THE ACADEMY
FOR PROFESSIONAL EXCELLENCE

TRANSFER OF LEARNING GUIDE
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Academy
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Excellence

INSPIRING INNOVATIVE SOLUTIONS
IN HEALTH AND HUMAN SERVICES

PCWTA
Southern Region

Transfer of Learning Guide

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Purpose of This Guide

The Academy for Professional Excellence has a deep commitment to developing, implementing and evaluating quality training and workforce development services. Our primary purpose is to provide a training experience that elicits the highest degree of Transfer of Learning (TOL) to human service work settings and professionals. The Academy for Professional Excellence's training model focuses on the principle that training should be treated as an 'intervention' in our work, as other interventions are. Training requires an equal dedication to evaluate with the same rigor as any other type of human service intervention. The ability to evaluate training as a key learning intervention in workforce development will help us to understand and improve training's impact on trainees themselves as well as the broader human services workforce.

What is TOL?

Transfer of Learning (TOL) is the degree to which trainees apply the knowledge, skills, and attitudes learned in training when they return to the job, and the degree to which the new learning is maintained over time. [1]

The above definition is the foundation that has defined TOL as applied to conventional classroom learning settings. The field of TOL has undergone much transformation over the past ten years as training and learning has become increasingly multi-modal and multi-dimensional. We have seen the customary concepts involved in TOL evolve to incorporate new concepts such as blended learning models, "Learning 3.0" concepts and the increased utilization of technology in the learning process. Throughout this guide, we present and review these new concepts to help you maximize trainee learning and provide both traditional and current TOL literature & research.

The "Transfer Problem"?

Human service fields as well as social workers themselves are increasingly being held responsible for errors within systems and among work with children and families. This heightened scrutiny requires a response in which we need to create training that is of the highest quality and produces actual changes and improvements in worker's perceived and actual knowledge and skills.

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[1] Baldwin & Ford, 1988

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The unintended consequences of a poorly trained workforce can lead to:

- Errors in decision-making
- Legal Issues
- Decreases in expertise
- Decreases in productivity
- Unintended case outcomes such as injury or death

"As a grave example, recent reports estimate $183 billion is spent on employee injuries and deaths linked to deficient training practice each year." [2] In human service fields, we can further apply this statistic to understand the potential loss to our organizations and clients in the decisions made surrounding individuals, children and families.

We understand training as an important part of 'Risk Management' within human service organizations and the vital need to provide the highest quality TOL training to workers. There has been a plethora of articles written on TOL however there is much contradictory views on the topic and what has actually been proven effective through research. While there has been much literature published on the subject of TOL, there has not been an extensive amount of rigorous research involving experimental or quasi-experimental methods to truly evaluate the actual effects of various training components and methods on TOL.

Learning Decay

Much research throughout the past 30 years has focused on understanding which factors contribute to the most effective TOL in educational environments. Considerable research has focused on identifying specific factors that promote or inhibit learning transfer. [3]

Figures of lost revenue from 'scrap learning' and the decay of trained knowledge and skills are upwards of $50-$200 billion annually with some data indicating that 28 to 90 cents on each dollar being lost to learning that is not retain or applied. [4] Also, there is evidence that about only 10-20% of training transfers to the workplace post-training.[5]

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[2] (Grossman & Salas, 104)

[3] e.g. Antle, Barbee, Sullivan, & Christensen, 2009; Arthur, Bennett, Stanush, and McNelly, 1998; Broad & Newstrom, 1992; Baker and Mayer, 1999; Burke & Hutchins, 2007; Curry & Caplan, 1996; Curry, Caplan, & Knuppel, 1991; Curry, Caplan, & Knuppel, 1994; Ford, 2009; Holton, 1996; Noe & Schmitt, 1986; Rouiller & Goldstein, 1993; Yamnill & Mclean, 2001

[4] Laker & Powell, 2011

[5] Freifeld & Belair, 2012; National Child Welfare Workforce Institute, 2013

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This guide aims to review concepts that can increase the transfer of training to the workplace as well as provides you strategies to implement to help develop training that will provide your participants with the highest transfer to their work settings.

