriented attitude of educational engineering and a science of education that focused on standardization and control" (p.15). The scientific and engineering emphasis in the development of the field was felt through the concurrent century. In 1994, Instructional Technology is defined as "the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning" (Seels and Richey, 1994 p.1 as cited in Januszewski, 2001, p. 103). The definition definitively describes the professional background of those who forged this most recent description. It is the educational engineer and scientist who are attracted to and continue to populate this field. Inherent in this definition is not only a description of the work performed but also the output. Daniel Surry (1997), in "Diffusion Theory and Instructional Technology", suggests that instructional technology is an innovative-based discipline. "The products represent radical innovation in the form, organization, sequence and delivery of instruction" (p.2). Surry

implies that those who practice instructional technology can possess, in addition to other qualities, intellectual inventiveness and creativity.

If we can accept these two unique and outstanding qualifiers, innovative and creative, as unique characteristics for those who do instructional technology, then those who lead in this field must be exceptional in this area. It is not my intent to disqualify leaders in the Instructional Technology field from possessing characteristics of leaders in other fields such as business. However, it is the IT leader's unique work in producing innovative theory and the subsequent masterful application and integration of technology in human systems that distinguishes these leaders from those in other fields.

Howard Gardener confirms this in his book, *Creating Minds*. Gardener (1993) defines the creative individual as "a person who regularly solves problems, fashions products, or defines new questions in a domain in a way that is initially considered novel but that ultimately becomes accepted in a particular culture (p. 35). To define the related creative characteristics of a select group of individuals from the 20<sup>th</sup> Century: Sigmund Freud, Albert Einstein, Pablo Picasso, Igor Stravinsky, T.S. Elliot, Martha Graham and Mahatma Gandhi, Gardener first presents the life view of each person and then relates the various human commonalities between each. Additionally, he traces the corresponding timeframe patterns that led up to each individual's major contribution.

What is significant and the area this paper will capitalize upon is what Gardener refers to as the ten-year rule. Gardener describes the professional careers, representing thirty-plus years, of these seven superior creators "in which important events and breakthroughs occurred at approximately ten-year intervals" (Gardener, 1993, p. 370).

As has already been documented in cognitive psychology, it takes about ten years for an individual to gain initial mastery of a domain (Gardener, 1993, p. 370). (*Gardener defines the term initial mastery.*) "The terms expertise or expert are

appropriately invoked only after an individual has worked for a decade or so within a domain. By this time, the individual will have mastered the skills and lore that are pre-requisite to performance at the highest level of the domain. However, there is no implication of originality, dedication or passion in such a performance; expertise is better conceived as a kind of technical expertise” (Gardener, 2006, p.41).

The decade of apprenticeship heightens the likelihood of a major breakthrough. Such breakthroughs generally follow a series of tentative steps, but when it occurs, it represents a decisive break from the past. In the years that follow, the creator comes to terms with his or her breakthrough. The appeal of innovation rarely atrophies, but generally...the subsequent breakthrough (*occurring at approximately ten years after the first*) is of a broader and more integrative sort with the creator proceeding in a more nuanced way, tying innovations more directly to what has gone on in the past of the domain and to what others have been executing in the domain. What happens after the second breakthrough is more a reflection of the nature of the domain than of the skills and aspirations of the creator (Gardener, 1993, p. 370).

With this, Gardner lays out an approach for the study of a significant leader in the field of Instructional Technology. The plan is to trace a man and his work using what Gardener refers to as, “Life Patterns: the Shape of Productivity (Gardener, 1993, p.369). The life and work of John M. Keller, Ph. D., creator of the ARCS for Motivation Design Theory and Process, will be the subject of this paper. Using the approximate ten-year interval patterns of innovative breakthroughs exemplified by significant creators of the twentieth century presented in *Creative Minds*, it is the purpose of this paper to describe Dr. Keller’s formative years as a new professional in the field to 1977, those leading to the motivation design theory breakthrough and peer acceptance in 1987, the generalizability years and periods of new insights gained at both a national and international level, and finally to the second breakthrough occurring early in the first decade of the new century. The paper will conclude with remarks that predict future influences along with a rationale for the position.

