
DO WE NEED A STIMULUS IN LEARNING DESIGN-

HOW ABOUT A DOSE OF COMMON SENSE?

A WHITE PAPER REVIEWING THE STATE OF INSTRUCTIONAL DESIGN
AND
A SUGGESTED ENHANCEMENT FOR TODAY'S BUSINESS CLIMATE.



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EXECUTIVE SUMMARY

Our Learning and Development community is tasked with significant challenges, and interestingly, despite many technological advancements and new delivery modalities, not much has changed since I first addressed this topic five years ago. Senior management still tasks the L&D function of their organizations to justify the expense; they have yet to view the L&D function as an asset; and we still question our efforts in optimizing learning transfer to the job.

The traditional ADDIE model remains the industry standard in design processes while we see a vast array of thought regarding instructional design theories and processes striving to meet the challenges of the 21st century business climate. It seems a more pragmatic approach to the design process would benefit all concerned.

Despite the success seen with the advent of distance learning capabilities, use of due diligence in application of learning theory, and efforts to enhance worker productivity, gaps still exist in delivering and development of learning solutions that are fully aligned to job outcomes and have accountability to job productivity. These gaps include:

- Ø Corporate scrutiny which comes with difficult economic times
- Ø Well-designed learning experiences going off to training obscurity, forever residing on a credenza shelf, or worse, being lost in a virtual sea of electronic media
- Ø A lack of continuity between individual elements of a particular curriculum, and how well all elements of that curriculum align to the desired job behaviors and outcomes
- Ø A continuing desire by upper management to justify that learning and development solutions are value added activities in the corporate environment

The purpose of this White Paper is to provide an analytical look at the current application of learning design and delivery principles, and propose a common sense suggestion to enhance the end outcomes we obtain, better meeting the needs faced today. By implementing a more strategic and pragmatic approach, early in the design process, this will occur. Outcomes Today, LLC has revised the traditional ADDIE model to do this.

Our E.D.D.I.E™ model insures attention to the evaluation of the practical job behaviors early in the design process by first identifying Optimal Performance Outcomes (OPO™), and then aligning the courses to meet these objectives. The first “E” in the acronym focuses designers to more fully **E**valuate the end outcomes desired in the learning activity, course or curriculum before we identify individual learning objectives. This method will enhance the traditional analytical process and deliver the expected outcomes.

OBJECTIVES

Upon your reading and review of the principles and ideas presented in this White Paper, you will:

- Know the challenges the Training & Development community faces
- Identify shortcomings of current ID processes
- Know how you can improve the alignment of learning activities to job performance through application of a Level III evaluation
- Implement a new “Common Sense” approach to your future design efforts

INTRODUCTION

The state of the Learning and Development industry undergoes continual change to adapt to current economic pressures. Training Magazine, in its *Industry Annual Report* (Nov-Dec 2008¹), begins their review of the U.S. training industry by stating, “*It’s not business as usual!*” From their current report (Nov-Dec 2013²) they note “*On average, employees receive 37.5 hours of training per year, three-and-a-half hours less than last year.*”

Equally well respected is the ASTD *State of The Industry Report*, (ASTD Research: State of the Industry, 2013³). Among ASTD’s concluding observations is that “*In 2012 we saw organizations continue to invest in their employees despite a challenging economic environment*”

When comparing 2007 & 2013 data (Table 1 & 2 in Appendix) these reports tell us:

- In general, we are doing less training which it is costing us more
- While technology use has grown considerably over the past five years, it seems to be leveling
- Neither of these reports mentions anything regarding metrics pointing to on-the-job performance!

A favorite quote by Yogi Berra states: “*The future ain’t what it used to be!*” Yogi’s words of wisdom seem more relevant today than ever reflecting the change our industry is experiencing. In an article appearing in the December 2008 issue of T&D (*Learning in 2020*)⁴ the editors take an in-depth look at the changes foreseen for 2020 in the learning and development arena. While the review touches on many points including technology, learning tools, and future leaders, they included a section on Talent Management, a topic area here-to-fore not in the lexicon of workplace learning and performance (WLP). In this article, Peter Capelli, Professor of Management at The University of Pennsylvania’s Wharton School of Business, states that learning professionals in 2020 will “*...need to translate business needs into talent requirements...*” Additionally, commentary from Rob Lauber, VP of Yum Brands, Inc. emphasizes how we must fully understand the significance of the role learning professionals play in talent management and the importance of executive level support of our involvement.

