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Theory-to-Practice

Transfer of Learning for Health Care Workers

Sandra Ratcliff Daffron
Shelley Moore
Tasha Chicovsky

Abstract

This study of health care workers who are nurses, medical assistants, administrators or team coordinators, demonstrates that while the workers responded positively to an optional training program, they reported they still needed additional support in order to transfer the new information into their practice. The 16 health care workers in this study are expected to continually update their skills, knowledge and abilities and then transfer or use the information in their work. Health care educators participating in this study assumed if the training program is well planned, the workers will transfer the information to their practice. Findings indicate that if the health care educators planning the programs apply several variables, such as involving the workers in the planning process, using a variety of delivery approaches, and arranging for immediate application opportunities with support from the organization, the health care workers would experience a higher level of transfer. The results of the study are a series of recommendations for health care educators and continuing professional educators to promote transfer of learning to practice.

Introduction

In 2001, the Institute of Medicine (IOM) identified a significant problem resulting in medical errors, and identified a gap in the area of education and training for health care practitioners as the cause (Speicher

Sandra Ratcliff Daffron, Professor Emeritus in Adult and Continuing Education, Northern Illinois University. **Shelley Moore,** Manager of Education, Seattle Cancer Care Alliance. **Tasha Chicovsky**, Student Activities Coordinator, SPIE, The International Society for Optics and Photonics.

& Kehrhahn, 2009). The gap was further analyzed as a lack of analogical reasoning coming from poor transfer of learning skills for health care professionals (Shine, 2002; Gentner, Loewenstein & Thompson, 2003; Norman, Shannon, & Marrin, 2004). Poor transfer skills were linked to using traditional instructional strategies for training; and the Knowledge, Skills, and Abilities (KSA) did not transfer resulting in poor problem solving abilities (Speicher & Kehrhan, 2009). These findings suggested changes were needed in teaching methods. Others in health care education such as Waddell and Dunn (2005) have found significant gaps in transfer of learning and proposed peer coaching as a solution. Gitonga (2007) has examined models of transfer of learning to find solutions for transfer to practice in pertinent transfer-related factors.

Broad (1997) identifies transfer of learning as a change in attitude, a change in behavior, or a demonstration on the job of newly acquired skills. With this description of transfer, four stakeholders are identified as being involved in continuing professional education process: the program planner or designer, the trainer or instructor, the learner or trainee and the organizational management. All the stakeholders want and expect transfer to practice to happen as a result of an educational program. Caffarella and Daffron (2013) included transfer of learning in their program planning model as a significant task to be integrated throughout the planning process. Each of these ideas provides a component of the transfer to practice solution and it appears that if enough instruction is presented, a variety of teaching methods used, transfer will surely occur.

Organizations spend at least $190 billion annually updating their workers with new Knowledge, Skills, and Abilities (KSA) (American Society for Training and Development, 2006) and management is disappointed when only approximately 10% of the information is retained (Awoniyi, 2002, p. 25). There is no doubt that much money is spent to keep workers and organizations educated and competitive, however, the research discussing the amount of the information that is absorbed, conceptualized and implemented on the job, shows that transfer drops significantly when workers return to work from an educational program. Employers expect a 'return on investment,' or the more common reference in training, 'ROI.' The demand for ROI in the field of training and development is not new or significantly different than the concern for transfer of learning. Researchers do not focus on the similarities or differences between transfer of learning or ROI, but rather they examine the lack of transfer to practice and the need to fix it. Whether the definition

of transfer of learning means using recently learned KSA or ROI, the lack of either becomes a huge problem for all stakeholders. Daffron, Metzgen-Ohlswager, Skinner, and Saarinen (2012, p. 613) assert:

> The pressure on the four key stakeholders in the training process – those being the program designer, the trainer, the trainee, and management – to transfer KSA to the workplace are enormous. Somehow, these stakeholders must create praxis, in other words put newly gained KSA into practice. The speed and agility to transfer KSA to change and build new ideas and products drives the success of the organization.