It is important to acknowledge the extensive volume of work, representing a twenty-year span, that Dr. Keller produced in the area of organizational development in his role as consultant

to business, government and industry. Dr. Keller also continues to contribute to the broader scope of the IT field in the area of evaluation and measurement (Keller, 2007c). This expertise also lends credible support to his work in Motivational Design theory validation. However, this paper will confine its focus to Dr. Keller's life work in motivation design within the field of Instructional Technology.

#### Influences: The Building of Multiple Perspectives (1960 – 1973)

The debate continues on whether leaders are born or made. In the case of John McCue Keller (Keller, 2<sup>nd</sup> personal communication, November 1, 2007), I believe that both situations hold true. The stirrings to leadership were always there but they became more overtly evident in the late 1980's when his work describing a theory and a process for incorporating motivation design into the instructional systems design process was first published. The theory, The ARCS Motivation Design Model, was a major breakthrough in the world of Instructional Technology. It was released in the form of a macro-model, a synthesis of validated motivation theory (Shellnut, 1996), that represented a first major attempt to reform current incomplete assumptions regarding the issue of learner motivation in the design of instruction (Keller, 1979, 1983 as cited in Keller, 2006a). This was accomplished using a systematic method that ran in parallel with the Instructional Systems Design Model. According to Keller, "The objective of the ARCS Model is to make the theory and research in the field of motivation more easily applied in actual instruction" for the overall purpose of maximizing the effort of the student to learn the required knowledge and skills (Gagne et al, 2005, p. 114).

The creative process is an evolving one. The roots of creative work, from inception to product, can often be traced through the series of experiential events and their impacts upon the creator (Gardener, 1993). The following is a chronology of early life experiences that shaped

and formed the later direction of John Keller's life's work synthesized from Keller's 2007 vita and various personal communications with Keller.

John Keller left the Marine Corp in 1960 to attend San Bernardino Community College with plans for a business career. After exposure to a liberal arts curriculum, with an emphasis on philosophy, he changed direction to pursue studies in secondary education at the University of California, Riverside. Keller retains fond memories of time spent at the home of Professor Akins, at San Bernardino, where Keller and fellow students would enter into intellectually stimulating philosophical discussions. Later in life, a mentor himself, Keller carried over the practice of intellectual and social interaction with his doctoral students at Florida State University by hosting them in his home on a regular basis (Keller, personal communication, October 21, 2007).

After graduating from University of California, Riverside, in 1965, with a major in Philosophy and a minor in English, Keller first taught at Sunnymead High School, California and then at Granite Hills High School in San Diego, California. It was a chance conversation with a fellow teacher at Granite Hills that opened the door to Keller's interest in a program called Instructional Technology. Soon after, in 1971, Keller began his doctoral work in Instructional Systems Technology at Indiana University with the support of a Title IV Fellowship Award. "I completed my doctoral work in three years as that was the time limit on the fellowship", reflects Keller (Keller, personal communication, October 21, 2007).

Although of limited duration, the three years at Indiana University were productive and formative years for John Keller. They represent the beginning of his apprenticeship in the field of Instructional Technology where his knowledge grew exponentially and his insights deepened. One approach to calculating the full impact of this experience is to reflect upon the professors at

Indiana University at the time who are remembered as major influences. Others influenced Keller through their textbook writings and published work.