These indices point toward the incorporation of “just-in-time” learning practices, full utilization of more “blended” learning approaches, and alignment to job behaviors. By themselves these trends are welcome and needed to meet current demand. They also point to the increasing complexity of learning design and the need to insure design efforts remain true to practical application and end outcomes.

The growth and reliance on e-learning solutions seen in the past five to ten years has provided the industry with excellent training products. As a learning community, we are by no means at a loss for effective training solutions, however we suffer from a “once & done” mentality – many learning solutions developed and deployed but seldom re-used and enduring in their application. You have a multitude of effective training programs, consistently meeting the immediate need for today’s business challenge, however, when you look at the totality of the offerings you

provide, the solutions created today risk becoming another in a long list of past offerings cataloged in your organization's LMS. The question to ask is, "Do we design continuity with the job function into each program, tutorial, and class, or operate with a once & done mentality?" While an immediate need is satisfied by the programs we create, they seldom are used to their, or the employees, greatest benefit in the long term, nor are they completely integrated to the overall job function. One remedy is to add better continuity to our instructional design initiatives by adding a dose of common sense into the process.

JUSTIFICATION OF TRAINING & DEVELOPMENT

Businesses today are challenged with new paradigms of productivity, insuring higher application of skills than in times of greater economy. While "training" has always been a cornerstone of preparing a workforce to meet the challenges they face, we now frequently hear a call for a higher level of accountability and productivity in our training endeavors.

Over the past 20 years, we have attempted to apply the principles of "ROI" to those activities we label "training," yet from a practical standpoint, this goal of quantifying the ROI of Training remains elusive. At virtually every Learning & Development conference, seminar or global congress, the accountability of training is frequently a cornerstone event of the agenda. Efforts by Kirkpatrick, Phillips, and others, while well founded and presented, provide one of the greatest challenges to the learning and development community. Today, while always a consideration, inclusion of an ROI component into the design of learning activities has not become a routine reality.

In more difficult economical times senior management is incessantly more interested in the return on their investment in employee training and development. "Conventional wisdom" often has positioned training initiatives as necessary expenditures rather than as "investments" when looking at corporate balance sheets. At the 2005 Training Magazine's Expo, keynote speaker Steven R. Covey drew a corollary of the past Industrial Age to today's transition to the "Information Age". In the early 20th century, machines and material objects were the "capitol" expenditures that lead to higher productivity. As we progress into the 21st Century, Covey states, people have become the new "capitol" in which we must fully invest.

The impact of these circumstances mentioned above is that historically transfer of skills taught in the classroom, or via distance learning, has minimal benefit on the job. In 1979 Donald Kirkpatrick's foundational work found that only 15% of skills taught in corporate learning & development programs transferred to the job. In 2005, a study commissioned by ASTD found the same degree of learning transfer! Does this indicate a gap in the alignment of learning activities with expected job performance and outcomes? My conjecture is, yes it does.

CURRENT DESIGN PRACTICE

With this myriad of thought, is it no wonder that our learning community faces the challenges I mentioned earlier? We have become experts in finding the right solutions, for the right need, at the right time, but have we fully incorporated continuity with the end objectives of the curriculum?

The application of ID theory and practice is widely applied in today's business environment. Businesses in the 21st century nearly unanimously accept the premise of Learning and Development, with design elements routinely applied to an ever more creative variety of classroom, distance, and adaptive learning strategies. The quality of today's instructional solutions is without compromise, vastly enhancing the scope of capabilities of the modern work force. In one corporate entity during 2007, more than 100,000 learning activities and assessments were administered or completed by a workforce of +/-5,000 employees. Compliance training, core skills training, and personal development programs can all benefit from enhanced instructional design.

ASTD's 2002 *State of the Industry Report* notes that our learning community relies heavily on Kirkpatrick's Level 1 evaluations, demonstrating learner satisfaction as accountability for a learning activity 78% of the time, versus only 3% and 7 % reliance respectively upon Level 3 and 4, for accountability in demonstrating behavioral change and results and on-the-job impact.