Merriam and Leahy (2005) in their review of the literature on learning transfer, tell us that much attention is now focused on the factors that hinder or help learners transfer to practice. This study of health care workers provides specific suggestions for program planners to design, plan and produce programs. The suggestions identify the variables needed to effectively transfer the Knowledge, Skills, and Abilities into the workplace.

Method

The methodology used for this study was interview questions sent by mail using a blind response-management system. The questions were created from the results of research projects to examine situations in which transfer of learning was or was not taking place among groups of professionals in their workplace. In the research projects, 17 professional groups/ 500 individuals, were interviewed from 2002 – 2011, with 15 questions crafted to assess the variables present when learning was transferred to practice. The 15 questions were assembled from the work of transfer of learning researchers and authors such as Broad (1997), Caffarella (2002), Cervero (1985), Daley (2001), and Merriam and Leahy (2005), with the questions tested and adjusted in pilot studies.

As a result, a "Successful Transfer of Learning" model was created with seven variables (see Figure 1). Daffron and North (2011), the creators of the model, identified the transfer of learning variables in place during the program-planning stages, at the presentation of the program, and when the professionals returned to their jobs. They also identified barriers to the transfer process and make suggestions for enabling trans-

fer. These same 15 questions were used in this study of the health care workers who attended an optional program on the topic, "Effective Communication."

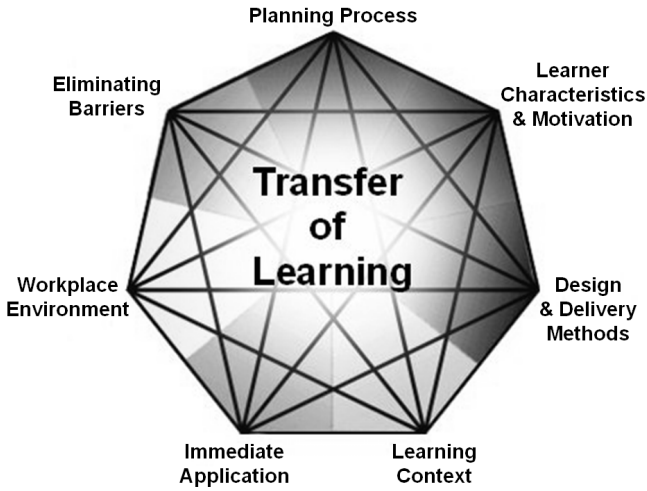

Figure 1: Successful Transfer of Learning Model – 7 Variables

The subjects of this study were 60 health care workers from a medical facility within a large medical research organization. The health care workers agreed to be a part of a study by responding to the15 questions. The questions were asked approximately 60 days after the program was completed to better assess transfer of learning to the workplace. Out of 60, 16 responded and all 16 said they had a positive learning experience in acquiring new ideas and skills. The interview questions were grouped into four categories: the program-planning process, the delivery of the program, the post-program phase, and the barriers to transfer with suggestions to help with transfer of learning to practice. The questions were designed to measure variables in:

- Pre-program processes, including the planning process and the characteristics and mind-set of the individual trainee before the training.

- Delivery of the program, including program design, methods of delivery, and involvement of the trainee in the learning process.

- Post-training experiences, including informal learning methods with immediate application, the environment within the workplace, support from the institution, and peer support.

- Barriers to successful transfer, and suggestions for increasing the likelihood of transfer of learning (Daffron and North, 2006, p. 53).

These four categories have become the seven variables of the "Successful Transfer of Learning" model and for this study are reported within each of these seven variables:

1. The Planning Process
2. Learner Characteristics and Motivation
3. Design and Delivery Methods
4. Learning Context
5. Immediate Application
6. Workplace Environment
7. Eliminating Barriers

Study Results

The health care workers responded to the 15 questions with positive comments and all said that they have been using some of the information presented in the communication skills workshop on the job over the last 60 days. The motivation to attend the "Effective Communication" class came from a need mentioned by the workers themselves, to improve interactions with their own co-workers. The workers said they wanted to be better prepared to deal with conflicts on the job and the challenges of working under stressful situations. Their responses are summarized here:

1. The Planning Process

The majority of respondents were not involved in the planning process of the "Effective Communication" class and though they were not part of the class preparation, they still felt that their needs were represented and met. Some of the participants stated that the program description outlined what they felt they needed from a communication class and that is why they attended. The goal and objectives of the class addressed issues that concerned them and the planning process was positive since the program appeared to meet the needs of all of the health care workers.