- From Psychology, Professor William Scott. Professor Scott introduced Keller to organizational behavior and “human behavior perspective...more than just Skinner”. It was during this time that Keller was introduced to the concept of Locus of Control and Learned Helplessness which eventually became the subject of his dissertation.
- From the Department of Institutional Research in the College of Education, Professor Richard Pugh. Keller was a student in Pugh’s statistics course and had opportunities to work on research projects before working on his dissertation – a practice he has incorporated in his work with his doctoral students at Florida State University. Professor Pugh introduced Keller to the concept of locus of control which was just getting firmly established at the time and they co-authored an article on this concept.
- From Evaluation, Professor Egan Guba and Assistant Professor James Sanders. Keller remembers enjoying the models and planning processes and went on to minor in research and evaluation.
- From Educational Technology, Professors Ivor Davis, Robert Heinich, Howard Levie. Ivor Davis influenced Keller’s work in organization behavior. Organization behavior became a second Ph.D. minor in Keller’s program.  
Robert Heinich provided influence from the communications branch.  
Howard Levie was an early pioneer in visual imagery and message design – an area whose major spokesperson now is Richard Mayer.
- Other influences were David McClelland, Victor Vroom and his Expectancy Value Theory, and the social learning theorists, E.C. Tollman and Kurt Lewin

(Keller, personal communication, October 21, 2007)

Reflecting back on these three years at Indiana University, Keller states, “It was my work in locus of control, learned helplessness and also the organizational behavior writings of people like McClelland and Vroom that I realized that I had been interested in motivation all of my life and that the current work out there was just the tip of the iceberg” (Keller, personal communication, October 21, 2007).

This statement signals the turning point in Keller’s life. It represents a clear and decisive moment to proceed in a single direction in pursuit of a yet to be determined outcome. There is a hint here, that inherent in this realization is a calling – the acknowledgement of this work as one’s avocation and it carries with it a commitment to sustained effort over the long haul. With self-realization and a Ph.D. in hand, Keller accepted an Assistant Professorship in the Department of Instructional Technology at Syracuse University in 1974 and began his first years of serious effort in the area of motivation and motivation design.

#### The First Decade Plus Three (1974 – 1987)

According to Gardner (1993), the opportunity for apprenticeship heightens the likelihood of a creative breakthrough. Keller’s work in his doctoral program and certainly his first years as an associate professor at Syracuse may be compared to an apprenticeship. Gardener continues, “The new theory or innovative work is the result of a series of tentative steps but when it occurs, it represents a decisive break with the past” (Gardener, 1993, p. 370). One method of tracing the progress of John Keller’s work is to determine the official announcement of the theory and its breakthrough implications through scholarly publication releases and the recognition by peers and leading professionals in the Instructional Technology field. This can be accomplished via a review the topics of papers and other documents that were published during this period. Because of the consistent and sustained volume of his publications over the

last twenty years, only the refereed papers will be considered. It must also be assumed that the outcome of his work was completed at least year or more before publication date and reflects years of development investment.

In his first years at Syracuse, it is clear that Keller maintains his focus on Locus of Control. In 1976, he along with Richard Pugh, publish “Sex similarities and differences in locus of control in relation to academic adjustment measures”. Within this timeframe, Keller responds to a question from a colleague who asks for a way to measure motivation. Keller responds that there is not one measure but many (Shellnut, 1996). In 1978, he publishes a monograph, “A practioner’s guide to concepts and measures of motivation”. Also in 1978, “Locus of control in relation to academic attitudes and performance in PSI” was published. In 1979, Keller is named Associate Professor, Instructional Design, Development and Evaluation at Syracuse. That same year, he publishes, “Motivation and instructional design: A theoretical perspective.” In 1983, a significant monograph is published in the Netherlands, “Development and use of the ARCS model of motivational design”. Also in 1983, Keller is named Chair of the Department of Instructional Design, Development and Evaluation at Syracuse. Finally, Keller contributes a chapter in C. Riegeluth’s 1983 release, *Instructional design theories and models: An overview of their current status* titled “Motivation design of instruction” (Keller, 2007c).

