Action theory and the training and performance application: performance templates

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Abstract

Purpose – This paper sets forth a description and explanation of how action theory serves as the foundation for the training and performance management approach, performance templates (P-T). In recent years the efficacy of performance templates, given its limitations, has been demonstrated; however, the theory base for the P-T approach had not been sufficiently developed. This paper aims to examine the content and efficacy of performance templates.

Design/methodology/approach – The P-T method is set forth in detail with some examples. The theoretical bases of the P-T approach, a training and development partnership among trainers, managers, and employees, are explained in detail.

Findings – The layered features of the action theory of Michael Frese fit very well with the interpersonal and intrapersonal events that make up the creation and use of performance templates. The P-T method requires considerable mental work and the action theory helps explain the cognitive events that occur.

Practical implications – The paper sets forth the features of action theory, especially the foundation for metacognitive heuristics, that is, the short-cut reasoning tools that individuals use to aid decision making. Aside from the application of the P-T approach, this paper offers trainers a set of examples regarding how the trainer may influence learning by attending to the dynamics of metacognitive heuristics and cognitive style, concepts that have received very little attention in the training literature.

Originality/value – Action theory offers many features that help explain the regulation of learning and behavior. The template approach not only adds to the repertoire of training methods, it helps to illuminate the high-order cognitive functioning that helps individuals regulate their learning and performance.

Keywords Training, Performance management
Paper type Research paper

Introduction

This paper is the first of a pair of papers which:

1. Examines the content of the training and performance method, performance templates, as well as the elements of action theory as the theory provides the conceptual underpinning for the creation and use of the method.

2. Give evidence of the implementation and efficacy of performance templates in the field.

The second paper will appear in a subsequent issue of the journal.

The content of this paper is exploratory in nature and presents a model of training and performance improvement (performance templates) that adds to our repertoire of training and management methods. Performance templates (P-T) are intended to assist trainers and managers to promote employee agility, resiliency, and change with regard to critical performance events. There is some research (Lyons, 2007, 2008) that supports the development and use of P-T, however that research was subject to some limitations and from

inadequate theoretical support for the P-T method. The present study improves on prior research and identifies a strong theory base that underlies the P-T approach.

Often, performance and its improvement represent moving targets and it is probably realistic to think about performance as something that must be improved, over time, and usually in incremental adjustments. Both performance and improvement may represent gradations in the application of skills and or knowledge. A critical, underlying aspect of performance and improvement is the systematic use of feedback to enhance socially constructed learning in which change is desired. The method proposed in this paper incorporates feedback at both the individual and group levels.

We know that performance improvement potential can vary widely for any given performance system. Research indicates that organizations that make continual efforts toward employee training perform better, financially, as compared to organizations that are not as focused on continuous improvement of employee skills and knowledge (Ellinger *et al*., 2002). Some systems offer opportunities for substantial improvement, while in others the improvement potential is quite limited.

In mirroring such practices, the P-T approach, in the training context, is a set of interdependent, group-based activities. Currently, it is supported by the findings of some studies that addressed the use of small groups in the creation and use of script-type information for improving both learning and performance (see, for example, Lyons, 2008). The methods developed in these studies are sometimes referred to as scenistic methods as they frequently make use of situation-based material and/or cases as bases for training and learning. These scenistic methods have broad applicability as they may be used to assist individuals and groups in:

- understanding a process or practice;
- training in various skills;
- improving some on-the-job performance; and
- enhancing organizational development.

A benefit of the P-T method, identified observationally but not verified empirically, is the enhancement of self-efficacy beliefs that may influence individual performance on the job. In both a learning and performance sense, employees with a high expectation of success have a tendency to actively select the best opportunities, set goals, prepare thoroughly, and the like. On- the -job research evidence (see, Kinicki, 2008) encourages managers to nurture self-efficacy in themselves and others. Nurturing of self-efficacy is part of the intent of P-T.

Focus of the study

The main objectives of this paper are to:

- express the P-T approach in practice; and
- set forth the theoretical underpinning of the method.

The intention is to demonstrate the value and practicality of the method so that it may become part of the repertoire of training and management practice.

Depending on the amount of information to be learned, the complexity of the tasks included, and the context of the performance environment, the P-T approach offered in this paper represents a methodology that should enhance training effectiveness as well as performance improvement. The action theory of M. Frese (2007) provides a foundation of support for the important learning and change dynamics included in the use of P-T. Action theory offers explanations that help to define the critical, cognitive work that takes place in a give-and-take collaboration. P-T invites trainers, managers, and employees to engage in a partnership aimed towards the creation and ownership of the vital elements of the training-performance improvement process.