The assumption that transfer to the workplace will somehow happen often leads the planners of programs to assume they have the right topics, the right trainer and they do not need any further intervention. In this study, the attendees were voluntary, which gave the planning team an even greater belief that transfer would surely happen. While this assumption may be true in some situations, the whole process of transfer to practice is complex and all the stakeholders need to participate in the planning process to encourage and support the learner (Austin, 2008; Lim and Morris, 2006). Another significant factor in the planning process is to know who made the decision for the learner to participate. Mathieu, Tannenbaum, and Salas (1992) found that those sitting around the planning table have a direct link and a direct responsibility to the learner to inspire and motivate them to attend, and for transfer to practice to happen. Cervero and Wilson (2006, p. 160) find the planning table is where the negotiation begins for the program's educational, management, and political objectives and the negotiation is . . ." one of the most critical activities that planners undertake, because these types of objectives serve as the pivot between the many needs that could be met and the ultimate priorities that guide instructional, administrative, and evaluation decisions."

2. Learner Characteristics and Motivation

Some workers said their motivation to take the class was to improve their communication skills and to understand others better and their various styles of communication. Since almost all workers also interact with patients and families, they felt if they improved their communication skills with their co-workers, the effective communication would also benefit the patients and families; everyone would benefit. They said their stress would be less if the workers would know how to come together and effectively interact with each other.

Facteau, Dobbins, Russell, Ladd, and Kudish (1995) examined 967 managers to find the motivation to participate in programs was directly connected to the transfer process and the greater the motivation (self-motivation, self- efficacy, and expectations set by management), the more likely transfer occurs. Cheetham and Chivers (2001) say from their research that learners need to be self-aware, self-confident, and comfortable with the learning before they are open to learning. When the learner expects to learn, going into the educational program, they have a greater chance to transfer to practice. Management usually puts the responsibility for transfer directly in the hands of the program planner or

trainer without directing the trainee to bring the Knowledge, Skills, and Abilities (KSA) back to the workplace or discussing the importance of the learning with the trainee (Holton III, 2000; Daffron & North, 2006, 2011; Yelon & Ford, 1999). Recent research has found the lack of management support or the failure to set learning expectations for the worker in the planning stage likely results in a failure to motivate the worker and thus, a failure to transfer to practice (Austin, 2008; Broad, 2005; Clarke, 2002: Daffron and North, 2011; Kirwan, 2009).

3. Design and Delivery Methods

When delivering a continuing professional education program, researchers confirm for transfer to practice or ' praxis' to occur, a variety of delivery methods and involvement of the learner needs to take place (Baldwin, Ford, & Naquim, 2000; Gitonga, 2007; Speicher & Kehrhahn, 2009; Su & Juestel, 2010). The 16 health care workers in this study supported these findings and affirmed that the overall program was a positive experience for them. When asked what made the program positive, the participants expressed an array of answers. Many stated that the instructor was very good and they enjoyed his engaging way of teaching. Even though some were not fans of group work, they expressed that the scenarios were helpful. Numerous participants commented on the class structure. They liked the mixed format, which included lecture, small group discussions, and role-playing. This format helped to engage them in reflection and self-discovery regarding how they would react in the situations and scenarios that the instructor presented.

They used phrases such as "The scenarios were helpful in thinking of other situations I would not initially have thought of," and "It helped me to clarify my own deficits in communication skills." The health care workers also said, "It helped me to keep in mind all perceptions and where the other person is coming from," and "I personally tried to put new ideas into situations that might arise in my day to day life."