In 1985, John Keller accepted a position as Associate Professor, Instructional Science and Technology at Florida State University, Tallahassee, Florida. The following two years, 1986 and 1987, are important years for John Keller and his Motivation Design Theory and Process. The ensuing events represent the official debut and release of this major work to the IT field. The recognition he receives is an indication not only of the acceptance of his work but also the value that is attached to it.

In 1986, he is invited to present a paper at the National Society of Performance and Instruction (NSPI) titled, “Application of the ARCS model of motivation to course design and development”. The following year he received an invitation from NSPI for an encore presentation. The same year, 1987, Keller published two articles, “Strategies for stimulating the motivation to learn”, and “Development and use of the ARCS model of motivation design”. With these events, a milestone has been reached in Keller’s work in motivational design. He has addressed an area, learner motivation, by developing a new theory and process and it has been acknowledged as creditable and important work by peers within his field.

What does this contribution mean to the field of Instructional Technology? First, Keller selected an area, learner motivation, lean in substance and validated research and mastered the research literature that explained how and why people are motivated. This resulted in a successful synthesis – a first of its kind (Keller, 1979, 1983 as found in Keller, 2006 draft manuscript). Second, Keller then translated the synthesis into a systematic, problem-solving process for practitioners in the field of Instructional Technology. Last, he modeled his theory and process to align with the Systematic Design of Instruction which provided the practitioner a complementary way in which to embed the model into the overall design of instruction.

#### Generalizability in Practice and in the Field (1988 – 2000)

The years following the publication of ARCS for Motivation Design continued to be productive ones for Keller. Gardener (1993) suggests that in the period following the release of the first innovation, the creator comes to terms with his/her breakthrough. The need to innovate is still strong. However, the creator looks for additional breakthroughs that are of a more integrative nature - integrative to what is going on in the field. In reviewing his major research studies during the 1990’s, it is understandable to assume that Keller’s involvement in this

extended study of technology-enhanced individualized instruction, as it relates to motivational concerns, was one influence in his decision to pursue a more comprehensive revision of the earlier ARCS for Motivation Design that occurs later in 2004. There is another driver which will be disclosed shortly.

First, it is important to review the two areas of work that predominate his interest during the years 1988 through 2000. From Keller's publications during this period, it is clear that he is focused upon testing the applicability and validity of the ARCS Model in a variety of instructional settings. Second, he continues a practice established early on, to reach out for international exposure by accepting invitations to present ARCS motivational design theory to an ever increasing international audience.

The following represents a sample of the various instructional settings Keller explored using ARCS for Motivational Design during this period taken from titles of research papers published during this period:

- Courseware Design
- Motivational messages
- Multimedia
- Cyber learning
- Motivationally adaptive computer-assisted instruction
- Computer-based instruction and distance learning (Keller, 2007c)

In addition to his responsibilities as Program Leader of Instructional Systems Programs, Department of Education Research, and Professor of Instructional Systems and Educational Psychology & Learning Systems, College of Education at Florida State University, Keller continued to honor requests to present his work in motivation design before a myriad of professional international audiences at conferences throughout the world. Conference locations

spanned the globe and include the following countries: Japan, Cuba, Canada, Malaysia, Singapore, Taiwan, Austria, Korea, and Ireland (Keller, 2007c).

#### The Twenty Plus Year Mark (late 1990's – 2007)

By the mid-nineties, before the dawn of the new millennium, John Keller began a reorientation in the direction of his work. He pulled back from external involvement in consultancies and other interests to refocus on research (J. M. Keller, personal communication, October 17, 2007). Joining him at Florida State University, during these years, were numerous visiting international scholars who wrote to him requesting to be included as members of his research team. Of particular note was a doctoral student from Germany, Marcus Deimann, who joined the team in 2003. Deimann brought with him literature about implementation intentions, volition (*one's will to proceed toward and complete a goal*), and related concepts such as self-regulated learning and action control (J.M. Keller, 2<sup>nd</sup> personal communication, November 1, 2007). According to Keller, this is an area that looks at those distracters that may interfere with one's intentions and desires – an area that is not considered in current motivation design theory (Keller, 2004). In addition to this, Keller's earlier review of multi-mediated instruction surfaced a concern regarding gaps in motivational dimensions within multimedia learning theory. Although motivational variables had been incorporated, they represented an incomplete list of variables. It was Keller's position that a model that integrated both the volitional aspects of motivation with Mayer's information processing model using the ARCS model as a foundational framework would provide a more complete and updated view of motivation, volition and the learning process (Keller, 2004).