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It is most desirable to provide both the conceptual grounding and the empirical basis for an approach to adult learning and performance in a work setting in which employees and managers are designing change in performance via socially constructed learning based on a carefully designed feedback system. There are many potential benefits that derive from the use of an approach such as P-T such as enhancing social facilitation and information processing (Lord and Kernan, 1987), improving the contextual skills of employees (Pearce, 2006), and aiding in the motivation of employees (see Latham and Pinder, 2005). It is also valuable to help employees in the creation of new knowledge at the same time learning to use and refine reflective skills such that they learn to review, re-visit, and examine their own methods and processes of attaining and using information (Kayes and Kayes, 2005). The elaboration and exploration of all of these potentials are beyond the scope of the present study and could be the subject of future research.

General features of the performance template (PT) model

In the model both learning and performance are regarded as combined in a series of deliberate steps that, over time, are largely reflexive. In this segment we offer the descriptions of the dynamics of learning and performance. We begin by assuming that the managers, leaders, and key operatives know their business and its operations well. In addition, we assume that nearly all of the employees have this same knowledge. These assumptions are important because in the model cycle the managers must first identify key processes and critical performance indicators associated with those processes. Thus, important tasks and functions are able to be identified clearly and this is our starting place.

1. As key processes are carefully defined, then for each process, managers must identify the critical performance events (CPE) attendant to each process. Ultimately, these events must relate to the training and learning required of employees because the information and skills involved in each CPE are of vital importance to successful performance.

    An example of a CPE in a sales organization (data storage devices) might be: sales representatives possess knowledge of each product so as to be able to articulate to a customer the major technical features and applications of the product.

2. The designers of the actual training and the managers who oversee key processes must meet in order to isolate the essential elements of the CPE for which information, knowledge, and skills are to be created and/or enhanced. Agreement among the designers and managers is required for this phase. Initially, this agreement may be based largely on coarse or granular features – that is, much of the detail work may take place in their subsequent learning encounters.

3. The actual training activities can be shaped in many ways. What must result from the training per a given CPE is the initial performance template (P-T, hereafter – template).

    Training and education in the construction of the template often makes use of a variety of methods, tools, and concepts as appropriate in the circumstances. For our purposes is assumed that the training is conducted with intact teams or groups, preferably small groups in order to encourage maximum individual participation in the template-building process. When completed, the template is usually represented as a written guide and/or script created in order to reflect those activities and behaviors required in the successful implementation of the CPE.

4. Once a few templates have been developed (all are in a tentative state – nothing is ''final'' in the usual sense), then employees must use them in typical work situations that contain critical performance events (CPE). The templates can be made available in print, CD-DVD, on a web site and so on for easy access.

5. Each time a template is used or applied by an employee in a CPE, the employee is expected to reflect on use, note what was learned for example, reactions of customer, missing information, and feed that information back to the design staff (contact person). This part of the capture process can be facilitated with forms, instructions, as well as electronic, web-based reporting formats. Research (Kleingeld *et al.*, 2004) has demonstrated that direct involvement of employees in capture of performance details, as informed participants, results in improved performance. The more immediate the feedback, the likely greater value of the feedback for providing guidance for future behavior. These feedback activities are tied to the theory base that supports the model. Feedback is probably the most critical component of the training and implementation activities.

6. Adjusting the template. Some basis must be used for the timing and frequency of updating and revising the templates. Actual frequency of use of a template may dictate the chronological basis for adjustment. Regardless, templates need to be adjusted based on learning and feedback. The feedback is basically formative; intended for development and change. At the individual level, it is well established that goals and performance feedback are the most effective interventions available to improve learning and performance (see Locke and Latham, 1990). Adjustment may relate to information (for example – product, service), customer needs and wants, the skill requirement features of the template (e.g. use of follow-up questions in sales contacts), and administrative requirements of transactions, among other things.

This last step relates to the transference dynamics of learning. First, we are assuming that our employee group possesses a learning goal orientation as they have a desire to increase their competence by developing new skills and mastering new situations. Transference of learning is enhanced as the group engages in activities to fine-tune existing behavior patterns, in this case applying the performance template (Berry and Dienes, 1993). The fine-tuning behavior may be reinforced by the visible support (attendance) of managers and supervisors at the group sessions and the reward system that may include formal recognition and enhanced sales commissions must be sensitive to improvements in performance.