Shifts in TOL

As in all industries currently, the field of TOL has been greatly influenced and transformed by the prevalence of technology in our lives. The influence of technology has led to increased efficiencies in the way training occurs as well as the ways in which training is effective. A new definition of learning has been influential in TOL concepts that incorporates these new ways of learning and interacting with learning modalities into adult learning theories:

"Learning 3.0 refers to learning that comes through sharing rather than from being taught or where the product of learning is defined by experts. In a Learning 3.0 world, the primary focus is no longer on the individual learner, but rather the community and the people around you." [6]

What does Research tell us?

Research indicates that TOL occurs through "pervasive systems of influences" [7] and multiple factors are involved in understanding how the most effective TOL can be implemented. In general, there are 5 categories of factors identified that can assist trainers in understanding how they can best facilitate TOL for training:

1. Learner/Participant Factors
2. Trainer Factors
3. Training Design/Delivery Factors
4. Work Environment/Transfer Climate Factors
5. Evaluation

In addition to the above categories of factors that have been identified as TOL accelerators or barriers, specific implementation time-frames are also helpful to understand at what point-in-time these factors are the most impactful. These points-in-time include: 'Before,' 'During' & 'After' training as well as a relatively new category called 'Not time bound,' [8]

[6] Gogos, 2015

[7] Broad, 2005; Holton et al 2000; Hutchins 2009

[8] Burke, 2008; Wenzel & Cordery, 2014

which incorporates activities such as coaching, microlearning and other activities that are beneficial to implement at varying points within the training process.

Below is a conceptual model of transfer from Burke & Hutchins that integrates the categories of factors within the specific timeframes for training development, implementation and evaluation: [9]

Figure 1. A Proposed Model of Transfer
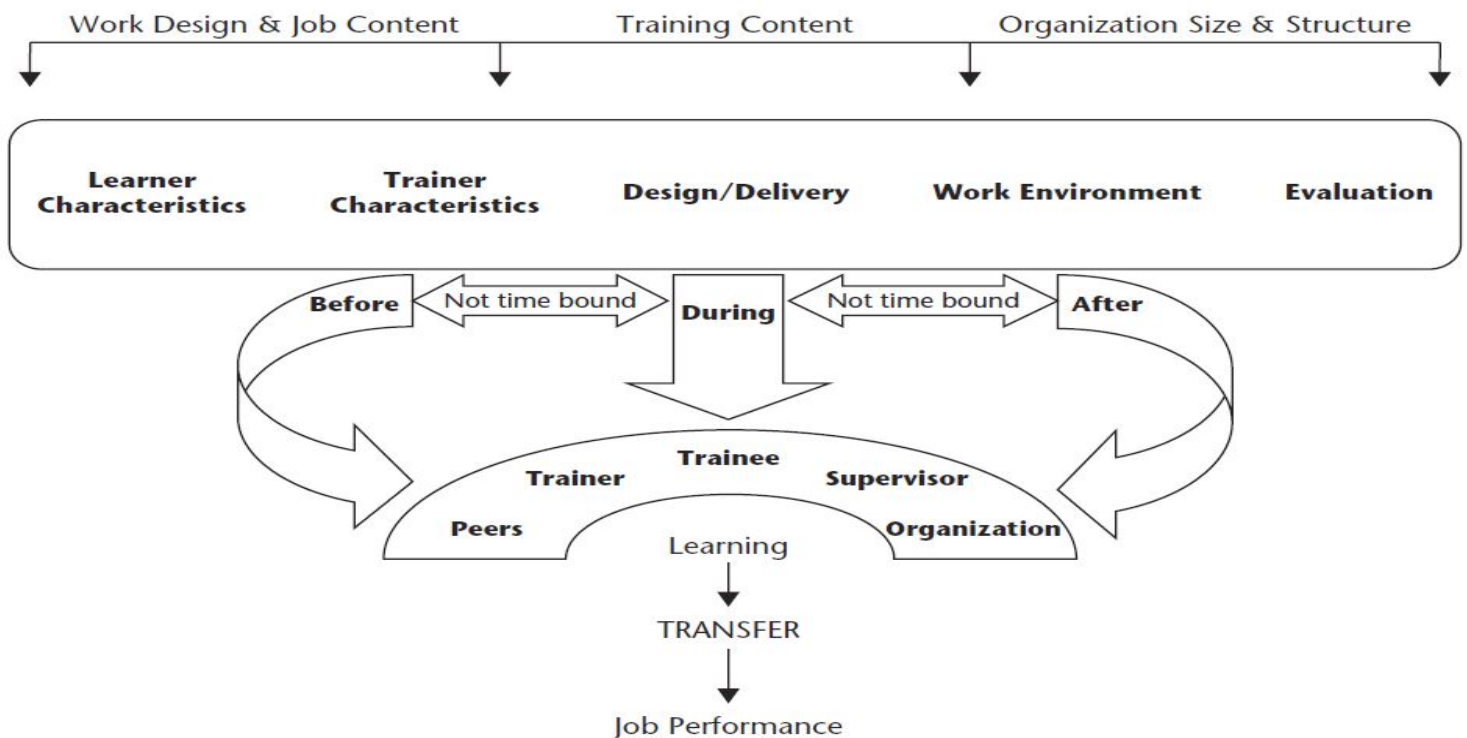
There are some factors that contribute to increased TOL that have been researched in a way that give us information about how certain factors can enhance TOL for trainees. The following factors have shown the greatest positive effect on TOL: [10]