The format of using class discussion time to talk about personal experiences was beneficial to most of the participants. They used that time to listen and reflect on others diverse views and experiences with communication strategies. Many liked the opportunity to hear the wide variety of views expressed during the class discussion time and they tried to understand each other's perceptions. This opportunity to give feedback to the class, thinking about new ideas to use during communication, and the challenges of learning from the role-play scenarios were frequent answers to the question, "What was the most valuable part of the class?"

By using a variety of delivery and instructional methods such as workbooks, handouts, lectures, PowerPoint presentations, small and large group discussions, visual and practical examples, and role-playing and scenario discussions, the instructor has a greater chance of using teaching methods that reach everyone in the class. The variety of delivery and instructional methods allows the instructor to use principles of adult education and to make the instruction interactive and effective. Transfer of learning rarely occurs if one delivery method, for example, a lecture, is used exclusively (Broad, 2000, 2005; Holton & Baldwin, 2003; Kirkpatrick & Kirkpatrick, 2005; Silberman, 2005). Daley (2001) and others have studied the context for the learner and found that the program planner needs to know and understand this context in order to maximize learning, help facilitate transfer to practice and use the appropriate delivery methods for the learning context.

4. Learning Context

The health care workers response to the question about their learning preference fell into groups that included preferred learning methods of visual, auditory, interactive, and repetitive. Many commented that they learn through different combinations of delivery styles, and did not categorize themselves as learning through one style only. Some liked a written/verbal approach, while others preferred learning through discussion and examples, and by doing, reading and repeating. Group work, role-playing, and learning through scenarios were mentioned by many of the participants as the ways that they learn best. Respondents also mentioned that the learning environment was very important to set the stage for optimal learning, whether it was an organized structured environment or an independent learning situation where they did not have to share with others.

Broad (1997), Daffron and North (2011), and Daley (2001), consider the importance of involving key people in the planning process to have them help determine how the learning context and cultural aspects influence the learning situation. Each organization has a learning context as well as a professional context. Professional groups are educated with certain learning contexts that become familiar and comfortable to them and this learning context sets the stage for future learning in the same way. When working with a professional group, planners need to find the learning context of the group and set up teaching methods and design strategies to meet that context. Daley (2001) says that meaning-making is a process based on the way KSA is taken in, used, and transformed

from the learning setting to another setting, hopefully in the workplace. The learning context for this setting is often controlled by the organization.

5. Immediate Application

To make transfer happen, a helpful strategy is to set the expectation for the learner to use the new information when returning back to the workplace. If the expectation is set before training by management or if the motivation to gain skills is so strong that the learner is determined to learn, then a setting for immediate application ought to be made. Quinones, Ford, Sego, and Smith (1995) put the responsibility for transfer directly on the learner and with Vroom (1964), all agree the learner is more motivated to learn and put the new skills into practice immediately if learning is supported and connected to the expectations of the employer.

Broad (2005) is more specific about immediate application and suggests setting up a process through the organization that results in ROI that can be measured and is immediate for the worker. Broad (2005) uses five stages of measurement called Human Performance Technology (HPT) with this process having "the abilities to identify and analyze performance problems and opportunities and to design, implement, and evaluate interventions to resolve them (p. 54)." Hall and Hord (2011) have the Stages of Concerns (SOC) used to identify seven categories for the worker that end in immediate application. Phillips and Stone (2002) are also conscious of immediate application in the workplace and have a mechanism for measurement of application.

In this study of health care workers, they reported that they were able to use an assortment of new skills taught in the class. Some of the skills were more active, such as using better communication techniques with difficult people, communicating with specific and clear facts and checking in with people to make sure that intended information is clearly understood. Practicing skills learned in class helped some participants deal more effectively with difficult co-workers. Many participants mentioned using patience, understanding, and awareness more often when communicating with people. This reflective style of dealing with communication challenges was emphasized many times during the class and participants remembered to think before speaking. One class member thought that the most important thing learned in class was a better understanding of why people communicate in different ways while others said that the information was a needed reminder for them and it did not hurt

to have some of the concepts reviewed. Some are still working on successful communication strategies, but mentioned they tried to implement the ideas when they returned from work. The key point is, transfer will not occur if implementation is delayed.