This is the crucial step in this template process because the learning is amplified in several directions. For example, suppose the group of interest is sales agents for a global manufacturer of high quality fishing equipment (rods, reels, lures, etc.). There may be two-dozen sales agents in our group. In number six, mentioned previously, the information learned from implementation of a particular template by our sales agents from activities such as individual customer visits, participation at national or international trade shows, and at major fishing events and contests, is fed back into the template development process.

The information has implications for learning transfer for at least three groups of individuals (training staff, managers, employees; and in some cases, customers), and perhaps other individuals. This transfer is stimulated by the occurrence of parallel feedback processes at individual, group and organizational levels, as stated. The sales agents are working, changing, and receiving feedback at the same time the managers and training staff are learning. We have taking place, simultaneously, both formative feedback as the templates are modified and summative feedback (longer-term) as performance indicators are examined for effects (London, 1995). Following is a summary list of the steps in the template process.:

1. Identify critical performance events (CPE).

2. Decide which CPE to include in the training work.

3. Plan and design the training activities to house CPE performance in templates.

4. Use the templates on-the-job.

5. Individual reflection on template application; reporting.

6. Adjusting and improving the templates.

If we assume that the initial viewer of the feedback, learned information is the person responsible for: training, template development and promulgation, then this person learns from the exchange. The same information supplied to management provides not only information aimed at template development and revision but is also aimed at critical performance elements of a larger process. Considering the total amount of information received, we find we have the opportunity for management development and transference of basic information to important performance components. In addition, managers may find that the information learned and passed on by the sales agent has implications for other matters. Perhaps some observation passed on by a sales agent is a bellwether of some trend or movement in the making. At the extreme, such learning could be substantial enough to inform the shaping of business strategy. Obviously, the sales agent has learned something otherwise she/he had nothing to report in the first place. The learning that has occurred is clearly anticipated by management, and is now a part of the work of the unit.

These attributes, mentioned previously, comprise the main characteristics of the model. On the pages that follow we present the theory bases for the activities corresponding to template creation and implementation.

Theory bases for creation and development of performance templates

In previous research regarding the implementation of P-T (see, for example, Lyons, 2007) different theoretical supports were offered to explain how and why the P-T activities took place in terms of training and learning. The different theories and concepts that were used to support P-T included experiential learning theory (Kayes, 2002; Kolb and Kolb, 2005) and learning and fluency (Gander, 2006), among others. Each of these theories/concepts helps to explain the creation of templates and their application. Most of them are sensitive to the reflective aspects of the P-T approach. The reason that several theories and concepts were formerly used to explain P-T creation and use was because none of them offered sufficient detail to explain more than part of P-T creation and use.

While helpful, these conceptualizations singly or in combination do not do enough to reflect the complexity of the training and learning features in terms of the cognitive processes that occur with the training participants. For example, in the reflective and feedback segments of the P-T process, none of the previously examined theories/concepts prominently recognize just how much individual regulation of behavior is needed to successfully manage implementation of P-T practices in the field.

Detailed analysis of the previously mentioned theories is beyond the scope of this paper. There is, however, a recently articulated theory, action theory (Frese, 2007), that represents the content of the P-T approach more completely than other theories and it has both an action and regulation focus. In the following paragraphs, action theory elements are generally mapped onto the important features of the P-T approach.

Action theory and the processes of performance templates

Frese and Zapf (1994) and Frese (2007) offer action theory to explain how individuals regulate their behavior to achieve goals actively in regular and/or novel situations. Performance templates work is a novel situation in the creation phases and evolves into regular and iterative situations in fieldwork. In regulation of behavior feedback is an important component and in the P-T processes it is a necessary element for learning and implementation. Action theory is characterized by Frese and Zapf (1994, p. 272) as:

> Action theory is a cognitive theory. But unlike many cognitive theories, it is tied to behavior. It is an information processing theory. But unlike many information-processing theories, it is tied to objective work environments and to the objective work outcome. It is a behavior-oriented theory.

But unlike behavioristic theories, it is concerned with the processes that intervene between environmental input and behavior: the regulatory function of cognitions.

These explanations fit quite well with the template processes identified in this paper as they involve training – learning – work – signal detection – reflection.