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[9] (Burke & Hutchins, 120)
[10] Hutchins, 2009; Grossman & Salas, 2011

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Trainee Characteristics: [11]

- Cognitive Ability
- Self-Efficacy
- Motivation (moderated by perceptions of usefulness & level of commitment to the organization)
- Perceived Utility of the Training

Training Design: (41% importance on TOL)

- Behavioral Modeling
- Error Management
- Realistic Training Environment

Work Environment: (33% importance on TOL)

- Transfer Climate
- Support from Supervisors and Peers
- Opportunity to Perform &Practice Skills
- Follow Up

To view a comprehensive Annotated Bibliography on Transfer of Learning & the below matrix, please reference the following article by the Atlantic Coast Child Welfare Implementation Center (ACCWIC): https://static1.squarespace.com/static/525fe472e4b09f9731f69c36/t/534d3dd9e4b0978b15c3ba0b/1397571033314/Transfer+of+Learning-Annotated+Bibliography.pdf

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[11] Trainers have the least control over these factors and this category is highly influenced and moderated by other categories.

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Transfer of Learning Matrix*

	Individual Factors	Training Design & Delivery	Organizational Factors
Before Training	▪ Training motivation (Burke; Facteau ; Khasawneh) ▪ Cognitive ability (Franke; Clarke) ▪ Career exploration/planning ▪ Length of service (Curry) ▪ Organization commitment ▪ Positive perceptions (Franke) ▪ Self-efficacy (Wehrmann, Perkins) ▪ Establish a support network (JHPIEGO/PRIME II)	▪ Voluntary training (Khasawneh) ▪ Sequencing (Clarke) ▪ Training reputation (Facteau) ▪ Training incentives (Facteau ▪ Familiarity with training content (Wehrmann) ▪ Curriculum and design and relevance to job (Wehrmann ; Clarke) ▪ Pre-training preparation (Curry)	▪ Support network for learners (JHPIEGO/PRIME II) ▪ Recognize task constraints: Time, workload (Clarke) ▪ Organizational commitment to training/congruence (Facteau; Curry) ▪ Supervisor support (Wehrmann) ▪ Coworker support (Curry) ▪ Organizational learning culture (Burke)
During Training	▪ Active self-monitoring on one's thinking processes (Perkins) ▪ Self-efficacy (Wehrmann) ▪ Perceived utility (Wehrmann)	▪ Abstract learning/*bridging* (Olivero; Perkins) ▪ Developing practical skills rather than transmitting knowledge (Olivero; Burke) ▪ Instruction directly engaging learners or *hugging* (Perkins) ▪ Goal-setting to be included in training (Wehrmann; Franke) ▪ Feedback during training (Franke) ▪ Examples during training- *error-based* (Franke)	▪ Support network for learners (JHPIEGO/PRIME II) ▪ Reduce task constraints: Time, workload (Clarke) ▪ Organizational learning culture (Burke)
After Training	▪ Behavior changes resulting from training (Facteau) ▪ Providing performance feedback as a viable way to shape and engage feelings of self-efficacy (Wehrmann)	▪ Case consultation/One-on-one interactions /coaching-emphasizing goal setting, collaboration, problem solving, practice feedback, supervisory involvement, evaluation and public presentation (Olivero; Antle) ▪ Assessment/ feedback from trainees (Wehrmann; Franke; Curry) ▪ Application plan (Curry) ▪ Technological support geared towards transfer (Burke)	▪ Support network for learners (JHPIEGO/PRIME II) ▪ Supervisor support (Clarke; Wehrmann ▪ Supervisor key to structuring and reinforcing use of trained skills (Wehrmann) ▪ Peer coaching (Joyce & Showers) ▪ Peer support (Burke; Wehrmann) ▪ Top management support (Curry) ▪ Application (Curry; Burke ▪ Accountability to which org. expects learning (Burke)

*A Transfer of Learning Model developed by ACCWIC which consolidates multiple TOL models and frameworks.