Further, in our own survey conducted at the 2008 SPBT conference, a group of 55 training leaders estimated that less than 10% of their training resources (\$ & hours) were expended in the evaluation aspect when applying the ADDIE model to their design efforts. Seventy five percent of the participants agreed that a strategic approach, focusing on greater accountability of both the learner and trainer, is optimal.

Despite current efforts and with the high quality of the majority of our current programs, why do we still struggle to improve and deliver to the "C" level of management the degree of accountability they desire?

WHAT WOULD THOMAS PAINE SAY?

We frequently see the philosophies of our country's founding fathers' forming the basis for solutions to modern day problems. One historical figure not often referenced is Thomas Paine. One way to meet the future challenges of learning and development is to add a dose of Paine's "Common Sense" into our strategic approach to instructional design.

Patriot, early American philosopher, and architect of our early form of government, Thomas Paine stated in his 1776 publication, *Common Sense*:

“In the following pages I offer nothing more than simple facts, plain arguments, and common sense; and have no other preliminaries to settle with the reader, than that he will divest himself of prejudice and prepossession, and suffer his reason and his feelings to determine for themselves; that he will put on, or rather that he will not put off the true character of a man, and generously enlarge his views beyond the present day”

If Mr. Paine were designing a training program to educate early Americans on the necessities of forming a new republic, how would he have designed that course? He knew his objective was to educate the citizenry of this fledgling nation on the merits of forming their own government and break from the monarchical rule of Great Britain. He had no Instructional Design Process to follow, he had limited means to survey his audience for their educational need; he had no metrics to assess the success of his endeavor. Yet, this was exactly the challenge he found himself facing, and the environment in which he had to operate!

His answer was to rely upon “simple facts,” “plain arguments,” and “common sense” in asking the citizenry to put aside their pre-conceived ideas and prejudices and “generously enlarge their views beyond the present day”. Thus, Paine was relying solely upon his personal experiences, those of his peers, and the lessons they had learned from history.

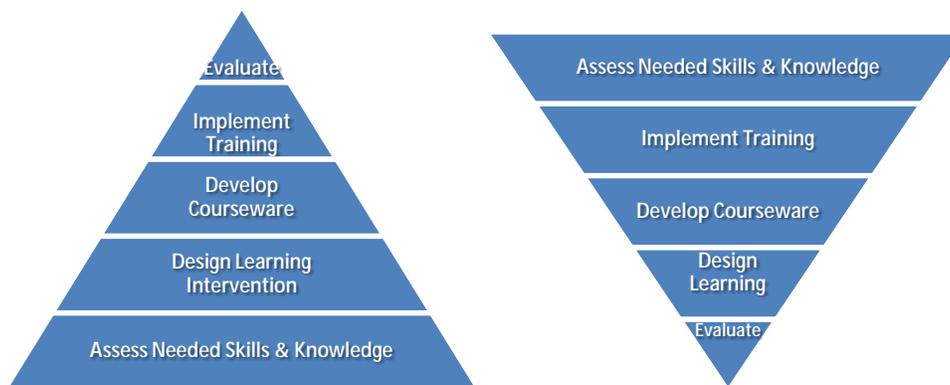
If our learning community were to look at how efficiently we apply “common sense” to our modern learning strategies, what alterations, or enhancements could we apply to meet the challenges of the day?

THE THOMAS PAINE APPROACH - APPLYING COMMON SENSE

Let me introduce you to a modern day Thomas Paine. He is Training Director of a large multi-national business entity, tasked with bringing enhanced performance to the employees of his organization. Mr. Paine may well approach the topic in this manner, applying his well known “simple facts and plain arguments” approach:

- In his Analysis, he would look back at historical performance standards and determine what behaviors, attitudes, skills, and knowledge led to the desired outcomes, implementing what today we would refer to as EBP, or Evidence Based Practice. He would identify, from a practical standpoint, those traits, and behaviors that lead to successful implementation of job skills and deliver the desired level of productivity. With those performance behaviors documented, he would identify the skills necessary to implement the behaviors, and then finally the knowledge the learner needed in order to implement those behaviors. Once his analysis was complete, he would develop Performance Objectives, Enabling Objectives, and Learning Objectives, as well as, and most importantly, a means to evaluate the learning process, on the job, in terms of desired performance standards.