The information-processing model of Nosal (1990) parallels somewhat the important segments of action theory. The four levels of Nosal's model are perception (using short term perceptual images), concept formation (categorizations of concepts), modeling (taking in and assimilating new information as well as forming prototypes and schemas), and program. Program is a level of control and regulation in which the individual uses preferred methods to monitor decision-making and intellectual functioning, in general. This information-processing model is highly reflexive and complex. Owing to its detail and practical features, action theory is likely a better fit with P-T work. Action theory helps us to get beyond what Salisbury (2008) refers to as a piecemeal approach to the management of knowledge of cognitive processes. The theory provides a framework for the understanding of the regulation of knowledge in a performance context. Action theory contains three elements (Frese, 2007) whose interrelationships provide the bases and dynamics of the theory and they are focus, sequence, and action structure. The elements are explained in the sections that follow.

A. Focus

Focus may be represented by the task itself, review and reflection of one's own performance in the task situation, and the social context in which the task is completed. Using our example of template work (mentioned previously), focus means the activities surrounding the implementation of the template in the field in a given customer setting. As part of the focus or context is a reflection or self-component, that is, one is consciously thinking about whether or not she/he is doing well in their performance as they enact the template. This is an important element in self-regulation (Frese, 2007, p. 174). This self-component fits, in part, the definition of what Kozhevnikov (2007) calls cognitive style. Cognitive style is represented by those stable attitudes and somewhat habitual strategies that determine how an individual may perceive, remember, and solve problems.

B. Sequence

While focus is elemental and relates almost exclusively to the actual setting in which the template is enacted in the field, sequence contains a broad range of activities that extend from the very creation of the template to its actual use. The sequence and structure components of the theory are more complex than focus. Sequence is expressed first. Sequence is comprised of five interdependent parts, in order: goal setting, mapping of the environment, planning, monitoring of the execution, and feedback processing. In the following, each part is expressed *vis-à-vis* template work.

Goal setting. The goals of:

- successful application of the template; and
- improvement in the quality, value, and efficiency of the template are anticipated future results; that is, goals are targets and they guide action.

As Locke and Latham (1990) have expressed, higher goals have higher pull and can lead to higher performance. Semmer and Frese (1985) indicate that a goal can act as a motivator for performance as it contributes to some regulatory influence over the action. The template creation processes stimulate and create goals in their execution. The goals serve as bases for regulatory functions.

Mapping of the environment. Here we limit mapping activity largely to signal detection and use. As mentioned earlier in this work, the creation of a template ultimately results in a type of script, a prototype for action. Template creation is an attempt to conceptualize some aspects of the environment in preparation to influence that environment. The template is typically

used and modified on the basis of signals perceived in practice in the field. Diefendorff (2004) suggests that the perception of signals and the creation and refinement of a prototype, which the template is, often leads to better, more realistic mental models and helps us to understand complex situations. Research on signal detection regarding cognitive functioning has been with us for at least 50 years from the research of Holzman and Klein (1954) to the present. The thorough exploration of the body of research relating to signal detection is beyond the scope of this paper.

Planning. Planning is informed by signal detection (Scott and Delmar, 2004). In the template execution activities, planning behavior is both formal and informal. Preparing the content of a template is clearly a formal activity that follows a pattern of behavior (see template features, number 3). Informal planning in the actual use of the template in the field is more of an impromptu, less formal activity done in real-time, on-the-fly, although no less important than formal planning. As the situation with the customer changes, we make adjustments. This represents a highly regulated use of feedback. We must assume that action theory embraces the idea that planning can include contemplation of more than one action at a time. That is, we assume parallel actions in thought and practice.

Monitoring of the execution. In the template implementation work the monitoring action is individual consciousness that anticipates reflection on the recording of effects, perceptions, and evaluation of the template implementation with the customer. It is similar to vigilance, attentiveness and the like. It acts in the service of regulation. It is more complex than the self-consciousness referred to previously in the section on focus. Training for this part of template use presents real challenges for trainers because attentiveness cannot easily be taught.

Feedback processing. This is the final component in the sequence of regulation activity. This work is fully part of the overall template implementation and refinement work. It is a requirement for template improvement and future use. There are at least two parts to feedback processing:

■ creating judgments regarding effectiveness of template use, that is, results; and

■ defining perceptions regarding how the template implementation processes, as self-contained activities, functioned.

Judgments regarding outcomes and use may be positive in both instances, negative in both instances, or mixed. As Locke and Latham (1990) point out, it is generally accepted that receipt of negative feedback is likely more influential than is the receipt of positive feedback. As expressed previously in the ''Features'' section, the feedback is anticipated by managers and trainers, as well as the other trainees as the loop is closed regarding action.