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The Importance of Evaluation on TOL

In order to understand the factors that have the greatest influence on your organization and trainee populations, it is best to obtain evaluation data from multiple sources in order to determine TOL and the impact of training transfer to specific work settings. These sources of feedback include trainees, trainers, training assistants, supervisors, subject matter experts, etc. We are reminded that:

> *"training professionals take on a variety of roles in supporting*
> *learning and performance in organizations, and current research*
> *suggests that supporting transfer requires involvement in the design,*
> *implementation and evaluation of the training process."*[12]

What can be done to promote transfer?

There is a lack of strong research support for existing traditional strategies, especially given the influence of technology as well as with blended-learning modalities being increasingly utilized (i.e. webinars, eLearnings, microlearning, etc.). There is no 'magic bullet' formula of factors and it is essential to use multiple strategies together as well as obtain necessary evaluation feedback in order to best understand the training population and agency you are working with. Promising avenues for further inquiry include: [13]

- Proactive selection of training cohorts
- Increasing motivation of trainees
- Finding ways to induce higher levels of supervisor and peer support in the work environment.

Below are strategies that trainers can use to help them with training & curriculum development as well as to use within the classroom and posttraining:

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[12] (Hutchins, 71)

[13] Tonhauser, 2016; Blume et al., 2010

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Strategies to Promote TOL

BEFORE ▼ ▼ ▼ ▼ ▼ ▼ DURING

Set Clear Course Goals & Objectives: (Brown; Kontoghiorghes)

- Use SMART objectives: Specific, Measureable, Attainable, Realistic, Time-Specific
- Provide a Course Description and opportunities for stakeholders, supervisors & trainees to state their expectations and desired outcomes.

Orient Supervisors & Trainees to the Course: (Baumgartel et al; Chiaburu et al; Antle et al; Brinkerhoff et al; Gaudine et al; Konotoghiorghes; Brown)

- Provide opportunities for both supervisors & trainees to state their expectations and desired outcomes.
- Encourage supervisors & trainees to create preliminary Action Plans for how they will apply and support the transfer of knowledge and new skills after training & long-term.

Connect New Knowledge & Skills to Future Use: (Brown; Axtell et al)

- Directly alert trainees to occasions where they can apply what they are learning.
- Ask students to predict possible on the job applications for learning.
- Use a mix of developing soft/open and hard/closed skills throughout the training course.
- Challenge students to come up with a convincing reasons why a particular skill is useful now & long-term.

Use Authentic & Meaningful Learning Tasks that Harness Trainees Existing Knowledge: (Burke et al, Salas et al, Holladay et al; McKeachie)

- Make learning mimic actual applications (i.e. using the actual form to record case data in an exercise).
- Use simulations or role-playing to train in real-life scenarios which can help trainees practice new skills in a safe space and make parallels between training concepts and trainees' home or work lives.

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D U R I N G ▼ ▼ ▼ ▼ ▼ ▼ A F T E R

Provide Adequate Repetition, Practice and Feedback to Prepare Trainees for Implementation of New Skills: (Fisk et al)

- Use a range of examples to illustrate key points and meet the needs of multiple learning styles.
- Give immediate, individualized, constructive and clear feedback as often as possible.
- Provide ways for trainees to support each other by giving feedback & engaging in meaningful discussions.
- Use multiple activities that reinforce the same skill set.
- Use these 3 cognitive strategies that will increase the likelihood of long-term knowledge retention:
  1. The Spacing Effect
  2. Repeated Retrieval
  3. Confidence-Based Learning (CBL)

Provide Opportunities for Reflection & Self-Monitoring: (Gist et al)

- Provide frequent opportunities for trainees to reflect on what they are learning & how they will use new knowledge.
- Ask impactful and stimulating questions that can cue trainees to engage with new learning:
  1. What does this remind you of?
  2. Have you done anything similar before?
  3. What strategies could you try that have been successful before?
  4. Do you think they will work here?
  5. How could I handle what was hard better next time, what skills/strategies have I learned that I might be able to use again?