- In the Design phase of Mr. Paine’s approach, he would next construct an assessment mechanism to evaluate the learner’s existing capabilities in executing the job behaviors, skills, and knowledge. He then would create learning activities and courses fully integrated and blended to sequentially achieve the basic knowledge, then the skills, and lastly the behaviors and attitudes desired. He would incorporate feedback mechanisms appropriate for evaluation of the training “on-the-job” and conducted by the first line supervisor, thus incorporating an embedded Level 3 evaluation.
- While he is applying principles of Adaptive Learning in his approach, Mr. Paine breaks from conventional wisdom by looking first at the end outcomes desired, then working backwards to identify individual skills driving performance behaviors, and then initiating the initial design process. In essence, this method puts the traditional ADDIE model upside down!



By first evaluating the expected performance parameters, and identifying the behaviors leading to optimal performance, Mr. Payne is applying a high degree of pragmatism and “common sense” to his design process. In this way, the learning activities developed better align to the end performance desired, thus providing a great deal of continuity to the training process.

DESIGN THEORY

The Learning and Design community is not at a loss for ideas and thought on instructional design. Many of the current design theories originated 30 and 40 years ago, coming from research conducted by the US military in concert with the educational community. The intent was to design courseware suitable for small chunk learning which would deliver the behavioral change needed in training of military recruits.

The Web Site, www.Learning-Theories.com,⁵ categorizes a wide variety of approaches, amounting to 42 various theories, approaches and categories of learning and instructional design. Of this variety of thought, several popular processes, paradigms, and theories, are:

THE ARCS MODEL -
ATTENTION; RELEVANCE; CONFIDENCE; SATISFACTION – JOHN KELLER⁶

In 1983, Indiana University professor John Keller first wrote of his ARCS model of motivational learning. He identified four key steps to gaining and sustaining a learner's motivation: Gain their Attention; provide Relevance of the material to their role; inspire Confidence in the learner's ability to learn; and provide Satisfaction in the learning process by providing the learner opportunities to apply the skills learned.

THE DESIGN BASED RESEARCH OR DBR MODEL – COLLINS, ET AL.⁷

Design-Based Research employs various analytical techniques attempting to bridge theory and practice in education. A 2003 report by The DBRC describes this process by stating:

*“Like formative evaluation, design-based research uses mixed methods to analyze an intervention's outcomes and refine the intervention.....The intention of design-based research...is to inquire more broadly into the nature of learning in a complex system and to refine generative or predictive theories of learning. Models of successful innovation can be generated through such work — models, rather than particular artifacts or programs, are the goal.”*⁸

THE BEHAVIORAL PARADIGM:

Some of the early learning theories relied on the principles of Behaviorism as practiced and taught by psychologists such as B.F. Skinner, Ivan Pavlov, Bandura, Maslow, and others.

The behavioral model assumes that the learner is essentially passive, open to external stimuli, and responds accordingly. Applying positive and negative reinforcement to the behavioral approach insures the probability that the expected behavior is applied on the job. In this model, we define learning as the expected change in behavior by the learner. The classic and most simplistic example is that of Pavlov's dogs, responding to the bell, with that principle then extended to human behavior.

Bandura, in the late 1960s and early 1970s expanded upon this behaviorist approach with the inclusion of social factors, stipulating that people learn from one another through observation, imitation, and modeling. The learner sees the expected results in others behaviors, and can thus more readily adopt those behaviors. Bandura labeled his theory as Social Learning and in essence created a bridge between behaviorist and cognitive learning theories with its inclusion of attention, memory, and motivation.

Abraham Maslow developed the Hierarchy of Needs model in 1940-50's. Maslow's Hierarchy remains valid today for understanding human motivation and for management training. His theory is that each of us is motivated by these five needs:

1. **Biological and Physiological needs** - air, food, drink, shelter, warmth, sex, sleep, etc.
2. **Safety needs** - protection from elements, security, order, law, limits, stability, etc.
3. **Belongingness and Love needs** - work group, family, affection, relationships, etc.
4. **Esteem needs** - self-esteem, achievement, mastery, independence, status, dominance, prestige, managerial responsibility, etc.