In 2004, Keller delivered a paper at the International Symposium & Conference: Educational Media in Schools held in Japan. "A predictive model of motivation, volition and

multimedia learning” became the first public announcement to the IT field of the major revision to the ARCS Motivation Design Theory since its release in the late 1980’s. A substantially revised copy of the theory, “An integrative theory of motivation, volition and performance”, in press, was completed in May, 2007 (Keller, 2007b).

Commenting upon the value of this type of theoretical integration represented by a comprehensive, macro, multi-layered model, Keller states, “The goal is to continue efforts to explain the dynamics and inner workings of motivation, learning, achievement and continuing motivation. The present model supports continued efforts to build systematic applied models of motivational design and learning design, and provides a frame of reference for examining the relationships between different independent lines of research” (Keller, 2007, p. 24).

Does the goal of integration fit the pattern of significantly creative and innovative people and the nature of the second breakthrough? An appropriate comparison can be made by reviewing the 10-year pattern suggested by Gardener (1993), and using one of Gardener’s subject’s as an example. Gardener acknowledges Albert Einstein’s first major breakthrough by calling it a radical breakthrough – a break from the past. We know it as Einstein’s special theory of relativity. Keller’s Motivational Design Theory was also a major break from past practices in the Instructional Technology field.

Einstein’s second breakthrough came about twenty or so years later. Gardener calls it “a comprehensive breakthrough”. We know it as Einstein’s general theory of relativity. As we look at Keller’s second breakthrough, we can acknowledge that this new version of the original is not just an enhancement of the original but a new, more comprehensive view of the variety of systems and sub-systems related to motivation, volition and multi-media learning theory. “It supports areas of disciplined theory and empirical studies in each of these areas, supports continued efforts to build systematic applied models of motivational design and learning design

and provides a frame of reference for examining the relationships between different independent lines of research (Keller, 2007b, p. 24).

What is the significance of this integrative model of motivation, volition and performance (MVP) to the field of Instructional Technology? Keller provides the answer. “One must take a system-wide perspective and attempt to manage the effects of an intervention in one system with respect to its interactive influences with coordinate systems, subsystems and supra-systems. With this regard, each of the major components of the MVP model can be viewed as a subsystem with multiple interactions with other subsystems. Because it is a systems model, the MVP model can be used as a tool for a diagnosis... The MVP model can guide a needs assessment to determine where sources of the problem are located. It can also be used as a prescriptive model and as a tool for design. The benefit... is that it facilitates a systematic examination of all the factors and then provides the basis for a coordinated set of improvements that take all of the relevant factors into consideration” (Keller, 2007b, pp. 28-29).

Concurrent with the release of the new MVP Model, Keller completed an updated report reviewing historical, prototypical validation studies of the ARCS Motivation Design Model applied within a variety of e-learning systems. These include: technology-assisted learning systems, motivationally adaptive computer-based instruction, reusable motivational objects, learner motivation in blended learning environments (Keller, 2007a). Keller is also in the process of completing a manual for instructional design practitioners on designing motivational instruction (Keller, 2006). Another manuscript, in draft form, introduces two validated assessment instruments that can be employed to measure student’s reaction to classroom instruction and students’ motivational reaction to self-directed instructional materials (Keller, 2006b).