Help Trainees Develop Job Aids & Other Reference Tools: (Clarke; Bates)

- Providing a personalized job aid or resource aid of some sort provides an opportunity for further repetition and practice on the job and creates connections to future applications.
- Have trainees practice using their job aids in situations similar to those on the job.

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Provide Tools to help Supervisors Coach, Evaluate and Support Transfer: (Richman-Hirsch; Foxon; Smith-Jentsch et al; Lim et al)

- Provide supervisors with research-based steps for helping trainee transfer learning on the job.
- Provide checklists and/or tools for supervisors that assess fidelity on new skills and trainee performance.
- Provide job aids for supervisors that give provide them with:
  1. Information about key concepts, procedures or skills that trainees were taught.
  2. Guidance for how to support these skills.

Provide MicroLearning & Microteaching Opportunities: (Rossett et al)

- Provide "booster shot" trainings either in person or by webinar.
- Utilize ways to provide flexible, shorter and continuous opportunities to reinforce learning that do not take trainees away from their work for entire days.

8 Components of MicroLearning: (Reference: Axonify)

1. Uses proven information retention techniques to ensure the most effective learning (i.e. spacing effect, retrieval, CBL)
2. Supports multiple content formats to suit various learning needs
3. Embeds personalized and adaptive learning techniques for tailoring learning
4. Includes gamification for increasing employee engagement
5. Offers modern social elements for collaborative learning
6. Supports multiple devices, including mobile, to ensure employees have access to learning
7. Offers learning at employees fingertips
8. Provides a way to measure learning effectiveness and tie it to organizational results.

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Newer Strategies

1.) Utilize Microlearning Formats:

"Microlearning is a method of learning that delivers content to employees in short, very specific bursts (think "bite-sized learning" or "learning nuggets"). Microlearning activities are usually completed in less than four minutes, making them digestible and manageable." [14]

The concept of microlearning is based on neurocognitive theories, such as Cognitive Load Theory, which emphasizes the benefits of reducing information overload and understanding how _the brain interprets and retains information better in chunked out, focused, shorter and consistently reinforced formats_. If possible, TOL overall can benefit from microlearning through microteaching strategies that harness innovative formats before, during, after and throughout the continual learning process in order to increase the effectiveness and retention of learned material.

Examples of impactful Microlearning activities include:

- Video clips
- Podcasts
- "Coffee Break" Webinars
- Infographics
- Brief Q&A formats
- Supervisor, Peer & Social Network Supports
- Mobile App "Push Notifications"
- Tutorials
- User-Generated Content
- Gamification

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[14] (Lahey, 8)

How Microlearning works: [15]
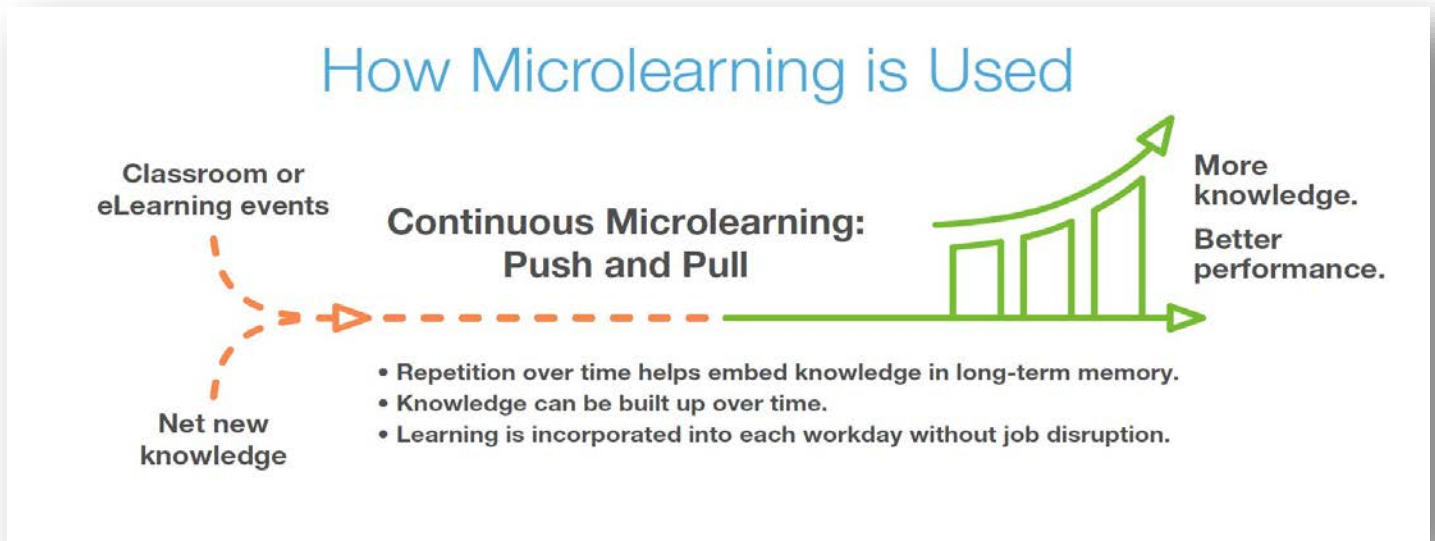
2.) Infuse Social Justice Themes Throughout Training:

Infusing the relationship between social justice issues and the everyday work of social workers can assist trainees in _making connections between training tasks and the broader social justice work_ that motivated social workers to enter the field of human services. Recent research indicates that incorporating a social justice perspective on training content when working with social workers can increase their motivations to learn, apply and make necessary connections to their work: [16]

> _"Social workers' sense of training preparedness and perceptions of social justice norms in the workplace have the ability to positively influence their perceived psychological empowerment and require attention in educational and practice settings."_ [17]

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[15] Taken from: Axonify. (n.d.) Microlearning: Small Bites, Big Impact. 8 must-haves every organization needs to be successful with microlearning.

[16] Bessaha et al, 2016.; Inman et al., 2015

[17] (Bessaha et al, 10)

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3.) Thoroughly Analyze the Learning Experience

Trainers should be actively exploring, understanding and addressing any gaps in learning and the learning culture. Trainers can benefit from analyzing how to bridge the gaps between learning objectives and performance outcomes. Many trainees often report through post-training evaluation that training material is not relevant to their work or work environments. _Exploring and understanding these gaps_ in training and attempting to address these gaps can bring the trainee an appreciation for why the training content is important and will also highlight barriers in trainees' implementing newly trained knowledge and material into the workplace.

Key Behaviors:

- Always start with the end in mind- evaluation should always be constructed along with the development process.
- Ask yourself as a trainer: _How can I best create learning objectives that will result in an increase in performance outcomes for the training topic?_
- Develop clear and meaningful content
- Use a scientific approach
- Question the linear ADDIE model of design as this model is not effective for programs that are aiming to change a behavior.[18]
- Increase engagement throughout all stages of learning (Before, During and After) as well as through 'Not time bound' methods
- Collect data from multiple sources at varying points-in-time in the training process

Blended Learning

Blended learning (also called hybrid learning or mixed learning) refers to "a formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path, and/or pace" while still receiving at least some education in the traditional face-to-face format. [19]

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[18] Sookhai, 2016
[19] Staker, 2012

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What does the research say about Blended Learning? [20]

- Overall, students learning in a blended environment have been shown to, on average, perform modestly better than students learning in a solely face-to-face environment.

- Students learning in a blended environment, mixing online learning with face-to-face instruction, had a larger advantage over students learning in a solely online environment.

- Online instruction should be collaborative or instructor-directed rather than having online learners work independently.

- Online and face-to-face conditions should be varied in terms of curriculum materials and aspects of instructional approach in addition to the medium of instruction.

- Elements such as online quizzes or videos do not appear to affect the amount that students learn in an online environment. Inclusion of more media in an online environment does not appear to affect learning. Including online quizzes does not appear to be more effective compared to other tactics such as assigning homework.

- Online learners should be given control of their interactions with media and should be prompted to engage in learner reflection. Manipulations that trigger learner activity or reflection have been shown to be effective when students pursue online learning as individuals, as has triggering self-monitoring of understanding.

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[20] US Dept. of Education, 2010

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"Meet the Modern Learner"

With increases in the use of technology and blended learning in the training field, there are a number of concepts to be aware of in understanding modern learning currently. Bersin by Deloitte created an infographic which illustrates current influences on how modern individuals and workforces learn, which can help to create a more effective training model as well as identify the barriers to learning and training:

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To access the digital version of this infographic, visit the following weblink: http://blog.grovo.com/7-learned-deloittes-meet-modern-learner/

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