5. Self-Actualization needs - realizing personal potential, self-fulfillment, seeking personal growth and peak experiences.

Our most basic needs are inborn, having evolved over tens of thousands of years. Only when the lower order needs of physical and emotional well-being are satisfied are we concerned with the higher order needs of influence and personal development.

Incorporating Maslow's Hierarchy of Needs into our design approach has practical implications. It addresses the elusive "Why" of the training initiative. Linking the higher needs of Self Actualization, Self-Fulfillment and personal growth to the lower needs gives participants added motivation to be full participants in the learning experience.

THE ADDIE MODEL – TODAY'S "GENERIC" ID MODEL.

Today, possibly the most widely applied theory or process is the ADDIE model of instructional design:

Analysis of the learning need; **D**esign of the instructional instrument or methods; **D**evelopment of the learning activities; **I**mplementation or deployment of the learning instruments; and finally, **E**valuation of the learning to insure initial objectives are met.

The ADDIE model has in effect become the generically accepted model of learning design. In general principles, this model and process addresses our needs in learning design. However, what could be missing, or added into the model, to bring it more in line with current needs of corporate training initiatives?

AGE OF THE PROCESS ORIENTATION

From my years in Sales management and Training leadership positions, I have seen the business community become increasingly reliant on what one could call "process orientation." Driving this orientation is the research and metrics we have for the desired performance. Frequently we hear leadership ask, "What does the data show?" This orientation is understandable and reasonable, but is it inclusive of all the relevant experiences? Having a well applied process of development, and using that as a criterion for evaluation, creates the gap mentioned earlier. While the L&D community needs, and benefits from, sound practices, we must be sure to include in our processes of design and delivery of training an adequate perspective to the practical application of the learning, and provide more common sense in the process.

The sustainability and replication of "best practices" is a beneficiary of having a systematic approach to the implementation. Hardly any segment of today's business structure is lacking in having multiple structured processes to implement in the conduct of their daily business. From procurement, through manufacturing, the training of sales people and customer service ranks, it has become the standard to establish Standard Operating Procedures. This process orientation has been a cornerstone of increasing productivity, compliance, and eventual customer satisfaction and corporate profitability.

We have seen numerous processes taught and implemented at the corporate level, as evidenced by such programs as Six Sigma and Business Process Excellence. In the model corporate environment, it has become routine to annually institute new initiatives aimed at increasing worker productivity and bottom line profitability. Some of these initiatives are “pet projects” of the CEO, or other corporate executives, some implemented at the suggestion of outside consultants, often at great expense, while some are internally initiated at a departmental level. Each have sound motivation, with justifiable expectations for the expected results, but yet are implemented for the short-term need, and revised or replaced annually. If these programs and processes are so effective, why do we see that annual regeneration of such efforts?

The intent of this processes orientation is to insure the transferability of those business practices that have proven effective in the past by applying a sustainable best practices approach. However, does this process orientation appropriately incorporate the vast pool of practical experience of today’s training leadership, or might it frequently overlook a more commonsense, experience based strategy?

Numerous design sessions and corporate meetings are conducted and have done an excellent job of following the “process”, but when we come to inclusion of “simple facts and common sense” gained through successful experiences, we struggle to find a way to justify their inclusion because there was no metric for quantifying this experience and past best practices. Might it be that we dedicate our value estimation too heavily on the process completion, with less than optimal assessment of the end outcomes?

Thus, the question we, as business leaders of tomorrow, and as a learning community, must ask in our initial stages of design and development become, “What are the ‘simple facts and plain arguments’ for this particular project”, thus injecting a more common sense approach to our process.

A COMMON SENSE APPROACH

The hypothesis for this paper is that, by inclusion of additional focus on “simple facts and plain arguments,” as Thomas Paine did in 1776, we can improve upon the great strides made to date in Learning and Development.

By no means is the intent to be critical of existing design processes, nor of our reliance upon process orientation. The real key is to become not overly concerned with the execution of the design process as it stands, but rather to find a way to improve upon an already wholesome method of how we design modern training.