6. Workplace Environment

The environment of the workplace was the most important influence on transfer. Most of the health care workers reported that they were not expected to share what they learned with other colleagues and staff. Even without this expectation, many of the respondents chose to share some aspects of the class with staff members and shared a few key points about the class workbook with staff. Others used less formal ways to discuss the class with co-workers closest to them by giving examples of positive feedback, KSA, and strategies learned. By setting expectations in the workplace for returning learners to share what they have learned, to demonstrate what they have learned or even just having a conversation with supervisors about some new ideas gained, can be the biggest factor in whether there is transfer to practice or not. This should not have to be only a voluntary aspect to transferring to practice.

Expectations to bring the KSA back to the workplace can be established at the planning stage for the event, reinforced to the worker going to the learning event (by management), mentioned by the instructor at the learning event, and then set up by the program planner before the learner returns to work. When the learner returns to work, the program planner can set up networks and online situations to reinforce the learning and finally, the supervisor can set up a situation at work for the learner to share and possibly use their new KSA. Daffron et al. (2012) through a study of transfer of learning, compare attendees at a usual research conference that has no demands upon the learner to report back to work to those at a conference planned with accountability for the learner woven throughout the planning process to the follow up after the conference. The differences in the amount of transfer to practice are stark and a good reminder to set transfer of learning strategies in the beginning planning stages through to the post-program.

7. Eliminating Barriers

Broad and Newstrom (1992), Broad (2005), and Calley (2011), report that overcoming barriers is the most significant aspect or variable of transfer. Most of the studies on transfer cite lack of time or lack of

applicability of the training as the biggest barriers. Broad believes, and we have found in the case studies of 498 professionals, that most want to learn the new information and apply it on the job, but they run right into these two barriers (time and applicability) before they can turn on their computers at work. Broad and Newstrom (1992) found nine barriers to transfer and many of these were mentioned in this study by the health care workers.

The majority of the health care workers stated that while nothing personal or professional prevented them from putting what they learned in class into practice, the hierarchy of management and political culture intervened in the transfer process. Being busy and forgetting some of what they learned was a frequent barrier to implementation. What then are some ideas and suggestions from the health care workers about transfer of learning strategies?

Findings

The health care workers participating in this study were anxious to make suggestions for transfer to practice and although the "Effective Communications" class was helpful and most said that KSA resulted from the class, they had additional suggestions to make transfer to learning more prevalent. The health care workers were clear on how they preferred their programs to be planned and executed and identified ideas at the organization, manager, and employee level. Their comments fell into points easily structured in Table 1.

The ideas reflected in this chart are some of the strategies and techniques used for promoting transfer of learning to practice. These ideas and a compilation of ideas taken from various studies on transfer are found in a model for successful transfer of learning (Cheetham & Chivers, 2000; Daley, 2001; Daffron & North, 2006; Daffron, Cowdrey, & Doran, 2007; Daffron, Goulet, Gray, & Viada, 2008; Daffron & North, 2011).

The analysis for this study outlined seven variables with each one necessary for the process of transfer to occur. The graphic of the model, Figure 1, exemplifies the intertwining aspects of all the variables that contribute to learning transfer. The ideas comprising each variable will facilitate taking theories developed about transfer of learning to actual practice (model graphic and descriptions found in *Successful Transfer of Learning* by Daffron and North (2011)).

Table 1
Transfer to Learning

	Organizational Level	Department Level	Employee Level
Assessment	Needs of all employees in the organization using a gap analysis along with required education content. Include all staff in the assessment.	Education needs of employees in specific departments. Use performance assessments and expressed needs.	Individual certification requirements and personal interests and expressed needs.
Content	Curriculum provided for all staff education	Real life and clinical scenarios and case studies involving staff input.	Participants are able to give input regarding delivery content.
Delivery	Seminars, eLearning, Web-based programs.	Demonstrations with staff interaction. Video tape case studies or scenarios.	Make classes interactive and pertinent to what employees need.
Integration	Refresher courses. Send follow-up information to reinforce learning and key points.	Share content between departments. Offer practical resources for staff.	Assignments and suggestions to use on the job.
Learning Context	Use prepared education materials.	Managers/supervisors mandate or strongly encourage attendance.	Employees request education/workshop with focused instruction on specific problems.