### Leaving a Legacy (2008 and Beyond)

Howard Gardener (1993), in *Creating Minds*, states, “What happens after the second breakthrough is more a reflection of the nature of the domain than of the skills and aspirations of the creator (p. 370). If the domain is wide-open, freshly charted, and graced with relatively little competition, the creator retrains the opportunity to continue to be innovative for as long as he or she remains active. However, continues Gardener, “After the second decade, a different kind of opportunity arises. The individual may begin to look back on the relevant domain in a historical or reflective way. In the sciences, however, people who become philosophers of science (referring to Einstein’s chosen direction) are considered to have left their domains; thus, may not be considered central to the discussion pursued by the most innovative scientists” (Gardener, 1993, pp. 370-371).

The question here is, of the two divergent paths that significant innovators may choose after the second major breakthrough, which will John Keller select? In thinking about these options and my work on this project, I am reminded of the last lines of a poem by Robert Frost, “Two Roads diverged in a yellow wood, and I, I took ... the one less traveled” (from “The Road Less Traveled” by Robert Frost). It is my conjecture that John Keller will remain actively involved in his work for a great many years to come. The field is still “wide open” and the aspect of the field, especially as it relates to technology-enhanced instruction for the purpose of individualizing learning is still uncharted and will continue to be an enticement to Keller. However, Keller will not travel this road alone.

Keller considers his work with his students to be his most significant contribution to the field. “I hope I will be remembered via the legacy of my graduates and their graduates” (Keller, personal communication, October 17, 2007). Over the years, Keller has mentored fifty doctoral students who completed doctoral degrees. Today, as has been a traditional practice, he

supervises and mentors a core group of doctoral students who work with him as research assistants in motivation design development. Many represent members of an international community. For instance, those who worked on the volitional strategy represented countries such as China, America, Korea and Germany (Keller, 2<sup>nd</sup> personal communication, November 1, 2007).

It is certain that Keller will stay involved and connected to a large scale integration of his theory and process of motivation design within an educational system. The China Project, part of the 11<sup>th</sup> five-year plan adopted by the Chinese government in 2005, will focus on “incorporating the ARCS model as one of their strategies for designing instruction and learning environments for the purpose of creating more learner-centered approaches and interactive learning strategies (Keller, 2<sup>nd</sup> personal communication, November 1, 2007). The implications of this project can profoundly impact the field of Instructional Technology and the educational system as we know it. First of all, it is an international effort. Second, it is the first large scale adoption of ARCS for Motivation Design within an educational system. Third, its implementation, its validated operation within a production system and substantiated impacts upon learner performance, will serve as a model for future integrations within other community educational systems world-wide.

On the home front, Keller will continue to promote the integration of his work into the mainstream within not only the field of Instructional Technology but in the broader field of Education. As I reviewed the literature for this study, I noted a number of evidences where this integration has taken place. First, the 1994 definition of Instructional Technology by the Association for Educational Communications and Technology (AECT), recognized motivation as a theoretical component of design within Instructional Technology Theory (Januszewski,

2001, p.111) which opened the door for continued research and development in the area of motivation design theory and development.

Other significant leaders in the field of Instructional Technology are adapting the ARCS Model as an Instructional Design (ID) model enhancement to address special concerns not addressed within the Instructional Systems Design (ISD) Model. Referring to the new Multiple Intelligence Model, Tracey & Richey explain, “This is the ‘overlay’ approach that involves taking an existing general ID model and embedding an additional layer of design procedures that address special concerns. The ARCS Model of Motivation Design (Keller, 1987) is the most common example of this approach to building ID models. This study replicates this approach and provides data supporting its usefulness” (Tracy & Richey, 2007, p. 386).

From a more universal perspective, motivation design considerations, specifically the ARCS Model, are becoming more integrated within the fiber of ID textbooks. Previously, those creating ID textual content treated motivational design considerations as separate from the overall discussion of the ID process. *Principles of Instructional Design* (Gagne et al., 2005) presents a more comprehensive approach whereby motivational design considerations are integrated within the overall discussion of the instructional design process.