C. Action structure

While sequence is about the steps taken in the actual use of a template, action structure is really about the mechanics of regulation; it is about the mental processes and behavior that take place to enact regulation. As mental work, structure is superimposed on most of the components of the sequence. The use of performance templates, particularly the reflective activity, is representative of a type of training in itself in which one learns to consciously attend to and improve her/his own reflective behavior. We may suppose that management wants to observe the successful application and improvement of the templates as a result of

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the steps in the process (see previous), in which employees learn then help to create, apply, and improve templates as a very deliberate, thoughtful set of activities.

Frese (2007, p. 162) says, ''The action structure is concerned with the hierarchical, cognitive regulation of behavior. The structure constitutes a kind of 'grammar' for action''. Hence, regulation of action follows a hierarchy in which lower levels of regulation consist mostly of patterns and routines that tend to be fairly specific. For example, the way one greets a customer. The higher levels of the hierarchy of action regulation are more general, typically conscious, and thought-oriented, and they correspond to the application of the template in varied situations, with different customers and customer needs, and adjustments required in the circumstances. Proposed here is the notion that training staff, in particular, are in the position to help employees with these higher levels of regulation. Such training efforts are direct reflections of an understanding of action theory.

In his expression of the action structure, Frese (2007) says there are four levels of regulation. From lowest to highest level the first is the skill level, called psychomotor by Ackerman (1988), which is rapid and somewhat automatic. An example would be finding the customer's location. The second level is that of the flexible action pattern in which behavior is less automatic in action yet represents a well-trained pattern that is subject to adjustment based on characteristics of the situation. An example would be preparing for a visit to a customer, having needed materials, promotions, and so forth. The third level is the conscious level and it includes conscious, self-aware, goal-directed behavior. It is an awareness of how a thing can and should be done; it can be visualized and/or verbalized. This conscious level has been called the intellectual level by Hacker (1998). This level of regulation corresponds very well with the implementation of a performance template in the field with a customer.

The fourth and final level of regulation Frese (2007, p. 163) called metacognitive heuristics, or the self-reflection and thinking we engage in regarding our methods of problem solving. This highest level of regulation may be somewhat general or very specific. For example, in the implementation of a performance template with a customer, a sales representative may follow a prescribed set of behaviors to assess their reflection and recording of the adequacy of template use. On a more or less patterned basis, heuristics, or shorthand rules for making choices and decisions, may be employed. Metacognition and heuristics are fields of study in their own right and in this paper it is not practical to include many details of these topics. Recent research by Kholodnaya (2002) has made relatively clear the idea that metacognition is represented by cognitive style, a mechanism that helps regulate and control thought and behavior.

Trainer use of cognitive style information

Assuming trainers can attain sufficient knowledge about the content and dynamic features of cognitive styles, they may be in a position to greatly influence employee learning and understanding. Learning may relate to reflective practices concerning P-T, one of the focal areas of this paper, and reflection may have meaning and use for individual learners well beyond the subject matter of templates. To close this section of this paper, we can offer three cognitive style examples (see Nosal, 1990) as food for thought for trainers as they may seek to influence learning at the metacognitive level.

In follow-up training with employees who have implemented and reflected on use of P-T we could discuss the cognitive style, time orientation. Individuals have different conceptualizations of the use of and passage of time and these thoughts may serve to regulate their use of P-T. Another style example is rigidity-flexibility of control and relates to how one may seek to manage their use of P-T in a more or less flexible manner. It is clearly reasonable to assume that different sales representatives are going to practice their use of P-T under regulation of more or less rigidity of application. Finally, the style example of internal – external locus of control. In this case, the trainer may explore with learners the extent to which they believe or assume use of the P-T leads to outcomes that are within their control. This paper uses sales representatives as the target group and it is often the case

that sales employees are ''internals'', that is, individuals who believe that they have considerable control over relationships with customers. Again, these cognitive styles are examples of the mental processes that characterize metacognitive heuristics aimed at regulation. Research indicates that there are many different heuristics in use. The particular context of the training, application of training in the field, and feedback processes may suggest just which cognitive styles have salience in the circumstances thus guiding trainers to help employees better regulate their thinking skills and feedback skills. This expression of how action theory supports the array of activities included in the entire P-T process concludes the theory bases segment of this paper.

In closing

As mentioned earlier in this paper, the performance template subject matter is bifurcated as a segment on theory and another segment that explains an empirical examination of the application of performance template training and follow-up. The present paper has presented the concepts and rationale of the template approach and of the action theory that provides the foundation for the approach. Included, also, are suggestions for trainer use of some tools related to trainee metacognition. The second paper treating the subject matter will appear in a subsequent issue of the journal and will offer an empirical test of the P-T approach in the field.

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