One –The Planning Process

The team of stakeholders is involved with the program planning process and this includes the organization setting up expectations for the learner returning to the job, the learner being aware of the expectations, the trainer incorporating the expectations, the planner orchestrating all of these plans and expectations.

Two- Learner Characteristics and Motivation

The learner's motivation to participate in a program is very clear to all stakeholders, and the characteristics and mind-set of individual learners to meet expectations for learning before the training programs are

set. The results of a connection between the learner's expectations for gaining information from the training program and transfer to practice are guided by management, the trainer, and the planning efforts by the program planner.

Three - Design and Delivery Methods

The training program is designed to involve the trainee in the learning process. Adult education principles of learning are applied using a variety of methods of delivery and involvement with the trainee. Specific methods of training are used based on how trainee participants learn best, and methods are used to increase the incidence of learning transfer.

Four – Learning Context

The need to understand the most effective context of learning for professionals is necessary to engage them in the learning process. The results of the 17 professional group case studies illustrate the need for planners, designers, and trainers to consider specific groups of learners and their context for learning. Planners and trainers can determine the preferred learning styles of the professionals and the context for learning that is particular to the profession.

Five - Immediate Application

Immediate application of new information is very important for the transfer of learning process. Several professional groups stipulate the need for immediate application of information while others store the information until needed. The reality is that the end of the class is not the end of the learning. The transfer process involves a collaborative effort between the professional educator, the learner, and the organization itself. There are actions to be taken within the post-training phase of the program, including setting up informal learning methods with immediate application and making the environment within the workplace welcoming to new ideas.

Six - Workplace Environment

Expectations to share learning come from management and are made during the planning process and carried out through the implementation stages. A positive workplace environment that is open to new ideas, increases innovation and carries on to desirable outcomes. The challenge for the workplace is to set aside time to try out new ideas and sometimes to change the status quo in the workplace when the trainee returns to work after the training.

Seven– Eliminating Barriers

Barriers of time constraints, lack of applicability, personal challenges, and workplace issues are realities and stop transfer to practice. These barriers can originate from a variety of sources including lack of sufficient planning, presentation of ideas without solutions for implementation, lack of follow-up, poorly designed training, poor attitude of the participant, and the lack of willingness or readiness to implement new ideas and new knowledge into the work environment. Barriers that have to be eliminated to make transfer to the job possible ought to be anticipated, and the planning for eliminating the barriers should be considered by all the stakeholders in the program planning process, followed by strategies for elimination after the program (adapted from Daffron et al. (2012), p. 623-625.)

Implications of This Study for Future Practice

Health care workers in this study agree that much can be done to incorporate strategies and techniques in their educational programs that help move the Knowledge, Skills, and Abilities into their practice. First, participants felt with representation by management in the planning stages, the expectations would be set up to gain the information needed in practice and on the job and could be determined through gap analysis to build on areas identified. The workers say they were self-motivated to participate in the training; they wanted the information, skills, and resources provided, however, the added incentive by management to bring the information back to the workplace would cause them to transfer to practice. Third, while many instructors use a variety of delivery approaches, not all do. In addition to using a variety of techniques, especially those that are fact-based and real-life, the instructors need to leave time to involve all of the learners in the learning process. The skills offered in the training in most cases had immediate applicability to the job and while there was organizational support for attending the training, there was little expectation from supervisors to share. The health care workers said transfer of learning would have been greater with more organizational support for reporting skills learned. Fourth, the organization then needs to advise supervisors to leave time for workers to implement the skills they learned into their practice.

The participants in this study made valuable suggestions for health care educators to use throughout the planning process, during the presentation of the program, and after the completion of the training to help

with the learning transfer. The assumption for transfer of learning to practice for all continuing educators is to include all stakeholders in the planning process and throughout the presentation of the program and to remember that transfer of learning strategies and techniques continue beyond the completion of the program.

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