“Common Sense” in early modern writing (e.g. Descartes) is described as the faculty responsible for coordinating the application of the different senses. In this meaning, the objects of common sense are the qualities such as extension and motion that can be detected by more than one sense. Later, the term loses any special meaning, coming to refer just to the sturdy good judgment,

uncontaminated by too much theory and unmoved by skepticism that is supposed to belong to persons before they become too philosophical.

The current application of the ADDIE process lacks this element of applying the different senses and the qualities they offer, and has the potential to suffer from contamination by theory and strict adherence to the process itself.

REVISITING THE ADDIE MODEL

The majority of recent design advances have been in the area of technology, web authoring, communications, and media technologies supporting distance learning. This strategy has provided business leadership with a greater ability to see value in learning and development; however, that value in essence is derived from delivering training remotely and the savings derived in that manner, rather than from better instructional design.

In the July 2008 issue of Training and Development (ASTD Press 2008), in his analysis of current instructional design in the article, *the year 2013: ARDDIE is IN, ADDIE is OUT*⁹, Senior Instructional and Performance Transfer Designer Benjamin E. Ruark, identified these same shortfalls. Mr. Ruark postulated the need for additional research and incorporation of Evidence Based Practices (EBP) as a means to provide greater accountability in the design process and to boost credibility for learning and development in the workplace.

The solution Mr. Ruark provides involves the addition of enhanced research into the ADDIE process, which he has renamed ARDDIE, adding the “R” for Research. This research entails the identification of “gaps” in our instructional design: The first gap involves clarifying a customer centered metric differentiating current from desired performance, the second identifies how the latest knowledge in curriculum design, learning, and delivery should affect a project, and the third, identifies the EBP in instructional design and then incorporating this into the design.

Conventional wisdom and current practice focuses predominantly on skills. We are able to impart to the learner more than adequate expertise on what they need to know for a specific job or task, but do little to address how and why the skills are applied relative to end performance. From these observations and experiences, one can deduce that additional attention to behavioral change may provide not only greater accountability, but also training results that are more solidly linked to the specific job behaviors and outcomes.

Current application of ADDIE and other ID processes do an excellent job of identifying and creating solid “Learning Objectives” for basic job skills. Hardly a project is completed without great attention to this aspect of the design process, then extending that design into the assessment of those objectives. However, these steps in development are only addressing the cognitive aspects of the desired learning. They identify the “what” aspects of the training, but often do not address the “why” and “how” aspects of learning relative to job performance. Potentially there is need to go beyond traditional learning objectives and look at how those learning objectives “fit”

into the overall job function. A way of doing so would be to first establish broader performance objectives geared to job behaviors, thus adding a degree of practicality and common sense to the process.

COMMON SENSE AND A BEHAVIORAL APPROACH

In his classic effectiveness model presented in “*7 Habits of Highly Effective People*,” Steven Covey suggests, as his 2nd Habit, to “Begin With The End in Mind”. If we apply this principle to the instructional design process, we would fully analyze the outcomes desired before we began identifying specific lesson plans and learning objectives. By giving attention to the performance evaluation process in our analysis we can dramatically improve the outcomes attained and better provide the learners the resources they need to continue learning and maximize their performance.

The key to doing so is to add behavioral components to our ID process. As previously acknowledged, today’s learning community does a superb job of identifying learning objectives in our conventional learning design. To improve on this, we must expand from solely developing cognitive objectives for the knowledge needed, and expand the design with the inclusion of Psychomotor and Affective objectives.

The hypothetical case using Mr. Paine is in essence a means of applying a more behaviorally focused design process. Behavioral approaches are by no means new to the field of instructional and learning design, but seldom does the learning objectives currently incorporated include these behavioral aspects.

A more behavioral approach needs to include identification of objectives for the three levels of human behavior¹⁰:

Cognitive behaviors – knowing or doing: this entails the specific job knowledge one will need to carry out their role. It would include technical knowledge of a product and background knowledge of the area of expertise. Simply stated this segment is the "what" which needs to be learned. These cognitive aspects are the foundation of currently identified learning objectives.

Psychomotor behaviors – doing or physical in nature: this aspect of a behavioral approach is the “how” segment. Psychomotor objectives would encompass the skills needed to implement the cognitive objectives, such as communications skills, selling skills, management skills, coaching skills, etc. In essence, these are the skills and behaviors one would need to enable the application of the learning objective.