In conclusion, it is appropriate to come full circle in our review of one significant leader in Instructional Technology as an opportunity to predict a leadership model for IT into the 21<sup>st</sup> Century. Certainly, Howard Gardener, in his book *Creating Minds*, provided a useful a 20<sup>th</sup> century model for an analysis of those who may be acknowledged as influential leaders because of their very large, sustained and continuing contributions to a field. What additional skills, abilities and qualities must leaders possess to meet the requirements of leadership in the 21<sup>st</sup> Century? This is a topic that could consume a future paper. However, intelligent conversations on the subject have already begun. I will borrow some thoughts from one source,

Michael Beaudoin, and his journal article titled, “Distance Education Leadership: An Essential Role for the New Century” (2002).

According to Beaudoin (2002), leadership is defined “as a set of attitudes and behaviors that create conditions for innovative change, that enable individuals and organizations to share a vision and move in its direction, and that contribute to the management and operationalization of ideas” (p. 132). In response to his own question of where current leadership is evident in the field, Beaudoin (2002) suggests that it comes from administrative roles as well as influential thinkers and theorists who have significantly impacted their organizations and the field. While disavowing any fast formulae for infallible leadership performance, he does provide a list a characteristics and qualities that are “essential for success” for those taking up the leadership baton in the 21<sup>st</sup> Century.

They must have a sense of vision, resoluteness and the ability to operationalize concepts. They must be innovative and realize that a new idea very often succeeds, not because it is noble, but because it can serve a useful purpose. They lead by emphasizing the implementation of innovation. They have the capacity to conceptualize, synthesize, and intersect earlier philosophies with emerging new ideas and articulate their implications and applications. They possess charismatic qualities in their ability to focus on a primary vision and mission, to empower and energize others to implement their vision, to press their organization to continuously improve, to widely communicate and live the vision, ...and to profoundly inspire and affect their followers aspirations (Beaudoin, 2002).

The final question must be asked. Does John M. Keller demonstrate the necessary leadership qualities and characteristics to sustain his role as a significant and influential leader into the 21<sup>st</sup> Century? My response is a resounding, “Yes”.

## Appendix

### John M. Keller Chronology of Career Events

#### Educational Background

Ph.D. Degree (1974)	Indiana University, Bloomington, Indiana Major: Instructional Systems Technology Minors: Research and Evaluation Organizational Behavior
B.A. Degree (1965)	University of California, Riverside, Calif. Major: Philosophy Minor: English

#### Major Positions

Program Leader, Instructional Systems Program, Department of Educational Research, College of Education, Florida State University, September, 1996 - 2003.

Professor, Instructional Systems and Educational Psychology, Department of Educational Psychology & Learning Systems (Formerly, Department of Educational Research), Florida State University, July, 1988 - present.

Program Leader, Instructional Systems Program, Department of Educational Research, College of Education, Florida State University, August, 1990 - 1992.

Associate Professor, Instructional Science and Technology, College of Education, Florida State University, Jan., 1985 - June, 1988.

Chairperson, Area Instructional Design, Development, and Evaluation, School of Education, Syracuse University, Sept., 1983 - Dec., 1984.

Associate Professor, Syracuse University, Department of Instructional Design, Development, & Evaluation, School of Education, Syracuse University (July, 1979 - Dec., 1984).

Assistant Professor, Syracuse University, Area of Instructional Technology, School of Education (1974 - 1979).

Secondary School Teacher in the English and Social Studies Departments at the Grossmont Union High School District, LaMesa, California (1967 - 1971), and the Moreno Valley Unified School District, Sunnymead, California (1965 - 1967).

#### Major Accomplishments

Creator, ARCS Theory of Motivational Design Theory and Model 1987  
Creator, Motivation, Volition and Performance Theory and Model 2007

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