Affective behaviors – demonstration of personal qualities: emotions, attitudes, feelings: affective objectives provide the “why” of our training. For true performance to reach its highest levels, a learner must see the purpose of the learning. They should know how success in the position benefits their wellbeing, customer well being and, most

importantly, allow them to gain self-confidence in their capabilities leading to increased enthusiasm for their role. Affective behaviors thus relate more to the job outcomes and end performance, and address Maslow's higher needs.

Another view to this behavioral approach is to look at the development of objectives in a purely educational perspective. Some educators classify learning objectives with a little more specificity, by differentiating between Terminal Learning Objectives, Enabling Objectives, and finally the well used Learning Objectives.

A Terminal Learning Objective (TLO) will state the lesson's expectations for a learner's performance and application of learned skills upon completion of the lesson or instructional unit. A TLO takes the perspective of what actions and behaviors the learner will apply upon lesson completion— what the student will do. A well-crafted TLO will consist of three distinct parts: a Condition, a Task, and a Standard. An effective TLO uses active terminology, including observable actions, and has measurable results.

Enabling Objectives (EOs) are concise statements of expectations and generally considered steps in accomplishing the TLO. EOs are written from the perspective of what the learner must do to accomplish the TLO. They typically provide tasks and skills needed to perform the end results of the TLO. While they are observable and measurable, an EO often does not include the standard or condition¹¹.

THE *E.D.D.I.E.*™ MODEL – A REVISION TO ADDIE

As discussed in the earlier mentioned Ruark' T-D article, our industry needs to take a revised look at the design process. What is sorely needed is a step back in time, before we became so process oriented, and addition into the process of a more outcomes orientation to the design model. This can be implemented without reducing utilization of the currently available levels of technology or theory.

To accomplish this, I suggest a simple and modest revision to the ADDIE design model. Outcomes Today, LLC does so by applying the acronym *E.D.D.I.E.*™, resulting in a minor adjustment to the way we apply the ADDIE model of design. *EDDIE* stands for:

E – Evaluation and Analysis: The first step is to analyze and identify Optimal Performance Objectives (*OPO*™) for the position or job function. The designer accomplishes this by identifying end performance goals, and how an employee's job evaluation reflects that performance on the job. Included in this step is identification of those job critical behaviors that drive performance (*EBP*). With those behaviors, or *OPOs* identified, the designer must ask, "What skills and knowledge are needed to implement these behaviors?" The answers to that question will then formulate Enabling Objectives, from which determinations are made as to specific courseware and content. This will align the specific skills and technical knowledge

training to future performance and drive the next phase of development. This essentially then is “starting with the end in mind,” as practiced in Covey’s *7 Habits of Highly Effective People*.

D – Design: The Design phase of the model then follows a more traditional path, determining the courses, content, delivery method, and specific learning objectives. It is also important to include in the design an assessment and evaluation strategy and tactics that relate directly back to the OPO. With proper alignment to the OPOs, a solid Level III evaluation can be included in the design, thus addressing senior management’s interest in the effectiveness of the training activities.

D – Development: No adjustments or alterations to this phase of the ID model, providing however that the learning activities developed are done so with adequate attention to the scope of the training needed, and organizational culture. The product of the developmental phase needs to address issues beyond the individual learning activities and formulate a unified training curriculum for the position. The development process should incorporate each of the current methods of adaptive adult learning. Doing so will accommodate future expansion of the job function to include new behaviors or revisions to the existing content.

I – Implementation: Utilizing Evidenced Based Practices, the training modalities are then implemented using the most appropriate means of blended delivery. Consideration should be given to a fully blended approach using distance based and live training as best fits the situation. As a rule of thumb, knowledge uptake is best accomplished via distance based, self paced learning modalities, while application of skills can be taught using a more experiential base approach, using live and web based modalities.

E – Evaluation: Here we find another break from the more traditional ID approach. Acknowledging that the evaluation aspect often gets less than adequate attention, by aligning to the OPOs established early on, an evaluation tool must be implemented to assess the effectiveness of the training. This assessment is best completed not by the trainers or training department, but rather by the position supervisor, on the job, three to six months post training. By having the individuals’ immediate supervisor assess, evaluate and rate the employee on the job performance, using a mechanism which follows the OPOs, we now have that much sought after Level III metric, and linkage to individual performance, which corporate leadership desires

This procedure fully identifies final training outcomes early in the analytical process, and hence maintains consistency to those OPOs throughout the design and delivery process. This design process features specific elements to assist in identification of the behaviors that will deliver the results expected, and development of OPOs and EO before we start the creative process, whether we are developing a course, unit or an entire curriculum. Doing so provides greater consistency of the content throughout all learning activities included in the curriculum.

The EDDIE model thus brings the whole Instructional Design approach full circle thereby creating a complete model unified with and aligned to the desired, on-the-job performance outcomes.

An additional feature of the E.D.D.I.E. model incorporates greater focus to our final “E” or end evaluation, an area often lacking in current application. While with the traditional ADDIE model the last “E” stands for evaluation, its point of reference is evaluating more the design process for future improvement than evaluating that of the learners’ use of the knowledge and skills taught.

At Outcomes Today, we incorporate Sustainability Evaluation Documents into each course design. These go beyond the traditional training satisfaction surveys, a Level 1 assessment, and utilize the learner’s immediate supervisor to assess application of learned skills on the job three to six months post training. Utilizing the OPOs identified in the first step of design, we return to those same objectives and behaviors, assess the specific job performance, and thus incorporate a Level 3 assessment.

PRACTICAL IMPLEMENTATION STEPS

While Outcomes Today has developed tools to guide this development strategy, it really is just a matter of applying a little common sense. Asking the right questions, at the right times, and incorporating the responses into the design process will get you started. As in any project, one can succumb to “scope creep,” so it does take a good dose of self-discipline to maintain alignment to the OPOs you identify. Of course, if you have never “started with the end in mind”, and never had any form of performance objectives in place at project initiation, just having that step in the analysis will lead you in the proper direction.

AUTHOR'S BIOGRAPHY

Mr. Heller has spent nearly 40 years in various sales, marketing and training capacities. He most recently was the Director at Wyeth Pharmaceuticals responsible for training and developing the #1 Ranked sales force in the Infectious Disease/Institutional market.

Mr. Heller holds certifications in Leadership Training, Influence Skills Training, Mindex Thinking Styles Training, Franklin Covey's Focus™, and 7 habits of Highly Effective People™. He has developed and delivered numerous Coaching, Strategic Thinking, Negotiations and sales training programs.

His training and development experience, combined with a successful career in field sales management, have provided him with a unique perspective to the needs of the learner. He has extensive experience in guiding the instructional design, development, and delivery of numerous Global product launch training initiatives. In this regard, Mr. Heller has become a recognized expert by receiving Training Magazine's 2006 Innovation Award for a global learning curriculum initiative. He has on numerous occasions presented at training industry conferences on the topics of Curriculum Design, New Employee Orientation, Manager Development, Instructional Design, Sustainability, and Globalization of Training initiatives.

If you wish to discuss strategic plans for your organization's learning and development, please feel free to contact Mr. Heller through his web site, www.outcomestoday.com, or via email at bobheller@outcomestoday.com

APPENDIX:

Table 1(Training Magazine Industry Reports

Category	2007	2013
Per learner spending	-11.0%	-17.0%
Training hours decreasing	-32.2%	-9.0%
Use of Instructor Led Training	67.0%	44.0%
Use of online self-study & virtual classroom	24% (-6.0%)	25.9% (+5%)

Table 2 (ASTD State of the Industry reports)

Category	2007	2012
Expenditure per employee	\$1,068	\$1,195
Learning Hours per employee	36.3	30.3
Cost to develop 1 hour learning	\$1,528	\$1,772
Content Areas:		
Job Specific	57.8	55.4
Managerial/Supervisory	11.7	13.5
Mandatory/Compliance	10.7	10.8
Soft Skills/Interpersonal	10.3	12.7
Delivery		
Total Instructor Led Training	70.6%	69.8%
Classroom based live	61.6%	54.6%
ILT Remote (web/CD/DVD)	8.9%	15.2%
Total Technology Based Learning	30.3%	35.4%
Remote ILT	8.9%	15.2%
On-Line/Web Based/Mobile	18.8%	13.3%
Non- online (DVD/CD, Etc)	2.5%	6.9%

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